

## Compilation of Changes to the CPC Scheme Between 2017.08 and 2018.01

### Presentation Details

- Entries for new symbols and headings: *Black text in italics*
- Entries for existing symbols and headings
- text insertions: *Green text in italics with yellow background*
- text deletions: ~~Red strikethrough text with grey background~~
- Entries for deleted symbols and headings: ~~Black strikethrough text~~
- In cases when the originating project cannot be found, "N/A" is given for the Project information (e.g. the change could be due to an Editorial Correction).
  - Projects ending in "-F" indicate finalisation after reclassification was completed.

### Project: N/A (A01B)

#### A01B

**SOIL WORKING IN AGRICULTURE OR FORESTRY; PARTS, DETAILS, OR ACCESSORIES OF AGRICULTURAL MACHINES OR IMPLEMENTS, IN GENERAL** (making or covering furrows or holes for sowing, planting, or manuring [A01C 5/00](#); soil working for engineering purposes [E01](#), [E02](#), [E21](#); {measuring areas for agricultural purposes [G01B](#)})

#### WARNING

The following IPC groups are not ~~used~~ in the CPC ~~system~~*scheme*. ~~Subject~~*The subject* matter ~~covered by~~*for* these ~~IPC~~*IPC* groups is classified in the following CPC groups:

|                            |            |                             |
|----------------------------|------------|-----------------------------|
| <a href="#">A01B 69/04</a> | covered by | <a href="#">A01B 69/008</a> |
| <a href="#">A01B 69/06</a> | covered by | <a href="#">A01B 69/005</a> |
| <a href="#">A01B 69/08</a> | covered by | <a href="#">A01B 69/006</a> |

#### U A01B 1/00

**Hand tools (edge trimmers for lawns [A01G 3/06](#) {; machines for working soil [A01B 35/00](#); making hand tools [B21D](#)})**

#### U A01B 1/22

• Attaching the blades or the like to handles (handles for tools, or their attachment, in general [B25G](#)); Interchangeable or adjustable blades

#### A01B 1/227

• • {~~Interchangable~~*Interchangeable* blades}

#### U A01B 73/00

**Means or arrangements to facilitate transportation of agricultural machines or implements, e.g. folding frames to reduce overall width (arrangements of lifting devices for soil working implements [A01B 63/00](#); {carriers for harvesters or mowers [A01D 75/002](#); arrangements or carriers for haymakers [A01D 78/1007](#), [A01D 80/005](#); } vehicles adapted for load transportation or to transport, to carry or to comprise special loads or objects [B60P](#); motor vehicles, trailers [B62D](#))**

#### U A01B 73/02

• Folding frames

#### U A01B 73/04

• • foldable about a horizontal axis

#### A01B 73/048

• • • {the axis being ~~oriended~~*oriented* in transverse direction ([A01B 73/042](#) takes precedence)}

**Project: N/A (A01G)****A01G**

**HORTICULTURE; CULTIVATION OF VEGETABLES, FLOWERS, RICE, FRUIT, VINES, HOPS OR SEAWEED; FORESTRY; WATERING** (picking of fruits, vegetables, hops, or the like [A01D 46/00](#); plant reproduction by tissue culture techniques [A01H 4/00](#); devices for topping or skinning onions or flower bulbs [A23N 15/08](#); propagating unicellular algae [C12N 1/12](#); plant cell culture [C12N 5/00](#))

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ for these **IPC** groups is classified in the following CPC groups:  
[A01G 33/02](#) covered by [A01G 33/00](#)

**U A01G 9/00**

**Cultivation of plants in receptacles, forcing-frames, or greenhouses (cultivation without soil [A01G 31/00](#) {; turfing of roofs [E04D 11/002](#)})**

**U A01G 9/10**

- Pots {or other receptacles} for {seeds,} seedlings {, saplings, cuttings or other young plants, e.g. foldable pots}; Soil-blocks {or like} for seedlings {; Plant substrate bodies}; Means for forming soil-blocks

**A01G 9/1086**

- {Composition of plant substrate bodies (plant growth regulators [A01N](#); fertilizers [C05](#); soil ~~conditioning~~**conditioning** or soil stabilizing materials [C09K 17/00](#))}

**Project: N/A (A01H)****A01H 3/00**

**Processes for modifying phenotypes, {e.g. ~~symbyosis~~**symbiosis** with bacteria}([A01H 4/00](#) takes precedence; influencing the growth of plants without producing new plants, non-chemically [A01G 7/00](#), chemically [A01N 25/00](#) - [A01N 65/00](#))**

**Project: N/A (A01J)****U A01J 25/00**

**Cheese-making (coating the cheese [A01J 27/02](#))**

**A01J 25/008**

- {Apparatus for making soft uncured Italian cheese, e.g. ~~Mozarella~~**Mozzarella**, Ricotta, Pasta Filata cheese}

**Project: N/A (A01K)****A01K 5/00**

**Feeding devices for stock or game ([A01K 1/10](#) takes precedence; for poultry [A01K 39/00](#) )(~~Feeding wagons~~; **Feeding wagons**; Feeding stacks)**

**U A01K 67/00**

**Rearing or breeding animals, not otherwise provided for; New breeds of animals (methods for reproduction or fertilisation [A61D 19/00](#); medicinal preparations containing sperm [A61K 35/52](#); tissue- or animal-cell cultivation apparatus [C12M 3/00](#); cultivation or maintenance of tissue or animal cells [C12N 5/00](#); mutation or genetic engineering [C12N 15/00](#))**

NOTE

In this group the following term is used with the meaning indicated:

- "breeding" means obtaining animals up to and including their birth or hatching.

**U A01K 67/033**

- Rearing or breeding invertebrates; New breeds of invertebrates (non-chemical sterilisation of invertebrates [A01M](#))

NOTE

In group [A01K 67/033](#), it is desirable to add the indexing codes relating to transgenic animals. In group [A01K 67/033](#), it is desirable to add the indexing codes relating to animals characterised by their purpose

A01K 67/0333

- {Genetically modified ~~invertebrates~~*invertebrates*, e.g. transgenic, polyploid}

**Project: N/A (A01M)****U A01M 3/00**

**Manual implements, other than sprayers or powder distributors, for catching or killing insects, e.g. butterfly nets**

A01M 3/005

- {Manual suction ~~tools~~*tools* for catching insects}

**Project: N/A (A01N)****A01N**

**PRESERVATION OF BODIES OF HUMANS OR ANIMALS OR PLANTS OR PARTS THEREOF; BIOCIDES, e.g. AS DISINFECTANTS, AS PESTICIDES, AS HERBICIDES (preparations for medical, dental or toilet purposes [A61K](#); methods or apparatus for disinfection or sterilisation in general, or for deodorising of air [A61L](#)); PEST REPELLANTS OR ATTRACTANTS (decoys [A01M 1/06](#); medicinal preparations [A61K](#)); PLANT GROWTH REGULATORS (compounds in general [C01](#), [C07](#), [C08](#); fertilisers [C05](#); soil conditioners or stabilisers [C09K 17/00](#))**

NOTES

1. This subclass covers:

- compositions, physical forms, methods of application of specific materials or the use of single compounds or compositions
- chemosterilants for the sexual sterilisation of invertebrates, e.g. insects (sex sterilants for other purposes [A61K](#)).

2. This subclass does not cover materials which affect the growth of a plant solely by supplying nutrients, i.e. plant food, ordinarily required for growth or materials which are used to prevent or cure mineral deficiencies in plants, e.g. addition of iron chelates to cure iron chlorosis, which materials are covered by class [C05](#).

3. In this subclass, the following expression is used with the meaning indicated:

- "plant growth regulators" are those materials which alter the plant through a chemical modification of the plant metabolism, such as auxins.

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~*The subject* matter ~~covered by~~*for* these ~~IPC~~*IPC* groups is classified in the following CPC groups:

|                             |            |                            |
|-----------------------------|------------|----------------------------|
| <a href="#">A01N 43/824</a> | covered by | <a href="#">A01N 43/82</a> |
| <a href="#">A01N 43/828</a> | covered by | <a href="#">A01N 43/82</a> |
| <a href="#">A01N 43/832</a> | covered by | <a href="#">A01N 43/82</a> |
| <a href="#">A01N 43/836</a> | covered by | <a href="#">A01N 43/82</a> |
| <a href="#">A01N 53/02</a>  | covered by | <a href="#">A01N 53/00</a> |
| <a href="#">A01N 53/04</a>  | covered by | <a href="#">A01N 53/00</a> |
| <a href="#">A01N 53/06</a>  | covered by | <a href="#">A01N 53/00</a> |
| <a href="#">A01N 53/08</a>  | covered by | <a href="#">A01N 53/00</a> |
| <a href="#">A01N 53/10</a>  | covered by | <a href="#">A01N 53/00</a> |
| <a href="#">A01N 53/12</a>  | covered by | <a href="#">A01N 53/00</a> |
| <a href="#">A01N 53/14</a>  | covered by | <a href="#">A01N 53/00</a> |
| <a href="#">A01N 55/10</a>  | covered by | <a href="#">A01N 55/00</a> |

**Project: MP0397 (A21D)**

**M A21D 2/00** Treatment of flour or dough by adding materials thereto **before or during baking** (**A21D 10/00 takes precedence** **batters, dough or mixtures before baking A21D 10/00**)

NOTE

In groups [A21D 2/02](#) - [A21D 2/40](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, a substance is classified in the last appropriate place.

**M A21D 8/00** **Methods for preparing dough or for baking dough** (**A21D 2/00 takes precedence** **treatment of flour or dough by adding materials A21D 2/00**)

**M A21D 8/02** • Methods for preparing dough; Treating dough prior to baking (~~machines or equipment for making or processing dough A21C~~)

**M A21D 8/06** • Baking processes (~~bakers' ovens A21B~~)

**M A21D 15/00** Preserving finished ~~{or, partly finished (or par-baked)}~~ bakery products (~~refreshing A21D 17/00, packaging or wrapping bakery products B65B, B65D~~); **Improving (refreshing A21D 17/00)**

**Project: N/A (A23C)**

**U A23C 19/00** Cheese; Cheese preparations; Making thereof (cheese substitutes [A23C 20/00](#); casein [A23J 1/20](#))

**U A23C 19/06** • Treating cheese curd after whey separation; Products obtained thereby ([A23C 19/097](#) takes precedence)

**U A23C 19/09** • • Other cheese preparations; Mixtures of cheese with other foodstuffs (preservation [A23C 19/097](#))

**A23C 19/0912** • • • {Fried, baked or roasted cheese products, e.g. cheese cakes; Foamed cheese products, e.g. ~~soufflès~~ **soufflés**; Expanded cheese in solid form}

**Project: N/A (A23K)**

**U A23K 10/00** Animal feeding-stuffs

**U A23K 10/30** • from material of plant origin, e.g. roots, seeds or hay; from material of fungal origin, e.g. mushrooms (obtained by microbiological or biochemical processes, e.g. using yeasts or enzymes, [A23K 10/10](#))

**U A23K 10/37** • • from waste material (from hydrolysates of wood or straw [A23K 10/32](#); from molasses [A23K 10/33](#))

**A23K 10/38** • • • from distillers' or brewers' waste

**Project: MP0391 (A23P)**

**M A23P** SHAPING OR WORKING OF FOODSTUFFS, NOT FULLY COVERED BY A SINGLE OTHER SUBCLASS (~~shaping substances in a plastic state in general B29C~~)

NOTE

Attention is drawn to subclasses [A01J](#), [A21C](#), [A22C](#), [A47J](#), [B02C](#), in addition to other subclasses of [A23](#), in connection with the shaping or working of foodstuffs

**Project: N/A (A24B)**

**U A24B 15/00** Chemical features or treatment of tobacco; Tobacco substitutes ([A24B 3/00](#) takes precedence)

**U A24B 15/10** • Chemical features of tobacco products or tobacco substitutes

- U A24B 15/16
- • of tobacco substitutes
- WARNING  
Group [A24B 15/16](#) is impacted by reclassification into group [A24B 15/167](#).  
Groups [A24B 15/16](#) and [A24B 15/167](#) should be considered in order to perform a complete search.
- A24B 15/165
- • {comprising as heat source a carbon fuel or an ~~oxydized~~[oxidized](#) or thermally degraded carbonaceous fuel, e.g. carbohydrates, cellulosic material}

**Project: RP0506 (A41C)**

- U A41C 3/00 **Brassieres**
- A41C 3/04
- for nursing mothers {(nursing clothing in general ~~A41D 1/205~~[A41D 1/215](#))}

**Project: N/A (A41C)**

- U A41C 3/12
- Component parts
- U A41C 3/14
- • Stiffening or bust-forming inserts
- A41C 3/148
- • {Prosthetic brassieres (~~non-implantable mammary prostheses~~  
~~A61F 2/52~~[non-implantable mammary prostheses](#) [A61F 2/52](#))}

**Project: RP0506 (A41D)**

- U A41D 1/00 **Garments (for children [A41D 11/00](#))**
- M A41D 1/04
- Vests, jerseys, sweaters, or the like
- U A41D 1/06
- Trousers
- C A41D 1/08
- • [specially adapted](#) for sporting purposes, ~~e.g. ski trousers, riding breeches~~

WARNING

Group [A41D 1/08](#) is impacted by reclassification into groups [A41D 1/085](#) and [A41D 1/089](#).

Groups [A41D 1/08](#), [A41D 1/085](#) and [A41D 1/089](#) should be considered in order to perform a complete search.

- M A41D 1/082
- • {for skiing}
- M A41D 1/084
- • {for cycling}
- N A41D 1/085
- • for playing golf

WARNING

Group [A41D 1/085](#) is incomplete pending reclassification of documents from group [A41D 1/08](#).

Groups [A41D 1/08](#) and [A41D 1/085](#) should be considered in order to perform a complete search.

- M A41D 1/086
- • {for horse riding}
- M A41D 1/088
- • {~~Crotch~~[with crotch](#) reinforcement}
- N A41D 1/089
- • Shorts

WARNING

Group [A41D 1/089](#) is incomplete pending reclassification of documents from group [A41D 1/08](#).

Groups [A41D 1/08](#) and [A41D 1/089](#) should be considered in order to perform a complete search.

- D A41D 1/20
- Maternity clothing  
<administratively transferred to [A41D 1/21](#)>

- D A41D 1/205
- {Nursing clothing (brassières for nursing mothers A41C 3/04)}  
<administratively transferred to [A41D 1/215](#)>
- N A41D 1/21
- Maternity clothing; Clothing specially adapted for persons caring for infants
- N A41D 1/215
- Nursing clothing, e.g. for breastfeeding
- M A41D 1/22
- ~~Other garments~~ *Clothing specially adapted for ladies {women, not otherwise provided for (nursing clothing A41D 1/205)}*

**Project: N/A (A41D)**

- U A41D 19/00
- Gloves (brush bodies shaped as gloves [A46B 5/04](#); gloves for washing the body [A47K 7/02](#); gloves for domestic washing or cleaning [A47L 13/18](#); surgical gloves [A61B 42/10](#); swimming gloves [A63B 31/02](#); as accessories for games or sports, e.g. baseball, boxing or golf gloves [A63B 71/14](#); gloves for glove-boxes [B25J 1/02](#))
- U A41D 19/015
- Protective gloves {([A41D 19/0055](#) takes precedence)}
- A41D 19/01505
- {resistant to mechanical ~~agressions~~*aggressions*, e.g. cutting, piercing}

**Project: N/A (A41G)****A41G 5/00****Hair pieces, inserts, rolls, pads, or the like; ~~Toupèes~~*Toupées***

A41G 5/0006

- {~~Toupèes~~*Toupées* covering a bald portion of the head}

**Project: N/A (A43B)****A43B****CHARACTERISTIC FEATURES OF FOOTWEAR; PARTS OF FOOTWEAR**WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|   |            |                            |
|---|------------|----------------------------|
| <a href="#">A43B 21/10</a> - <a href="#">A43B 21/16</a> | covered by | <a href="#">A43B 21/06</a> |
| <a href="#">A43B 21/34</a>                              | covered by | <a href="#">A43B 21/24</a> |

**U A43B 3/00****Footwear characterised by the shape or the use**

U A43B 3/0036

- {Footwear characterised by a special shape or design}

A43B 3/0094

- {with means to ~~differentiate~~*differentiate* between right and left shoe}

**Project: N/A (A43D)****U A43D 3/00****Lasts**

U A43D 3/14

- Stretching or spreading lasts; Boot-trees; Fillers; Devices for maintaining the shape of the shoe (drying of footwear [A47L 23/20](#))

U A43D 3/1433

- {Shoe-trees}

A43D 3/1491

- {with means for sweaty feet, e.g. with ~~desinfecting~~*disinfecting* or deodorant means (cleaning of a footwear [A47L 23/20](#))}

**Project: N/A (A44B)****A44B****BUTTONS, PINS, BUCKLES, SLIDE FASTENERS, OR THE LIKE (fastenings specially adapted for footwear [A43C](#))****NOTE**

This subclass covers buckles or slide fasteners whether used as haberdashery or otherwise.

**WARNING**

The following IPC ~~group is~~ groups are not ~~used~~ in the CPC scheme. ~~Subject~~ The subject matter ~~covered by this group for these IPC groups~~ is classified in the following CPC ~~group~~ groups:

[A44B 1/16](#)

covered by

[A44B 1/14](#)**Project: N/A (A44C)****A44C****JEWELLERY; BRACELETS; OTHER PERSONAL ADORNMENTS; COINS (jewel boxes [A45C 11/16](#))****WARNING**

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ The subject matter ~~covered by for~~ these IPC groups is classified in the following CPC groups:

[A44C 11/02](#)

covered by

[A44C 5/18](#)**Project: N/A (A45D)****A45D****HAIRDRESSING OR SHAVING EQUIPMENT; MANICURING OR OTHER COSMETIC TREATMENT (wigs, toupees, or the like [A41G 3/00](#), [A41G 5/00](#); hairdressers' chairs [A47C 1/04](#); hair cutting appliances, razors [B26B](#))****WARNING**

The following IPC groups are not ~~used not used~~ in the CPC scheme. ~~Subject~~ The subject matter ~~covered by this group for these IPC groups~~ is classified in the ~~corresponding~~ following CPC groups ~~as it follows~~:

[A45D 97/00](#)

covered by

[A45D 44/00](#)**Project: N/A (A46B)****A46B****BRUSHES (handles not integral with brushware [B25G](#))****WARNING**

The following IPC groups are not ~~used~~ in the ~~classification~~ CPC scheme. ~~Subject~~ The subject matter ~~covered by for~~ these IPC groups is classified in the following CPC groups:

[A46B 11/02](#)

covered by

[A46B 11/00](#) or [A46B 11/0017](#)  
or [A46B 11/0017](#) or  
[A46B 11/002](#)

[A46B 11/04](#)

covered by

[A46B 11/00](#) or [A46B 11/0013](#)**U A46B 15/00****Other brushes; Brushes with additional arrangements****U A46B 15/0055**

- {Brushes combined with other articles normally separate from the brushing process, e.g. combs, razors, mirrors}

**A46B 15/0079**

- {Brushes fitted with a ~~raser~~ razor or other shaving equipments}



**Project: N/A (A47B)****A47B****TABLES; DESKS; OFFICE FURNITURE; CABINETS; DRAWERS; GENERAL DETAILS OF FURNITURE (furniture jointing [F16B](#))****NOTE**

In this subclass, the following terms are used with the meanings indicated:

- "tables" covers also tables or underframes therefor for other than domestic use;
- "cabinets" or "racks" covers also cabinets or racks for storage in general.

**WARNING**

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups ~~are~~ *is* classified in the following CPC groups:

[A47B 21/013](#) and subgroups covered by [A47B 21/00](#) and subgroups are

**U A47B 47/00**

**Cabinets, racks or shelf units, characterised by features related to dismountability or building-up from elements ([A47B 43/00](#), [A47B 45/00](#) take precedence; features for adjusting shelves or partitions [A47B 57/00](#))**

A47B 47/0091

- {Modular arrangements of similar assemblies of elements (for elements or assemblies mainly made of wood or plastic [A47B 47/047](#), sectional ~~furnitures~~ *furniture* [A47B 87/00](#), stackable ~~furnitures~~ *furniture* [A47B 87/02](#))}

**Project: N/A (A47C)****A47C****CHAIRS (seats specially adapted for vehicles [B60N 2/00](#)); SOFAS; BEDS (upholstery in general [B68G](#))****WARNING**

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[A47C 23/053](#) covered by [A47C 23/05](#), [A47C 23/0507](#), [A47C 23/0515](#)

**U A47C 1/00**

**Chairs adapted for special purposes (features relating to vertical adjustability [A47C 3/20](#); convertible chairs [A47C 13/00](#); chairs or personal conveyances specially adapted for patients or disabled persons [A61G 5/00](#); operating chairs, dental chairs [A61G 15/00](#))**

U A47C 1/14

- Beach chairs {; Chairs for outdoor use, e.g. chairs for relaxation or sun-tanning}

A47C 1/143

- {Chaise ~~longues~~ *lounges*}

**U A47C 4/00**

**Foldable, collapsible or dismountable chairs (of tubular metal type [A47C 5/10](#); children's foldable chairs [A47D 1/02](#))**

A47C 4/54

- Inflatable chairs (connection of valves to ~~Inflatable~~ *inflatable* elastic bodies [B60C 29/00](#))

**Project: N/A (A47D)****U A47D 1/00****Children's chairs (chairs generally [A47C](#))**

A47D 1/008

- {with trays (combinations of chairs and tables [A47B 83/02](#); ~~children's chairs combined with tables~~ [A47D 3/00](#); *children's chairs combined with tables* [A47D 3/00](#))}

**WARNING**

Group [A47D 1/008](#) is impacted by reclassification into groups [A47D 1/0081](#), [A47D 1/0083](#) and [A47D 1/0085](#).



Groups [A47D 1/008](#) and [A47D 1/0081](#), [A47D 1/0083](#) and [A47D 1/0085](#) should be considered in order to perform a complete search.

**Project: N/A (A47F)**

**A47F**

**SPECIAL FURNITURE, FITTINGS, OR ACCESSORIES FOR SHOPS, STOREHOUSES, BARS, RESTAURANTS OR THE LIKE; PAYING COUNTERS**

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                            |            |                              |
|----------------------------|------------|------------------------------|
| <a href="#">A47F 1/14</a>  | covered by | <a href="#">A47B 87/0207</a> |
| <a href="#">A47F 1/16</a>  | covered by | <a href="#">A47F 5/0037</a>  |
| <a href="#">A47F 1/18</a>  | covered by | <a href="#">A47F 5/0025</a>  |
| <a href="#">A47F 3/022</a> | covered by | <a href="#">A47F 1/06</a>    |
| <a href="#">A47F 3/024</a> | covered by | <a href="#">A47F 1/08</a>    |
| <a href="#">A47F 3/026</a> | covered by | <a href="#">A47F 1/10</a>    |

**Project: N/A (A47G)**

**A47G**

**HOUSEHOLD OR TABLE EQUIPMENT (book-ends [A47B 5/00](#); knives [B26B](#))**

NOTE

This subclass covers equipment for similar use in hotels, dressing rooms, vehicles, or the like, not otherwise provided for

WARNING

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|                            |            |  |
|----------------------------|------------|--|
| <a href="#">A47G 25/42</a> | covered by | <a href="#">A47G 25/40</a> ,<br><a href="#">A47G 2025/4092</a> |
| <a href="#">A47G 25/46</a> | covered by | <a href="#">A47G 25/44</a> , <a href="#">A47G 2025/448</a>     |
| <a href="#">A47G 25/64</a> | covered by | <a href="#">A47G 25/62</a> , <a href="#">A47G 2025/629</a>     |
| <a href="#">A47G 29/02</a> | covered by | <a href="#">A47B 97/001</a>                                    |

**A47G 29/00**

**Miscellaneous supports, holders, or containers for household use (for drying towels [A47K 10/04](#); stands, racks, or the like for airing beds, garments, or the like, clothes, drying devices [D06F 57/00](#))**

WARNING

The following IPC group is not used in the CPC scheme. Subject matter covered by this group is classified in the following CPC group:

|                            |            |                             |
|----------------------------|------------|-----------------------------|
| <a href="#">A47G 29/02</a> | covered by | <a href="#">A47B 97/001</a> |
|----------------------------|------------|-----------------------------|

**Project: N/A (A47H)**

**A47H**

**FURNISHINGS FOR WINDOWS OR DOORS (concerned with the functioning of the door or window [E05](#); roller blinds [E06B](#))**

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                            |            |                            |
|----------------------------|------------|----------------------------|
| <a href="#">A47H 13/10</a> | covered by | <a href="#">A47H 15/02</a> |
| <a href="#">A47H 13/12</a> | covered by | <a href="#">A47H 15/04</a> |

**Project: N/A (A47J)**

- U A47J 31/00 Apparatus for making beverages (household machines or implements for straining foodstuffs [A47J 19/00](#); preparation of non-alcoholic beverages, e.g. by adding ingredients to fruit or vegetable juices, [A23L 2/00](#); coffee or tea pots [A47G 19/14](#); tea infusers [A47G 19/16](#); dispensing beverages on draught [B67D 1/00](#); brewing of beer [C12C](#); preparation of wine or other alcoholic beverages [C12G](#))
- U A47J 31/04 • Coffee-making apparatus with rising pipes {(pressure coffee-makers [A47J 31/24](#))}
- A47J 31/057 • • with water container separated from beverage container, the hot water passing the filter only once {, i.e. classical type of drip coffee makers (drip coffee makers only ~~funcationing~~[functioning](#) with the water heating container in a higher position than the brewing vessel [A47J 31/10](#))}

**Project: MP0300 (A47K)**

- U A47K 3/00 Baths; Douches; Appurtenances therefor (for curative purposes [A61H](#), [A61M](#), e.g. bathing devices for special therapeutic or hygienic purposes [A61H 33/00](#); {spray heads [B05B](#); devices for suspending or supporting the supply pipe or supply hose of a shower bath [E03C 1/06](#); heated bath tubs [F24H 1/0072](#))}
- U A47K 3/02 • Baths (heatable [F24H](#))
- M A47K 3/03 • • attachable to other baths, sinks, wash-basins, or the like {~~mounting frames for therefor~~(~~collapsible baths~~ [A47K 3/07](#)); ~~mounting frames therefor~~} (~~collapsible baths~~ [A47K 3/07](#))

**Project: N/A (A47K)**

- U A47K 5/00 Holders or dispensers for soap, toothpaste, or the like (specially adapted for shaving soap or cosmetics [A45D 33/00](#) - [A45D 40/00](#))
- U A47K 5/06 • Dispensers for soap
- U A47K 5/12 • • for liquid or pasty soap
- U A47K 5/1202 • • • {dispensing dosed volume ([A47K 5/1201](#) takes precedence)}
- U A47K 5/1204 • • • • {by means of a rigid dispensing chamber and pistons}
- A47K 5/1205 • • • • • {Dispensing from the top of the dispenser with a vertical ~~piston~~[piston](#)}

**Project: MP0300 (A47K)**

- U A47K 10/00 Body-drying implements; Toilet paper; Holders therefor
- U A47K 10/24 • Towel dispensers {, e.g. for piled-up or folded textile towels}; Toilet-paper dispensers (sheet or web dispensers in general [B65H](#) {; paper dispensers for publicity purposes [G09F 21/22](#), [G09F 23/10](#)}); Dispensers for piled-up or folded textile towels provided or not with devices for taking-up soiled towels as far as not mechanically driven
- U A47K 10/32 • • Dispensers for paper towels or toilet-paper
- U A47K 2010/3266 • • • {Wet wipes}
- U A47K 2010/3273 • • • • {moistened just before use}
- M A47K 2010/3286 • • • • • {~~mby~~[by](#) rollers}

**Project: N/A (A47K)**

- U A47K 11/00 Closets without flushing (closets with recirculation of bowl-cleaning fluid [E03D 5/016](#)); Urinals without flushing (for vehicles in general [B60R](#); closets for railway-cars [B61D](#); for ships [B63B](#); for aircraft [B64D](#); urinals with flushing arrangements [E03D 13/00](#)); Chamber pots; Chairs with toilet conveniences or specially adapted for use with toilets
- U A47K 11/02 • Dry closets, e.g. incinerator closets
- A47K 11/026 • • {with ~~continous~~[continuous](#) tubular film for receiving faeces}

**Project: N/A (A61B)****A61B**

**DIAGNOSIS; SURGERY; IDENTIFICATION** (analysing biological material [G01N](#), e.g. [G01N 33/48](#); obtaining records using waves other than optical waves, in general [G03B 42/00](#))

NOTE

This subclass covers instruments, implements and processes for diagnostic, surgical and person-identification purposes, including obstetrics, instruments for cutting corns, vaccination instruments, finger-printing, psycho-physical tests.

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ [The subject](#) matter ~~covered by~~ [for](#) these [IPC](#) groups is classified in the following CPC groups:

|                             |            |                                      |
|-----------------------------|------------|--------------------------------------|
| <a href="#">A61B 5/0295</a> | covered by | <a href="#">A61B 5/026</a>           |
| <a href="#">A61B 5/151</a>  | covered by | <a href="#">A61B 5/1411</a>          |
| <a href="#">A61B 5/153</a>  | covered by | <a href="#">A61B 5/1405</a>          |
| <a href="#">A61B 5/154</a>  | covered by | <a href="#">A61B 5/1438</a>          |
| <a href="#">A61B 5/157</a>  | covered by | <a href="#">A61B 5/00</a> and s. gr. |
| <a href="#">A61B 17/03</a>  | covered by | <a href="#">A61B 17/00</a>           |
| <a href="#">A61B 17/125</a> | covered by | <a href="#">A61B 17/122</a>          |
| <a href="#">A61B 17/138</a> | covered by | <a href="#">A61B 17/12</a>           |
| <a href="#">A61B 17/76</a>  | covered by | <a href="#">A61B 17/744</a>          |
| <a href="#">A61B 17/78</a>  | covered by | <a href="#">A61B 17/744</a>          |
| <a href="#">A61B 17/90</a>  | covered by | <a href="#">A61B 17/88</a>           |
| <a href="#">A61B 17/94</a>  | covered by | <a href="#">A61B 17/29</a>           |

**Project: RP0486 (A61B)****A61B 5/00**

**Detecting, measuring or recording for diagnostic purposes (radiation diagnosis [A61B 6/00](#); diagnosis by ultrasonic, sonic or infrasonic waves [A61B 8/00](#)); Identification of persons** ~~{(medical informatics [G06F 19/30](#))}~~

**Project: N/A (A61B)**

- U A61B 5/0033 • {Features or image-related aspects of imaging apparatus classified in [A61B 5/00](#), e.g. for MRI, optical tomography or impedance tomography apparatus; arrangements of imaging apparatus in a room (image data processing or generation [G06T](#))}
- WARNING
- Group [A61B 5/0033](#) and subgroups are not complete pending a reorganisation
- A61B 5/0035 • • {adapted for ~~acquistion~~[acquisition](#) of images from more than one imaging mode, e.g. combining MRI and optical tomography}
- A61B 5/01 • Measuring temperature of body parts; {Diagnostic temperature sensing, e.g. for malignant or ~~inflammed~~[inflamed](#) tissue}{clinical thermometers [G01K 5/22](#); thermometers for special purposes [G01K 13/00](#)}

- U A61B 5/48      • {Other medical applications}
- A61B 5/4833    • • {Assessment of ~~subject's~~ **subject's** compliance to treatment}

**Project: RP0486 (A61B)**

- A61B 5/72      • {Signal processing specially adapted for physiological signals or for diagnostic purposes (~~algorithms for computer assisted diagnosis G06F 19/34~~; pattern recognition [G06K 9/00](#))}
- U A61B 6/00      **Apparatus for radiation diagnosis, e.g. combined with radiation therapy equipment (analysis of materials using radiation [G01N 23/00](#), detecting hidden objects by radiation [G01V 5/0008](#), radiodiagnostic or X-ray contrast preparations [A61K 49/00](#); radiation therapy per se [A61N 5/00](#); instruments measuring radiation intensity for application in the field of nuclear medicine, e.g. in vivo counting [G01T 1/161](#); apparatus for taking X-ray photographs [G03B 42/02](#); X-ray photographic processes [G03C 5/16](#); irradiation devices [G21K](#); X-ray apparatus or circuits therefor [H05G 1/00](#))**
- U A61B 6/02      • Devices for diagnosis sequentially in different planes; Stereoscopic radiation diagnosis
- A61B 6/03      • • Computerised tomographs ({diagnosis by magnetic resonance imaging [A61B 5/055](#); } echo-tomography [A61B 8/14](#) ~~{; medical informatics G06F 19/30}~~)
- U A61B 6/52      • {Devices using data or image processing specially adapted for radiation diagnosis (image processing per se [G06T](#))}
- U A61B 6/5211    • • {involving processing of medical diagnostic data}
- A61B 6/5217    • • • {extracting a diagnostic or physiological parameter from medical diagnostic data (details of algorithms to analyse biomedical images [G06T 7/0012](#); ~~algorithms for computer assisted diagnosis G06F 19/34~~)}
- U A61B 6/56      • {Details of data transmission or power supply, e.g. use of slip rings}
- A61B 6/563      • • {involving image data transmission via a network ~~(transmission or management of patient information G06F 19/32)~~}
- U A61B 8/00      **Diagnosis using ultrasonic, sonic or infrasonic waves (imaging of objects using sonar [G01S 15/00](#))**
- U A61B 8/52      • {Devices using data or image processing specially adapted for diagnosis using ultrasonic, sonic or infrasonic waves (image processing per se [G06T](#))}
- WARNING  
This subgroup is not complete pending a reorganisation, see [A61B 8/08](#) and [A61B 8/14](#)
- U A61B 8/5215    • • {involving processing of medical diagnostic data}
- A61B 8/5223    • • • {for extracting a diagnostic or physiological parameter from medical diagnostic data (for algorithms to analyse biomedical images [G06T 7/0012](#); ~~for algorithms for computer assisted diagnosis G06F 19/34~~)}
- U A61B 8/56      • {Details of data transmission or power supply}
- WARNING  
This subgroup is not complete pending a reorganisation, see [A61B 8/00](#)
- A61B 8/565      • • {involving data transmission via a network ~~(management of patient information using digital computers G06F 19/32)~~}

**Project: N/A (A61B)**

- U A61B 17/00** **Surgical instruments, devices or methods, e.g. tourniquets ([A61B 18/00](#) takes precedence; contraceptive devices, pessaries, or applicators therefor [A61F 6/00](#); eye surgery [A61F 9/007](#); ear surgery [A61F 11/00](#))**
- U A61B 17/04
- for suturing wounds; Holders or packages for needles or suture materials (suture materials [A61L 17/00](#))
- U A61B 17/0401
- {Suture anchors, buttons or pledgets, i.e. means for attaching sutures to bone, cartilage or soft tissue; Instruments for applying or removing suture anchors ([A61B 17/0642](#) takes precedence; fixation devices for tendons or ligaments [A61F 2/0811](#))}
- U A61B 2017/0446
- . . . {Means for attaching and blocking the suture in the suture anchor}
- A61B 2017/0458
- . . . . {Longitudinal through hole, e.g. suture blocked by a distal suture **knoknot**}
- U A61B 17/28
- Surgical forceps ({for holding suture needles or materials [A61B 17/0483](#); for removing or smashing calculi [A61B 17/221](#); surgical scissors [A61B 17/3201](#)}; obstetrical forceps [A61B 17/44](#); for inserting intraocular lenses [A61F 2/1662](#); hand-held gripping tools in general [B25B 7/00](#) )}
- U A61B 17/29
- . Forceps for use in minimally invasive surgery
- U A61B 2017/2926
- . . . {Details of heads or jaws}
- U A61B 2017/2932
- . . . . {Transmission of forces to jaw members}
- A61B 2017/2938
- . . . . . {**Independently****Independently** actuatable jaw members, e.g. two actuating rods}
- U A61B 18/00** **Surgical instruments, devices or methods for transferring non-mechanical forms of energy to or from the body (eye surgery [A61F 9/007](#); ear surgery [A61F 11/00](#))**
- U A61B 18/18
- by applying electromagnetic radiation, e.g. microwaves (radiation therapy [A61N 5/00](#))
- U A61B 18/1815
- . {using microwaves}
- A61B 2018/1861
- . . . {with an instrument **insteredinserted** into a body lumen or cavity, e.g. a catheter}
- U A61B 34/00** **Computer-aided surgery; Manipulators or robots specially adapted for use in surgery**
- U A61B 34/30
- Surgical robots
- A61B 2034/304
- . {including a freely orientable platform, e.g. so called **Stewart platforms**'}
- U A61B 46/00** **Surgical drapes**
- U A61B 46/10
- specially adapted for instruments{, e.g. microscopes}
- A61B 46/13
- . the drapes entering the **patient'spatient's** body
- U A61B 50/00** **Containers, covers, furniture or holders specially adapted for surgical or diagnostic appliances or instruments, e.g. sterile covers (drapes specially adapted for instruments [A61B 46/10](#))**
- U A61B 50/30
- Containers specially adapted for packaging, protecting, dispensing, collecting or disposing of surgical or diagnostic appliances or instruments (for wound clamps [A61B 17/10](#); for ligaturing clips [A61B 17/122](#); packages or dispensers for surgical gloves or finger-stalls [A61B 42/40](#))
- A61B 2050/301
- . {carried on the medical **practitioner'spractitioner's** clothing or back}
- A61B 50/31
- . Carrying cases or bags, e.g. doctors'**bags**
- A61B 50/312
- . . . {Doctors'**bags** or nurses'**bags**}

**A61B 90/00**

Instruments, implements or accessories specially adapted for surgery or diagnosis and not covered by any of the groups [A61B 1/00](#) - [A61B 50/00](#), e.g. for luxation treatment or for protecting wound edges (protective face masks [A41D 13/11](#); ~~surgeon's or patient's gowns or dresses~~ [A41D 13/12](#); ~~surgeon's or patient's gowns or dresses~~ [A41D 13/12](#); devices for carrying-off, for treatment of, or for carrying-over, body liquids [A61M 1/00](#))

U [A61B 90/50](#)

- Supports for surgical instruments, e.g. articulated arms

[A61B 90/53](#)

- connected to the ~~surgeon's~~[surgeon's](#) body, e.g. by a belt

**Project: N/A (A61C)****A61C**

**DENTISTRY; APPARATUS OR METHODS FOR ORAL OR DENTAL HYGIENE** (non-driven toothbrushes [A46B](#); {tongue scrapers [A61B 17/24](#);} preparations for dentistry [A61K 6/00](#); preparations for cleaning the teeth or mouth [A61K 8/00](#), [A61Q 11/00](#))

**WARNING**

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|                             |            |                              |
|-----------------------------|------------|------------------------------|
| <a href="#">A61C 7/24</a>   | covered by | <a href="#">A61C 7/20</a>    |
| <a href="#">A61C 7/26</a>   | covered by | <a href="#">A61C 7/20</a>    |
| <a href="#">A61C 7/32</a>   | covered by | <a href="#">A61C 7/28</a>    |
| <a href="#">A61C 8/02</a>   | covered by | <a href="#">A61C 8/0004</a>  |
| <a href="#">A61C 11/04</a>  | covered by | <a href="#">A61C 11/00</a>   |
| <a href="#">A61C 13/003</a> | covered by | <a href="#">A61C 13/26</a>   |
| <a href="#">A61C 13/007</a> | covered by | <a href="#">A61C 13/01</a>   |
| <a href="#">A61C 13/03</a>  | covered by | <a href="#">A61C 13/01</a>   |
| <a href="#">A61C 13/07</a>  | covered by | <a href="#">A61C 13/0025</a> |
| <a href="#">A61C 13/093</a> | covered by | <a href="#">A61C 13/1006</a> |
| <a href="#">A61C 13/103</a> | covered by | <a href="#">A61C 13/1009</a> |
| <a href="#">A61C 13/105</a> | covered by | <a href="#">A61C 13/1009</a> |
| <a href="#">A61C 13/107</a> | covered by | <a href="#">A61C 13/0001</a> |
| <a href="#">A61C 13/113</a> | covered by | <a href="#">A61C 13/0001</a> |
| <a href="#">A61C 13/15</a>  | covered by | <a href="#">A61C 19/003</a>  |
| <a href="#">A61C 13/23</a>  | covered by | <a href="#">A61C 13/0025</a> |
| <a href="#">A61C 13/263</a> | covered by | <a href="#">A61C 13/225</a>  |
| <a href="#">A61C 13/271</a> | covered by | <a href="#">A61C 13/26</a>   |
| <a href="#">A61C 13/32</a>  | covered by | <a href="#">A61C 13/225</a>  |
| <a href="#">A61C 13/36</a>  | covered by | <a href="#">A61C 13/1016</a> |
| <a href="#">A61C 13/38</a>  | covered by | <a href="#">A61C 13/12</a>   |
| <a href="#">A61C 17/024</a> | covered by | <a href="#">A61C 17/02</a>   |
| <a href="#">A61C 17/032</a> | covered by | <a href="#">A61C 17/02</a>   |
| <a href="#">A61C 17/06</a>  | covered by | <a href="#">A61C 17/00</a>   |
| <a href="#">A61C 17/08</a>  | covered by | <a href="#">A61C 17/00</a>   |
| <a href="#">A61C 17/10</a>  | covered by | <a href="#">A61C 17/00</a>   |
| <a href="#">A61C 17/12</a>  | covered by | <a href="#">A61C 17/00</a>   |
| <a href="#">A61C 17/18</a>  | covered by | <a href="#">A61C 17/16</a>   |

U [A61C 8/00](#)

**Means to be fixed to the jaw-bone for consolidating natural teeth or for fixing dental prostheses thereon; Dental implants; Implanting tools (fastening of peg-teeth in the mouth [A61C 13/30](#))**

[A61C 8/001](#)

- {Multiple implanting technique, i.e. ~~mutiple~~[multiple](#) component implants introduced in the jaw from different directions}

**Project: N/A (A61F)****A61F**

**FILTERS IMPLANTABLE INTO BLOOD VESSELS; PROSTHESES; DEVICES PROVIDING PATENCY TO, OR PREVENTING COLLAPSING OF, TUBULAR STRUCTURES OF THE BODY, E.G. STENTS; ORTHOPAEDIC, NURSING OR CONTRACEPTIVE DEVICES; FOMENTATION; TREATMENT OR PROTECTION OF EYES OR EARS; BANDAGES, DRESSINGS OR ABSORBENT PADS; FIRST-AID KITS (dental prosthetics [A61C](#))**

WARNING

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|                            |            |  |
|----------------------------|------------|--|
| <a href="#">A61F 2/48</a>  | covered by | <a href="#">A61F 2/02</a>                                      |
| <a href="#">A61F 2/56</a>  | covered by | <a href="#">A61F 2/54</a>                                      |
| <a href="#">A61F 2/62</a>  | covered by | <a href="#">A61F 2/60</a>                                      |
| <a href="#">A61F 2/70</a>  | covered by | <a href="#">A61F 2/68</a> , <a href="#">A61F 2/72</a>          |
| <a href="#">A61F 2/74</a>  | covered by | <a href="#">A61F 2/68</a>                                      |
| <a href="#">A61F 5/045</a> | covered by | <a href="#">A61G 13/12</a>                                     |
| <a href="#">A61F 5/052</a> | covered by | <a href="#">A61F 5/05</a>                                      |
| <a href="#">A61F 5/447</a> | covered by | <a href="#">A61F 5/445</a>                                     |
| <a href="#">A61F 5/452</a> | covered by | <a href="#">A61F 5/451</a>                                     |
| <a href="#">A61F 5/457</a> | covered by | <a href="#">A61F 5/451</a>                                     |
| <a href="#">A61F 5/458</a> | covered by | <a href="#">A61F 5/451</a>                                     |
| <a href="#">A61F 6/10</a>  | covered by | <a href="#">A61F 6/08</a>                                      |
| <a href="#">A61F 9/01</a>  | covered by | <a href="#">A61F 9/00802</a> -<br><a href="#">A61F 9/00825</a> |
| <a href="#">A61F 9/011</a> | covered by | <a href="#">A61F 9/00802</a> -<br><a href="#">A61F 9/00825</a> |
| <a href="#">A61F 13/22</a> | covered by | <a href="#">A61F 13/206</a>                                    |
| <a href="#">A61F 13/24</a> | covered by | <a href="#">A61F 13/2037</a>                                   |
| <a href="#">A61F 13/30</a> | covered by | <a href="#">A61F 13/26</a>                                     |
| <a href="#">A61F 13/32</a> | covered by | <a href="#">A61F 13/26</a>                                     |
| <a href="#">A61F 13/40</a> | covered by | <a href="#">A61M 35/006</a>                                    |

**U A61F 2/00**

**Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents (as cosmetic articles, see the relevant subclasses, e.g. wigs, hair pieces, [A41G 3/00](#), [A41G 5/00](#), artificial nails [A45D 31/00](#); dental prostheses [A61C 13/00](#); materials for prostheses [A61L 27/00](#); artificial hearts [A61M 1/10](#); artificial kidneys [A61M 1/14](#))**

## U A61F 2/02

• Prostheses implantable into the body {(closure means for urethra or rectum or for artificial body openings therefor [A61F 2/0004](#))}

## U A61F 2/30

• • Joints

## U A61F 2/30767

• • • {Special external and/or bone-contacting surfaces, e.g. coating for improving bone ingrowth (materials for coating prostheses [A61L 27/28](#))}

## U A61F 2/30771

• • • • {applied in original prostheses, e.g. holes, grooves (etching the surface [A61F 2/30767](#))}

## U A61F 2002/3085

• • • • • {with a threaded, e.g. self-tapping, bone-engaging surface, e.g. external surface}

## A61F 2002/30863

• • • • • • {the entry end surface having flutes, relief grooves, starter notches or ~~beveled~~ *bevelled* indentations}



- U A61F 11/00** **Methods or devices for treatment of the ears, e.g. surgical; Protective devices for the ears, carried on the body or in the hand; {Non-electric hearing aids}**
- U A61F 11/06  
A61F 11/14
- Protective devices for the ears
  - • external, e.g. earcaps or earmuffs (headwear, e.g. caps or helmets, with means for protecting the ears [A42B 1/06](#), [A42B 3/16](#), {for hairdresser's rooms [A45D 44/12](#); for sports [A63B 71/10](#); headphones [H04R 1/10](#)})
- NOTE  
{Group [A61F 11/14](#) contains only acoustic protection (other external protectors, see [A61F 11/06](#))}
- U A61F 13/00** **Bandages or dressings (suspensory bandages [A61F 5/40](#); {contact-avoiding wound protectors [A61F 15/008](#); bandages or dressings with incorporated medicaments [A61L 15/44](#), [A61M 35/006](#); radioactive dressings [A61N 5/1029](#)}); Absorbent pads (chemical aspects of, or use of materials for, bandages, dressings or absorbent pads [A61L 15/00](#); {absorbent pads for tracheostomy [A61M 16/047](#)})**
- U A61F 13/15
- Absorbent pads, e.g. sanitary towels, swabs or tampons for external or internal application to the body (non-absorbent catamenial receptacles [A61F](#)); Supporting or fastening means therefor; Tampon applicators
- U A61F 13/45
- • characterised by the shape (cup-shaped type tampons [A61F 13/2045](#))
- U A61F 2013/4512
- • • {folded in special shape during use ([A61F 13/534](#), [A61F 13/551](#), [A61F 13/56](#), [A61F 13/15747](#) take precedence)}
- U A61F 2013/4543
- • • • {with a special transverse section ([A61F 13/534](#) takes precedence)}
- A61F 2013/455
- • • • • {having a "W" shape}
- A61F 2013/4556
- • • • • {having a "M" shape}
- U A61F 13/49
- • • Absorbent articles specially adapted to be worn around the waist, e.g. diapers
- U A61F 13/49007
- • • • {Form-fitting, self-adjusting disposable diapers}
- U A61F 13/49009
- • • • • {with elastic means}
- A61F 2013/49038
- • • • • • {the elastic means is located all around the absorbent ~~article's~~ [article's](#) perimeter}
- U A61F 2013/49068
- • • • {characterized by the shape of the outline}
- A61F 2013/49076
- • • • • {as "I"-shaped}
- A61F 2013/49077
- • • • • {as "T"-shaped}
- U A61F 13/53
- • characterised by the absorbing medium ([A61F 13/20](#) takes precedence)
- U A61F 2013/530481
- • • {having superabsorbent materials, i.e. highly absorbent polymer gel materials}
- A61F 2013/530671
- • • • {being mixed with mineral or inert material, e.g. "introfying particles"}
- U A61F 2250/00** **Special features of prostheses classified in groups [A61F 2/00](#) - [A61F 2/26](#) or [A61F 2/82](#) or [A61F 9/00](#) or [A61F 11/00](#) or subgroups thereof**
- U A61F 2250/0004
- adjustable
- A61F 2250/0008
- • for adjusting a position by translation along an axis or two ~~perpendicaular~~ [perpendicular](#) axes

**Project: N/A (A61G)****A61G**

**TRANSPORT OR ACCOMODATION FOR PATIENTS; OPERATING TABLES OR CHAIRS; CHAIRS FOR DENTISTRY; FUNERAL DEVICES (embalming corpses [A01N 1/00](#); {chairs or beds in general [A47C](#); walking aids [A61H 3/00](#)})**

**WARNING**

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|                             |            |                            |
|-----------------------------|------------|----------------------------|
| <a href="#">A61G 3/04</a>   | covered by | <a href="#">A61G 3/02</a>  |
| <a href="#">A61G 7/043</a>  | covered by | <a href="#">A61G 7/05</a>  |
| <a href="#">A61G 7/12</a>   | covered by | <a href="#">A61G 7/10</a>  |
| <a href="#">A61G 7/14</a>   | covered by | <a href="#">A61G 7/10</a>  |
| <a href="#">A61G 15/04</a>  | covered by | <a href="#">A61G 15/02</a> |
| <a href="#">A61G 15/06</a>  | covered by | <a href="#">A61G 15/02</a> |
| <a href="#">A61G 17/013</a> | covered by | <a href="#">A61G 17/00</a> |

**Project: N/A (A61K)****A61K**

**PREPARATIONS FOR MEDICAL, DENTAL, OR TOILET PURPOSES (devices or methods specially adapted for bringing pharmaceutical products into particular physical or administering forms [A61J 3/00](#); chemical aspects of, or use of materials for deodorisation of air, for disinfection or sterilisation, or for bandages, dressings, absorbent pads or surgical articles [A61L](#) {}; compounds *per se* [C01](#), [C07](#), [C08](#), [C12N](#); } soap compositions [C11D](#) {}; microorganisms *per se* [C12N](#)})**

**NOTES**

1. This subclass covers the following subject matter, whether set forth as a composition (mixture), process of preparing the composition or process of treating using the composition:

- a. Drug or other biological compositions which are capable of:
  - preventing, alleviating, treating or curing abnormal or pathological conditions of the living body by such means as destroying a parasitic organism, or limiting the effect of the disease or abnormality by chemically altering the physiology of the host or parasite (biocides [A01N 25/00](#) - [A01N 65/00](#));
  - maintaining, increasing, decreasing, limiting, or destroying a physiological body function, e.g. vitamin compositions, sex sterilants, fertility inhibitors, growth promoters, or the like (sex sterilants for invertebrates, e.g. insects, [A01N](#); plant growth regulators [A01N 25/00](#) - [A01N 65/00](#));
  - diagnosing a physiological condition or state by an *in vivo* test, e.g. X-ray contrast or skin patch test compositions (measuring or testing processes involving enzymes or microorganisms [C12Q](#); *in vitro* testing of biological material, e.g. blood, urine, [G01N](#), e.g. [G01N 33/48](#))
- b. Body treating compositions generally intended for deodorising, protecting, adorning or grooming the body, e.g. cosmetics, dentifrices, tooth filling materials.

2. Attention is drawn to the definitions of groups of chemical elements following the title of section [C](#).

3. Attention is drawn to the notes in class [C07](#), for example the notes following the title of the subclass [C07D](#), setting forth the rules for classifying organic

compounds in that class, which rules are also applicable, if not otherwise indicated, to the classification of organic compounds in [A61K](#).

4. In this subclass, with the exception of group [A61K 8/00](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.

#### WARNINGS

1. -The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ ~~The~~ ~~subject~~ matter ~~covered by~~ ~~for~~ these ~~IPC~~ groups is classified in the following CPC groups:

|                             |            |  |
|-----------------------------|------------|--|
| <a href="#">A61K 9/133</a>  | covered by | <a href="#">A61K 9/127</a>   |
| <a href="#">A61K 9/18</a>   | covered by | <a href="#">A61K 9/14</a>  |
| <a href="#">A61K 9/22</a>   | covered by | <a href="#">A61K 9/20</a>  |
| <a href="#">A61K 9/24</a>   | covered by | <a href="#">A61K 9/209</a>   |
| <a href="#">A61K 9/26</a>   | covered by | <a href="#">A61K 9/2077</a> , <a href="#">A61K 9/2081</a>                                  |
| <a href="#">A61K 9/30</a>   | covered by | <a href="#">A61K 9/28</a>  |
| <a href="#">A61K 9/32</a>   | covered by | <a href="#">A61K 9/28</a>  |
| <a href="#">A61K 9/34</a>   | covered by | <a href="#">A61K 9/28</a>  |
| <a href="#">A61K 9/36</a>   | covered by | <a href="#">A61K 9/28</a>  |
| <a href="#">A61K 9/38</a>   | covered by | <a href="#">A61K 9/28</a>  |
| <a href="#">A61K 9/40</a>   | covered by | <a href="#">A61K 9/28</a>  |
| <a href="#">A61K 9/42</a>   | covered by | <a href="#">A61K 9/28</a>  |
| <a href="#">A61K 9/44</a>   | covered by | <a href="#">A61K 9/2072</a>  |
| <a href="#">A61K 9/46</a>   | covered by | <a href="#">A61K 9/0007</a>  |
| <a href="#">A61K 9/52</a>   | covered by | <a href="#">A61K 9/50</a>  |
| <a href="#">A61K 9/54</a>   | covered by | <a href="#">A61K 9/5073</a> , <a href="#">A61K 9/5078</a> ,<br><a href="#">A61K 9/5084</a> |
| <a href="#">A61K 9/56</a>   | covered by | <a href="#">A61K 9/50</a>  |
| <a href="#">A61K 9/58</a>   | covered by | <a href="#">A61K 9/50</a>  |
| <a href="#">A61K 9/60</a>   | covered by | <a href="#">A61K 9/50</a>  |
| <a href="#">A61K 9/62</a>   | covered by | <a href="#">A61K 9/50</a>  |
| <a href="#">A61K 9/64</a>   | covered by | <a href="#">A61K 9/50</a>  |
| <a href="#">A61K 9/66</a>   | covered by | <a href="#">A61K 9/48</a>  |
| <a href="#">A61K 9/68</a>   | covered by | <a href="#">A61K 9/0058</a>  |
| <a href="#">A61K 9/72</a>   | covered by | <a href="#">A61K 9/0073</a>  |
| <a href="#">A61K 39/108</a> | covered by |  |
| <a href="#">A61K 39/112</a> | covered by |  |
| <a href="#">A61K 45/08</a>  | covered by | <a href="#">A61K 31/00</a> , <a href="#">A61K 47/00</a>                                    |
| <a href="#">A61K 47/04</a>  | covered by | <a href="#">A61K 47/02</a>   |
| <a href="#">A61K 50/00</a>  | covered by | <a href="#">A61K 9/0009</a> , <a href="#">C09J 9/02</a>                                    |

The following IPC indexing codes are not used in the CPC scheme:

[A61K 101/00](#) - [A61K 135/00](#)

2. Subgroups of [A61K 48/00](#) are incomplete (Jan. 2003). Documents are being reclassified from [A61K 48/00](#) to its subgroups

#### U A61K 9/00

**Medicinal preparations characterised by special physical form (nuclear magnetic resonance contrast preparations or magnetic resonance imaging contrast preparataions [A61K 49/18](#); preparations containing radioactive substances [A61K 51/12](#))**

#### NOTE

Among the one-dot groups of [A61K 9/00](#), classification is not made in the last appropriate place.

[A61K 9/00](#) is subdivided according to the following concepts:

- the drug release technique ( [A61K 9/0002](#) and subgroups),
- the site of application ( [A61K 9/0012](#) and subgroups), and
- the physical form ( [A61K 9/0087](#) - [A61K 9/7023](#) ).

Where relevant, documents are classified in more than one of these subdivisions.

- U   A61K 9/0012       • {Galenical forms characterised by the site of application}
- U   A61K 9/007       • • {Pulmonary tract; Aromatherapy}
- U   A61K 9/0073       • • • {Sprays or powders for inhalation; Aerolised or nebulised preparations generated by other means than thermal energy; (nasal sprays [A61K 9/0043](#); inhalation of vapours of volatile or heated drugs, e.g. essential oils or nicotine, [A61K 9/007](#); devices [A61M](#))}
- A61K 9/0075       • • • • {for inhalation via a dry powder inhaler [DPI], e.g. comprising micronized drug mixed with lactose [carrier](#) particles}
- U   A61K 9/48       • Preparations in capsules, e.g. of gelatin, of chocolate {( [A61K 9/0004](#) takes precedence; bite capsules [A61K 9/0056](#) )}
- U   A61K 9/50       • • Microcapsules {having a gas, liquid or semi-solid filling; Solid microparticles or pellets surrounded by a distinct coating layer, e.g. coated microspheres, coated drug crystals ( [A61K 9/2081](#) takes precedence; particles with a single coating comprising drug [A61K 9/167](#) )}
- A61K 9/5094       • • • {Microcapsules containing magnetic carrier material, e.g. ferrite for drug [targeting](#) }

**U   A61K 48/00       Medicinal preparations containing genetic material which is inserted into cells of the living body to treat genetic diseases; Gene therapy**

**NOTES**

1. In this group the following expression is used with the meaning indicated:  
"gene therapy" means *in vivo* delivery of nucleic acids encoding for peptides by administration of these nucleic acids or by implanting cells transfected *ex vivo* with the nucleic acids encoding for the peptides.
2. Documents relating to new nucleic acids encoding for peptides, e.g. enzymes, and their use in gene therapy are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the encoded peptides, with the appropriate indexing codes relating to gene therapy.
3. Documents relating to new vectors and their use in gene therapy are classified in groups [C12N 15/85](#) - [C12N 15/90](#) according to the vectors, and the appropriate indexing codes, including those relating to gene therapy.
4. Documents describing cells genetically modified to express a gene of interest and their use in gene therapy are classified in [C12N 5/06](#) according to the cells, with the appropriate indexing codes relating to gene therapy.
5. Documents relating to new medical uses of peptides *per se*, which peptides may be encoded by nucleic acids, and wherein the nucleic acids may be administered directly or by implanting cells transfected *ex vivo* with the nucleic acids, are classified in the appropriate groups [A61K 38/00](#) or [A61K 39/00](#) according to the encoded peptides, with the indexing codes relating, *inter alia*, to gene therapy.

- U   A61K 48/0008       • {characterised by an aspect of the 'non-active' part of the composition delivered, e.g. wherein such 'non-active' part is not delivered simultaneously with the 'active' part of the composition}
- A61K 48/0025       • • {wherein the non-active part clearly interacts with the delivered [nucleic](#) acid}

## Project: N/A (A61L)

A61L

METHODS OR APPARATUS FOR STERILISING MATERIALS OR OBJECTS IN GENERAL; DISINFECTION, STERILISATION, OR DEODORISATION OF AIR; CHEMICAL ASPECTS OF BANDAGES, DRESSINGS, ABSORBENT PADS, OR SURGICAL ARTICLES; MATERIALS FOR BANDAGES, DRESSINGS, ABSORBENT PADS, OR SURGICAL ARTICLES (preservation of bodies or disinfecting characterised by the agent employed [A01N](#); preserving, e.g. sterilising, food or foodstuffs [A23](#); preparations for medical, dental or toilet purposes [A61K](#); preparation of ozone [C01B 13/10](#))

WARNINGS

1. -The following IPC groups are not **used** in the CPC **system** **scheme**. **Subject** **The subject** matter **covered by** **for** these **IPC** groups is classified in the following CPC groups:

[A61L 33/10](#) covered by [A61L 33/0011](#)

[A61L 33/14](#) covered by [A61L 33/0011](#)

[A61L 33/16](#) covered by [A61L 33/0047](#)

[A61L 101/00-A61L 101/56](#) covered by

2. IPC7 groups [A61L 2/07](#) and subgroups, and [A61L 9/012](#) - [A61L 9/014](#) might be incomplete as relevant documents might still be classified in the hierarchical higher groups

A61L 11/00

Methods specially adapted for refuse ~~{{(desintegrating medical waste [B02C 19/0075](#); **disintegrating medical waste** [B02C 19/0075](#); disposal of medical waste [B09B 3/0075](#))}}~~

U A61L 26/00

Chemical aspects of, or use of materials for, {wound dressings or} bandages {in liquid, gel or powder form}

NOTES

1. When classifying in group [A61L 26/00](#), classification is also made in [A61L 33/00](#) if the materials used are antithrombogenic.

2. In groups [A61L 26/00](#) - [A61L 26/0095](#), the use of specific polymers is indicated using the relevant combination set symbol, adding, after the symbol in [A61L](#), the correspondent symbol of the polymer in subclass [C08L](#), e.g. liquid bandages on alginates: [A61L 26/0023](#), [C08L 5/04](#)

A61L 26/0095

- {Composite materials, i.e. containing one material dispersed in ~~amatrix~~ **a matrix** of the same or different material}

## Project: N/A (A61M)

A61M

DEVICES FOR INTRODUCING MEDIA INTO, OR ONTO, THE BODY (introducing media into or onto the bodies of animals [A61D 7/00](#); means for inserting tampons [A61F 13/26](#); devices for administering food or medicines orally [A61J](#); containers for collecting, storing or administering blood or medical fluids [A61J 1/05](#)); DEVICES FOR TRANSDUCING BODY MEDIA OR FOR TAKING MEDIA FROM THE BODY (surgery [A61B](#); chemical aspects of surgical articles [A61L](#)); DEVICES FOR PRODUCING OR ENDING SLEEP OR STUPOR

NOTES

1. This subclass covers suction, pumping or atomising devices for medical use (e.g. cups, breast relievers, irrigators, sprays, powder insufflators, atomisers, inhalers), apparatus for general or local anaesthetics, devices or methods for

causing a change in the state of consciousness, catheters, dilators, apparatus for introducing medicines into the body other than orally

2. Void

3. When classifying in this group, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                             |            |  |
|-----------------------------|------------|--|
| <a href="#">A61M 1/18</a>   | covered by | <a href="#">B01D 63/02</a> , <a href="#">B01D 63/04</a>                                  |
| <a href="#">A61M 1/20</a>   | covered by | <a href="#">B01D 63/06</a>   |
| <a href="#">A61M 1/22</a>   | covered by | <a href="#">B01D 63/08</a>   |
| <a href="#">A61M 1/24</a>   | covered by | <a href="#">B01D 63/10</a>   |
| <a href="#">A61M 3/04</a>   | covered by | <a href="#">A61M 3/02</a>  |
| <a href="#">A61M 5/175</a>  | covered by | <a href="#">A61M 5/168</a>   |
| <a href="#">A61M 5/303</a>  | covered by | <a href="#">A61M 5/30</a>  |
| <a href="#">A61M 5/307</a>  | covered by | <a href="#">A61M 5/30</a>  |
| <b>A61M23/00</b>            | covered by | <a href="#">A61M 25/01</a> , <a href="#">A61M 29/00</a>                                  |
| <a href="#">A61M 25/08</a>  | covered by | <a href="#">A61M 25/0105</a>   |
| <a href="#">A61M 25/082</a> | covered by | <a href="#">A61M 25/0116</a>   |
| <a href="#">A61M 25/085</a> | covered by | <a href="#">A61M 25/0122</a>   |
| <a href="#">A61M 25/088</a> | covered by | <a href="#">A61M 25/01</a>   |
| <a href="#">A61M 25/092</a> | covered by | <a href="#">A61M 25/0133</a>   |
| <a href="#">A61M 25/095</a> | covered by | <a href="#">A61M 25/01</a> , <a href="#">A61B 5/00</a> ,<br><a href="#">A61N 1/056</a>   |
| <a href="#">A61M 25/098</a> | covered by | <a href="#">A61M 25/0108</a>   |
| <a href="#">A61M 25/12</a>  | covered by | <a href="#">A61M 25/10</a> , <a href="#">A61M 29/02</a>                                  |
| <a href="#">A61M 25/14</a>  | covered by | <a href="#">A61M 25/0021</a>   |
| <a href="#">A61M 25/16</a>  | covered by | <a href="#">A61M 25/0009</a>   |
| <a href="#">A61M 25/18</a>  | covered by | <a href="#">A61M 25/0014</a>   |
| <a href="#">A61M 29/04</a>  | covered by | <a href="#">A61M 29/02</a>   |
| <a href="#">A61M 36/00</a>  | covered by | <a href="#">A61M 37/0069</a> , <a href="#">A61N 5/10</a>                                 |
| <a href="#">A61M 36/02</a>  | covered by | <a href="#">A61M 37/0069</a> , <a href="#">A61N 5/10</a>                                 |
| <a href="#">A61M 36/04</a>  | covered by | <a href="#">A61M 37/0069</a> , <a href="#">A61N 5/10</a> ,<br><a href="#">A61M 15/02</a> |
| <a href="#">A61M 36/06</a>  | covered by | <a href="#">A61M 37/0069</a> , <a href="#">A61N 5/10</a> ;<br><a href="#">A61M 15/02</a> |
| <a href="#">A61M 36/08</a>  | covered by | <a href="#">A61M 5/1785</a>  |
| <a href="#">A61M 36/10</a>  | covered by | <a href="#">A61M 37/0069</a> , <a href="#">A61N 5/10</a>                                 |
| <a href="#">A61M 36/12</a>  | covered by | <a href="#">A61M 37/0069</a> , <a href="#">A61N 5/10</a>                                 |
| <a href="#">A61M 36/14</a>  | covered by | <a href="#">A61M 37/0069</a> , <a href="#">A61N 5/10</a>                                 |

#### Project: RP0486 (A61M)

U A61M 5/00

Devices for bringing media into the body in a subcutaneous, intra-vascular or intramuscular way; Accessories therefor, e.g. filling or cleaning devices, arm-rests ({vaccination appliances for veterinary use [A61D 1/025](#)}; tube connectors, tube couplings, valves or branch units specially adapted for medical use [A61M 39/00](#); containers specially adapted for medical or pharmaceutical purposes [A61J 1/00](#); {combinations of vial and syringe for mixing or transferring their contents [A61J 1/20](#); holders for containers for collecting, storing or administering blood or medical fluids [A61J 1/16](#)})

- U A61M 5/14      • Infusion devices, e.g. infusing by gravity; Blood infusion; Accessories therefor (suction in pumping blood transfusion [A61M 1/02](#); {infusion containers [A61J 1/05](#)})
- U A61M 5/142      • • Pressure infusion, e.g. using pumps
- NOTE  
In this group, the following expression is used with the meaning indicated:
- "pressure infusion" includes powered injection working at a controlled rate
- A61M 2005/14288      • • • {Infusion or injection simulation (simulation of surgery in general [A61B 34/10](#); training for or simulation of use of injection or infusion devices [G09B 23/285](#); ~~computer simulations for diagnosis or treatment in general~~ [G06F 19/3437](#))}

**Project: N/A (A61M)**

- U A61M 2202/00      **Special media to be introduced, removed or treated (applying radioactive material [A61N 5/1028](#))**
- NOTE  
The classification symbols [A61M 2202/0007](#) - [A61M 2202/0092](#) are not listed first when assigned to patent documents.  
They are used only when associated to other subgroups of [A61M 2202/00](#) in combination sets  
Example:  
[A61M 2202/0417](#), [A61M 2202/0057](#)
- U A61M 2202/04      • Liquids
- NOTE  
The codes can be followed by additional symbols. The symbols have the meaning as listed below:
- |           |   |
|-----------|---|
| <b>+A</b> | fluid entering a filter;  |
| <b>+B</b> | fluid leaving the cross-flow filter without having passed through the filtering element ; |
| <b>+C</b> | filtrate, i.e. the fluid passing through the filter;                                      |
| <b>+D</b> | residue retained by the filter due to size;   |
| <b>+E</b> | retained by adsorption;   |
| <b>+F</b> | changed by biological action;   |
| <b>+H</b> | product to be retained or harvested, e.g. by pheresis;                                    |
| <b>+K</b> | changed by chemical action:   |
| <b>+W</b> | product washed out;   |
| <b>+Z</b> | starting product created by centrifuging.   |
- U A61M 2202/0468      • • non-physiological
- A61M 2202/0484      • • • ~~Alchohol~~[Alcohol](#)
- U **A61M 2205/00**      **General characteristics of the apparatus**
- U A61M 2205/35      • Communication
- U A61M 2205/3507      • • with implanted devices, e.g. external control
- A61M 2205/353      • • • using mechanical means, e.g. ~~subcutaneous~~[subcutaneous](#) pushbuttons



**Project: N/A (A61N)****A61N**

**ELECTROTHERAPY; MAGNETOTHERAPY; RADIATION THERAPY; ULTRASOUND THERAPY (measurement of bioelectric currents [A61B](#); surgical instruments, devices or methods for transferring non-mechanical forms of energy to or from the body [A61B 18/00](#); anaesthetic apparatus in general [A61M](#); incandescent lamps [H01K](#); infra-red radiators for heating [H05B](#))**

**NOTE**

In this subclass, the following term is used with the meaning indicated: In this subclass, the following term is used with the meaning indicated:

- "therapy" implies that the treatment, when it aims at destroying sick or abnormal cells, is performed within the limits of healthy cell life, the destruction thereof being undesired, contrary to that which takes place with instruments, devices or methods covered by group [A61B 18/00](#).

**WARNING**

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                            |            |  |
|----------------------------|------------|--|
| <a href="#">A61N 1/34</a>  | covered by | <a href="#">A61N 1/36021</a> ,<br><a href="#">A61N 1/36071</a> |
| <a href="#">A61N 2/04</a>  | covered by | <a href="#">A61N 2/02</a>                                      |
| <a href="#">A61N 5/067</a> | covered by | <a href="#">A61N 5/06</a>                                      |
| <a href="#">A61N 5/08</a>  | covered by | <a href="#">A61N 5/06</a>                                      |
| <a href="#">A61N 2/08</a>  | covered by | <a href="#">A61N 2/06</a>                                      |
| <a href="#">A61N 2/10</a>  | covered by | <a href="#">A61N 2/06</a>                                      |
| <a href="#">A61N 5/073</a> | covered by | <a href="#">A61N 5/06</a> , <a href="#">A61N 2005/073</a>      |

**Project: RP0329 (A61P)****N A61P****SPECIFIC THERAPEUTIC ACTIVITY OF CHEMICAL COMPOUNDS OR MEDICINAL PREPARATIONS****NOTES**

1. This subclass covers therapeutic activity of chemical compounds or medicinal preparations already classified as such in subclasses [A61K](#) or [C12N](#), or in classes [C01](#), [C07](#) or [C08](#)
2. In this subclass, the term "drugs" includes chemical compounds or compositions with therapeutic activity.
3. In this subclass, therapeutic activity is classified in all appropriate places {to the extent of all the different therapeutic activities stated in the claims and also significantly disclosed as examples in the disclosure}.
4. Attention is drawn to cases where the subject of the invention concerns only specific therapeutic activity of chemical compounds or medical preparations, and the chemical structure, compound, mixture or composition of this subject of the invention is known. In such cases, classification is made in both subclass [A61K](#) and subclass [A61P](#) as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information of interest for search, it may also be classified as additional information. {There is no classification in [C01](#), [C07](#), [C08](#), [C12N](#) as additional information in CPC if the chemical structure, compound, mixture or composition or any individual

*ingredient of a mixture or composition is known and classification is made in both subclass [A61K](#) and subclass [A61P](#) as invention information.*

*5. The classification symbols of this subclass are not listed first when assigned to patent documents.*

**N A61P 1/00**

**Drugs for disorders of the alimentary tract or the digestive system**

N A61P 1/02

• Stomatological preparations, e.g. drugs for caries, aphtae, periodontitis

N A61P 1/04

• for ulcers, gastritis or reflux esophagitis, e.g. antacids, inhibitors of acid secretion, mucosal protectants

N A61P 1/06

• Anti-spasmodics, e.g. drugs for colics, esophagic dyskinesia

N A61P 1/08

• for nausea, cinetosis or vertigo; Antiemetics

N A61P 1/10

• Laxatives

N A61P 1/12

• Antidiarrhoeals

N A61P 1/14

• Prodigestives, e.g. acids, enzymes, appetite stimulants, antidyspeptics, tonics, antifatulents

N A61P 1/16

• for liver or gallbladder disorders, e.g. hepatoprotective agents, cholagogues, litholytics

N A61P 1/18

• for pancreatic disorders, e.g. pancreatic enzymes

**N A61P 3/00**

**Drugs for disorders of the metabolism (of the blood or the extracellular fluid [A61P 7/00](#))**

N A61P 3/02

• Nutrients, e.g. vitamins, minerals

N A61P 3/04

• Anorexiant; Antiobesity agents

N A61P 3/06

• Antihyperlipidemics

N A61P 3/08

• for glucose homeostasis (pancreatic hormones [A61P 5/48](#))

N A61P 3/10

• • for hyperglycaemia, e.g. antidiabetics

N A61P 3/12

• for electrolyte homeostasis

N A61P 3/14

• • for calcium homeostasis (vitamin D [A61P 3/02](#); parathyroid hormones [A61P 5/18](#); calcitonin [A61P 5/22](#); osteoporosis [A61P 19/10](#); bone metastasis [A61P 35/04](#))

**N A61P 5/00**

**Drugs for disorders of the endocrine system**

N A61P 5/02

• of the hypothalamic hormones, e.g. TRH, GnRH, CRH, GRH, somatostatin

N A61P 5/04

• • for decreasing, blocking or antagonising the activity of the hypothalamic hormones

N A61P 5/06

• of the anterior pituitary hormones, e.g. TSH, ACTH, FSH, LH, PRL, GH

N A61P 5/08

• • for decreasing, blocking or antagonising the activity of the anterior pituitary hormones

N A61P 5/10

• of the posterior pituitary hormones, e.g. oxytocin, ADH

N A61P 5/12

• • for decreasing, blocking or antagonising the activity of the posterior pituitary hormones

N A61P 5/14

• of the thyroid hormones, e.g. T3, T4

N A61P 5/16

• • for decreasing, blocking or antagonising the activity of the thyroid hormones

N A61P 5/18

• of the parathyroid hormones

N A61P 5/20

• • for decreasing, blocking or antagonising the activity of PTH

N A61P 5/22

• • for decreasing, blocking or antagonising the activity of calcitonin

N A61P 5/24

• of the sex hormones

N A61P 5/26

• • Androgens

N A61P 5/28

• • Antiandrogens

|          |                   |   |
|----------|-------------------|---|
| N        | A61P 5/30         | • • Oestrogens  |
| N        | A61P 5/32         | • • Antioestrogens  |
| N        | A61P 5/34         | • • Gestagens   |
| N        | A61P 5/36         | • • Antigestagens   |
| N        | A61P 5/38         | • of the suprarenal hormones  |
| N        | A61P 5/40         | • • Mineralocorticosteroids, e.g. aldosterone; Drugs increasing or potentiating the activity of mineralocorticosteroids   |
| N        | A61P 5/42         | • • for decreasing, blocking or antagonising the activity of mineralocorticosteroids  |
| N        | A61P 5/44         | • • Glucocorticosteroids; Drugs increasing or potentiating the activity of glucocorticosteroids   |
| N        | A61P 5/46         | • • for decreasing, blocking or antagonising the activity of glucocorticosteroids   |
| N        | A61P 5/48         | • of the pancreatic hormones  |
| N        | A61P 5/50         | • • for increasing or potentiating the activity of insulin  |
| <b>N</b> | <b>A61P 7/00</b>  | <b>Drugs for disorders of the blood or the extracellular fluid</b>  |
| N        | A61P 7/02         | • Antithrombotic agents; Anticoagulants; Platelet aggregation inhibitors  |
| N        | A61P 7/04         | • Antihaemorrhagics; Procoagulants; Haemostatatic agents; Antifibrinolytic agents   |
| N        | A61P 7/06         | • Antianaemics  |
| N        | A61P 7/08         | • Plasma substitutes; Perfusion solutions; Dialytics or haemodialytics; Drugs for electrolytic or acid-base disorders, e.g. hypovolemic shock (artificial tears <a href="#">A61P 27/04</a> )            |
| N        | A61P 7/10         | • Antioedematous agents; Diuretics  |
| N        | A61P 7/12         | • Antidiuretics, e.g. drugs for diabetes insipidus (ADH <a href="#">A61P 5/10</a> )   |
| <b>N</b> | <b>A61P 9/00</b>  | <b>Drugs for disorders of the cardiovascular system</b>   |
| N        | A61P 9/02         | • Non-specific cardiovascular stimulants, e.g. drugs for syncope, antihypotensives  |
| N        | A61P 9/04         | • Inotropic agents, i.e. stimulants of cardiac contraction; Drugs for heart failure   |
| N        | A61P 9/06         | • Antiarrhythmics   |
| N        | A61P 9/08         | • Vasodilators for multiple indications   |
| N        | A61P 9/10         | • for treating ischaemic or atherosclerotic diseases, e.g. antianginal drugs, coronary vasodilators, drugs for myocardial infarction, retinopathy, cerebrovascula insufficiency, renal arteriosclerosis |
| N        | A61P 9/12         | • Antihypertensives   |
| N        | A61P 9/14         | • Vasoprotectives; Antihaemorrhoidals; Drugs for varicose therapy; Capillary stabilisers  |
| <b>N</b> | <b>A61P 11/00</b> | <b>Drugs for disorders of the respiratory system</b>  |
| N        | A61P 11/02        | • Nasal agents, e.g. decongestants  |
| N        | A61P 11/04        | • for throat disorders  |
| N        | A61P 11/06        | • Antiasthmatics  |
| N        | A61P 11/08        | • Bronchodilators   |
| N        | A61P 11/10        | • Expectorants  |
| N        | A61P 11/12        | • Mucolytics  |
| N        | A61P 11/14        | • Antitussive agents  |
| N        | A61P 11/16        | • Central respiratory analeptics  |
| <b>N</b> | <b>A61P 13/00</b> | <b>Drugs for disorders of the urinary system</b>  |

|          |                   |  |
|----------|-------------------|--|
| N        | A61P 13/02        | • of urine or of the urinary tract, e.g. urine acidifiers  |
| N        | A61P 13/04        | • for urolithiasis   |
| N        | A61P 13/06        | • Anti-spasmodics  |
| N        | A61P 13/08        | • of the prostate  |
| N        | A61P 13/10        | • of the bladder   |
| N        | A61P 13/12        | • of the kidneys   |
| <b>N</b> | <b>A61P 15/00</b> | <b>Drugs for genital or sexual disorders (for disorders of sex hormones <a href="#">A61P 5/24</a>); Contraceptives</b> |
| N        | A61P 15/02        | • for disorders of the vagina  |
| N        | A61P 15/04        | • for inducing labour or abortion; Uterotonics   |
| N        | A61P 15/06        | • Antiabortive agents; Labour repressants  |
| N        | A61P 15/08        | • for gonadal disorders or for enhancing fertility, e.g. inducers of ovulation or of spermatogenesis                   |
| N        | A61P 15/10        | • for impotence  |
| N        | A61P 15/12        | • for climacteric disorders  |
| N        | A61P 15/14        | • for lactation disorders, e.g. galactorrhoea  |
| N        | A61P 15/16        | • Masculine contraceptives   |
| N        | A61P 15/18        | • Feminine contraceptives  |
| <b>N</b> | <b>A61P 17/00</b> | <b>Drugs for dermatological disorders</b>  |
| N        | A61P 17/02        | • for treating wounds, ulcers, burns, scars, keloids, or the like  |
| N        | A61P 17/04        | • Antipruritics  |
| N        | A61P 17/06        | • Antipsoriatics   |
| N        | A61P 17/08        | • Antiseborrheics  |
| N        | A61P 17/10        | • Anti-acne agents   |
| N        | A61P 17/12        | • Keratolytics, e.g. wart or anti-corn preparations  |
| N        | A61P 17/14        | • for baldness or alopecia   |
| N        | A61P 17/16        | • Emollients or protectives, e.g. against radiation  |
| N        | A61P 17/18        | • Antioxidants, e.g. antiradicals (preparations for protection against sunlight <a href="#">A61Q 17/00</a> )           |
| <b>N</b> | <b>A61P 19/00</b> | <b>Drugs for skeletal disorders</b>  |
| N        | A61P 19/02        | • for joint disorders, e.g. arthritis, arthrosis   |
| N        | A61P 19/04        | • for non-specific disorders of the connective tissue  |
| N        | A61P 19/06        | • Antigout agents, e.g. antihyperuricemic or uricosuric agents   |
| N        | A61P 19/08        | • for bone diseases, e.g. rachitism, Paget's disease   |
| N        | A61P 19/10        | • • for osteoporosis   |
| <b>N</b> | <b>A61P 21/00</b> | <b>Drugs for disorders of the muscular or neuromuscular system</b>   |
| N        | A61P 21/02        | • Muscle relaxants, e.g. for tetanus or cramps   |
| N        | A61P 21/04        | • for myasthenia gravis  |
| N        | A61P 21/06        | • Anabolic agents (androgens <a href="#">A61P 5/26</a> )   |
| <b>N</b> | <b>A61P 23/00</b> | <b>Anaesthetics</b>  |
| N        | A61P 23/02        | • Local anaesthetics   |
| <b>N</b> | <b>A61P 25/00</b> | <b>Drugs for disorders of the nervous system</b>   |
| N        | A61P 25/02        | • for peripheral neuropathies  |

|          |                   |   |
|----------|-------------------|---|
| N        | A61P 25/04        | • Centrally acting analgesics, e.g. opioids   |
| N        | A61P 25/06        | • Antimigraine agents   |
| N        | A61P 25/08        | • Antiepileptics; Anticonvulsants   |
| N        | A61P 25/10        | • • for petit-mal   |
| N        | A61P 25/12        | • • for grand-mal   |
| N        | A61P 25/14        | • for treating abnormal movements, e.g. chorea, dyskinesia  |
| N        | A61P 25/16        | • • Anti-Parkinson drugs  |
| N        | A61P 25/18        | • Antipsychotics, i.e. neuroleptics; Drugs for mania or schizophrenia   |
| N        | A61P 25/20        | • Hypnotics; Sedatives  |
| N        | A61P 25/22        | • Anxiolytics   |
| N        | A61P 25/24        | • Antidepressants   |
| N        | A61P 25/26        | • Psychostimulants, e.g. nicotine, cocaine  |
| N        | A61P 25/28        | • for treating neurodegenerative disorders of the central nervous system, e.g. nootropic agents, cognition enhancers, drugs for treating Alzheimer's disease or other forms of dementia |
| N        | A61P 25/30        | • for treating abuse or dependence  |
| N        | A61P 25/32        | • • Alcohol-abuse   |
| N        | A61P 25/34        | • • Tobacco-abuse   |
| N        | A61P 25/36        | • • Opioid-abuse  |
| <b>N</b> | <b>A61P 27/00</b> | <b>Drugs for disorders of the senses</b>  |
| N        | A61P 27/02        | • Ophthalmic agents   |
| N        | A61P 27/04        | • • Artificial tears; Irrigation solutions  |
| N        | A61P 27/06        | • • Antiglaucoma agents or miotics  |
| N        | A61P 27/08        | • • Mydriatics or cycloplegics  |
| N        | A61P 27/10        | • • for accommodation disorders, e.g. myopia  |
| N        | A61P 27/12        | • • for cataracts   |
| N        | A61P 27/14        | • • Decongestants or antiallergics  |
| N        | A61P 27/16        | • Otologicals   |
| <b>N</b> | <b>A61P 29/00</b> | <b>Non-central analgesic, antipyretic or anti-inflammatory agents, e.g. antirheumatic agents; Non-steroidal anti-inflammatory drugs (NSAIDs)</b>  |
| N        | A61P 29/02        | • without antiinflammatory effect   |
| <b>N</b> | <b>A61P 31/00</b> | <b>Antimicrobials, i.e. antibiotics, antiseptics, chemotherapeutics</b>   |
| N        | A61P 31/02        | • Local antiseptics   |
| N        | A61P 31/04        | • Antibacterial agents  |
| N        | A61P 31/06        | • • for tuberculosis  |
| N        | A61P 31/08        | • • for leprosy   |
| N        | A61P 31/10        | • Antimycotics  |
| N        | A61P 31/12        | • Antivirals  |
| N        | A61P 31/14        | • • for RNA viruses   |
| N        | A61P 31/16        | • • • for influenza or rhinoviruses   |
| N        | A61P 31/18        | • • • for HIV   |
| N        | A61P 31/20        | • • for DNA viruses   |
| N        | A61P 31/22        | • • • for herpes viruses  |
| <b>N</b> | <b>A61P 33/00</b> | <b>Antiparasitic agents</b>   |

|          |                   |  |
|----------|-------------------|--|
| N        | A61P 33/02        | • Antiprotozoals, e.g. for leishmaniasis, trichomoniasis, toxoplasmosis  |
| N        | A61P 33/04        | • • Amoebicides  |
| N        | A61P 33/06        | • • Antimalarials  |
| N        | A61P 33/08        | • • for <i>Pneumocystis carinii</i>  |
| N        | A61P 33/10        | • Anthelmintics  |
| N        | A61P 33/12        | • • Schistosomicides   |
| N        | A61P 33/14        | • Ectoparasiticides, e.g. scabicides   |
| <b>N</b> | <b>A61P 35/00</b> | <b>Antineoplastic agents</b>   |
| N        | A61P 35/02        | • specific for leukemia  |
| N        | A61P 35/04        | • specific for metastasis  |
| <b>N</b> | <b>A61P 37/00</b> | <b>Drugs for immunological or allergic disorders</b>   |
| N        | A61P 37/02        | • Immunomodulators   |
| N        | A61P 37/04        | • • Immunostimulants   |
| N        | A61P 37/06        | • • Immunosuppressants, e.g. drugs for graft rejection   |
| N        | A61P 37/08        | • Antiallergic agents (antiasthmatic agents <a href="#">A61P 11/06</a> ; ophthalmic antiallergics <a href="#">A61P 27/14</a> ) |
| <b>N</b> | <b>A61P 39/00</b> | <b>General protective or antinoxious agents</b>  |
| N        | A61P 39/02        | • Antidotes  |
| N        | A61P 39/04        | • Chelating agents   |
| N        | A61P 39/06        | • Free radical scavengers or antioxidants  |
| <b>N</b> | <b>A61P 41/00</b> | <b>Drugs used in surgical methods, e.g. surgery adjuvants for preventing adhesion or for vitreum substitution</b>              |
| <b>N</b> | <b>A61P 43/00</b> | <b>Drugs for specific purposes, not provided for in groups <a href="#">A61P 1/00-A61P 41/00</a></b>                            |

**NOTE**

Classification is only made in this group when a specific therapeutic activity for a chemical compound or medicinal preparation has been clearly disclosed, the specific therapeutic activity not being appropriate to any of groups [A61P 1/00](#) - [A61P 41/00](#).

**Project: RP0329 (A61Q)**

|          |             |  |
|----------|-------------|--|
| <b>M</b> | <b>A61Q</b> | <b>SPECIFIC USE OF COSMETICS OR SIMILAR TOILET PREPARATIONS</b>  |
|          |             | <b>NOTES</b>   |
|          |             | 1. This subclass <u>covers</u> the use of cosmetics or similar toilet preparations already classified as such in main group <a href="#">A61K 8/00</a> or in addition thereto in subclasses <a href="#">C11D</a> and <a href="#">C12N</a> or in classes <a href="#">C01</a> , <a href="#">C07</a> and <a href="#">C08</a> . |
|          |             | 2. <del>Since</del> <i>When classifying this subclass, A61P-subclass A61P {is not activated in ECLA, relevant IPC Note (2) is not applicable. for secondary classification and} covers therapeutic activity of chemical compounds or medicinal preparations.</i>   |

**Project: N/A (A61Q)**

|           |  |
|-----------|--|
| A61Q 7/00 | Preparations for affecting hair growth (preparations with therapeutic activity <del>A61P17/14</del> <a href="#">A61P 17/14</a> ) |
|-----------|--|

**Project: N/A (A62D)****A62D****CHEMICAL MEANS FOR EXTINGUISHING FIRES OR FOR COMBATING OR PROTECTING AGAINST HARMFUL CHEMICAL AGENTS; CHEMICAL MATERIALS FOR USE IN BREATHING APPARATUS**WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                           |            |  |
|---------------------------|------------|--|
| <a href="#">A62D 1/02</a> | covered by | <a href="#">A62D 1/0007</a> , <a href="#">A62D 1/0071</a>  |
| <a href="#">A62D 1/04</a> | covered by | <a href="#">A62D 1/0071</a>  |
| <a href="#">A62D 1/08</a> | covered by | <a href="#">A62D 1/0007</a> - <a href="#">A62D 1/0028</a> ,<br><a href="#">A62D 1/0057</a> , <a href="#">A62D 1/0092</a> |

**Project: N/A (A63B)****A63B****APPARATUS FOR PHYSICAL TRAINING, GYMNASTICS, SWIMMING, CLIMBING, OR FENCING; BALL GAMES; TRAINING EQUIPMENT (apparatus for passive exercising, massage [A61H](#))**WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                             |            |   |
|-----------------------------|------------|---|
| <a href="#">A63B 7/06</a>   | covered by | <a href="#">A63G 1/00</a>   |
| <a href="#">A63B 21/075</a> | covered by | <a href="#">A63B 21/072</a>   |
| <a href="#">A63B 22/10</a>  | covered by | <a href="#">A63B 22/0605</a> in combination with <a href="#">A63B 22/0002</a> |
| <a href="#">A63B 22/12</a>  | covered by | <a href="#">A63B 22/0605</a> in combination with <a href="#">A63B 22/001</a>  |
| <a href="#">A63B 22/08</a>  | covered by |   |
| <a href="#">A63B 29/04</a>  | covered by | <a href="#">A63B 29/00</a>  |
| <a href="#">A63B 31/16</a>  | covered by | <a href="#">A63B 31/14</a> - <a href="#">A63B 31/18</a>                       |
| <a href="#">A63B 63/02</a>  | covered by | <a href="#">A63B 63/00</a>  |
| <a href="#">A63B 63/04</a>  | covered by | <a href="#">A63B 63/00</a>  |
| <a href="#">A63B 69/22</a>  | covered by | <a href="#">A63B 69/20</a>  |
| <a href="#">A63B 69/28</a>  | covered by | <a href="#">A63B 69/20</a>  |
| <a href="#">A63B 69/30</a>  | covered by | <a href="#">A63B 69/20</a>  |
| <a href="#">A63B 71/16</a>  | covered by | <a href="#">A63B 71/14</a> - <a href="#">A63B 71/148</a>                      |

**U A63B 21/00**

**Exercising apparatus for developing or strengthening the muscles or joints of the body by working against a counterforce, with or without measuring devices (electric or electronic controls therefor [A63B 24/00](#); measuring muscular strength [A61B 5/22](#))**

NOTE

In this subclass, the following terms or expressions are used with the meaning indicated:

- "resistance" and "resistance force" are often used in the art as synonyms for "counterforce";
- "interface with the user" covers the part of the apparatus, on which the user directly applies his force

**U A63B 21/40**  
**A63B 21/4001**

- {Interfaces with the user related to strength training; Details thereof}
- {Arrangements for attaching the exercising apparatus to the ~~user's~~ *user's* body, e.g. belts, shoes or gloves specially adapted therefor (weights worn on the user's body [A63B 21/065](#); exoskeletons in general [B25J 9/0006](#), for aiding patients or disabled persons to walk about [A61H 3/00](#))}



- U A63B 21/4023
  - {the user operating the resistance directly, without additional interface ([A63B 21/072](#) takes precedence)}
- A63B 21/4025
  - • {Resistance devices worn on the ~~user's~~*user's* body ([A63B 21/065](#) takes precedence)}
- U A63B 23/00 **Exercising apparatus specially adapted for particular parts of the body ([A63B 22/00](#) takes precedence; force-resisting aspects [A63B 21/00](#); electric or electronic controls therefor [A63B 24/00](#); devices for exercising or strengthening of fingers, or arms in teaching operation of keyboards [G09B 15/06](#))**
- U A63B 23/035
  - for limbs, i.e. upper or lower limbs, e.g. simultaneously
- U A63B 23/04
  - • for lower limbs {(training appliances for special sports [A63B 69/00](#); for the purpose of producing mechanical power [F03G 5/00](#))}
- U A63B 23/0405
  - • • {involving a bending of the knee and hip joints simultaneously ([A63B 23/0476](#) takes precedence)}
- U A63B 23/0429
  - • • • {with guided foot supports moving parallel to the body-symmetrical-plane by being cantilevered about a horizontal axis}
- U A63B 2023/0435
  - • • • • {(not used)}
- A63B 2023/0447
  - • • • • {the axis being in the body-~~simmetrical~~*symmetrical*-plane}
- U A63B 37/00 **Solid balls; {Rigid hollow balls}; Marbles (heavy throwing balls [A63B 65/06](#))**
- A63B 37/0098
  - {Rigid hollow balls, e.g. for ~~pétanque~~*pétanque*}

**Project: N/A (A63C)****A63C**

**SKATES; SKIS; ROLLER SKATES; DESIGN OR LAYOUT OF COURTS, RINKS OR THE LIKE (devices for underwater sports [A63B 31/00](#), [A63B 33/00](#), [B63C 11/00](#); devices for gliding on water, e.g. water skis, [B63B 35/79](#), [B63B 35/81](#), [B63B 35/83](#))**

**WARNING**

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~*The subject* matter ~~covered by~~*for* these *IPC* groups is classified in the following CPC groups:

|                            |            |                           |
|----------------------------|------------|---------------------------|
| <a href="#">A63C 5/025</a> | covered by | <a href="#">A63C 5/00</a> |
| <a href="#">A63C 5/14</a>  | covered by | <a href="#">A63C 5/12</a> |

**Project: MP0164 (A63F)**

- U A63F 3/00 **Board games; Raffle games (racing games, traffic games, or obstacle games characterised by figures moved by action of the players [A63F 9/14](#))**
- U A63F 3/02
  - Chess; Similar board games
- M A63F 3/022
  - • {Recording or reproducing chess games (~~data-processing-for-game-playing~~*goal posts per se* [A63F 7/305](#); teaching games [G09B 19/22](#))}
- U A63F 7/00 **Indoor games using small moving playing bodies, e.g. balls, discs or blocks (board games, raffle games [A63F 3/00](#); roulette games [A63F 5/00](#); miniature bowling games [A63D 3/00](#); bagatelle or similar games [A63D 13/00](#); billiards, pocket billiards [A63D 15/00](#))**
- M A63F 7/0005
  - {played on a table, the ball or other playing body being rolled or slid from one side of the table in more than one direction or having more than one entering position on this same side, e.g. shuffle boards (*goal posts per se* [A63F 7/305](#); miniature bowling-alleys [A63D 3/00](#); ~~goalposts per se~~ [A63F 7/305](#))}
- U A63F 7/22
  - in which the playing bodies are projected through the air {(not used, see subgroups of [A63F 7/06](#))}

- U A63F 7/30
- {Details of the playing surface, e.g.} obstacles; {Goal posts;} Targets; Scoring or pocketing devices; Playing-body-actuated sensors, e.g. switches; Tilt indicators; {Means for detecting misuse or errors}
- M A63F 7/305
- • {Goal- posts; Winning posts for rolling-balls}
- M A63F 7/36
- • Constructional details not covered by groups [A63F 7/24](#) - [A63F 7/34](#); {, i.e. constructional details of rolling boards, rims or play tables}, e.g. [frames](#)[frame](#), game boards, guide tracks;
- U A63F 9/00
- Games not otherwise provided for (aspects of games using an electronically generated display having two or more dimensions showing representations related to the game [A63F 13/00](#) {; miscellaneous sporting games [A63B 67/00](#)})**
- M A63F 9/24
- {Electric games;} Games using electronic circuits not otherwise provided for {(video games [A63F 13/00](#), [computers for game playing per se](#) [G06F 19/00](#); computerized gaming systems [G07F 17/32](#))}

**Project: N/A (A63F)**

- U A63F 2300/00
- Features of games using an electronically generated display having two or more dimensions, e.g. on a television screen, showing representations related to the game**
- U A63F 2300/40
- characterised by details of platform network
- A63F 2300/401
- • Secure communication, e.g. using encryption or [authentication](#)[authentication](#)

**Project: N/A (A63H)****A63H****TOYS, e.g. TOPS, DOLLS, HOOPS, BUILDING BLOCKS****WARNING**

The following IPC groups are not [used](#) in the CPC scheme. [Subject](#) [The subject](#) matter [covered by](#) [for](#) these [IPC](#) groups is classified in the following CPC groups:

|                             |            |  |
|-----------------------------|------------|--|
| <a href="#">A63H 3/33</a>   | covered by | <a href="#">A63H 3/28</a>  |
| <a href="#">A63H 17/267</a> | covered by | <a href="#">A63H 17/262</a>  |
| <a href="#">A63H 17/273</a> | covered by | <a href="#">A63H 17/26</a>   |
| <a href="#">A63H 17/385</a> | covered by | <a href="#">A63H 17/36</a>   |
| <a href="#">A63H 17/39</a>  | covered by | <a href="#">A63H 17/36</a>   |
| <a href="#">A63H 17/41</a>  | covered by | <a href="#">A63H 17/40</a>   |
| <a href="#">A63H 25/00</a>  | covered by | <a href="#">A63H 29/16</a> , <a href="#">A63H 31/00</a>                              |
| <a href="#">A63H 25/02</a>  | covered by | <a href="#">A63H 29/16</a> , <a href="#">A63H 31/00</a>                              |
| <a href="#">A63H 27/01</a>  | covered by | <a href="#">A63H 27/007</a>  |
| <a href="#">A63H 27/127</a> | covered by | <a href="#">A63H 27/12</a>   |
| <a href="#">A63H 27/133</a> | covered by | <a href="#">A63H 27/12</a>   |
| <a href="#">A63H 27/16</a>  | covered by | <a href="#">A63H 27/001</a> , <a href="#">A63H 33/16</a>                             |
| <a href="#">A63H 27/18</a>  | covered by | <a href="#">A63H 27/00</a> , <a href="#">A63H 27/02</a>                              |
| <a href="#">A63H 27/20</a>  | covered by | <a href="#">A63H 27/00</a>   |
| <a href="#">A63H 27/22</a>  | covered by | <a href="#">A63H 27/00</a> , <a href="#">A63H 29/18</a>                              |
| <a href="#">A63H 27/24</a>  | covered by | <a href="#">A63H 27/02</a> , <a href="#">A63H 29/00</a> , <a href="#">A63H 29/22</a> |
| <a href="#">A63H 27/26</a>  | covered by | <a href="#">A63H 27/06</a>   |
| <a href="#">A63H 27/28</a>  | covered by | <a href="#">A63H 27/008</a>  |
| <a href="#">A63H 27/30</a>  | covered by | <a href="#">A63H 27/02</a>   |
| <a href="#">A63H 27/32</a>  | covered by | <a href="#">A63H 27/00</a>   |

## Project: N/A (B01D)

## B01D

**SEPARATION** (separating solids from solids by wet methods [B03B](#), [B03D](#); by pneumatic jigs or tables [B03B](#); by other dry methods [B07](#); magnetic or electrostatic separation of solid materials from solid materials or fluids, separation by high-voltage electric fields [B03C](#); centrifuges, vortex apparatus [B04](#); presses *per se* for squeezing-out liquid from liquid-containing material [B30B 9/02](#); treatment of water [C02F](#), e.g. softening by ion-exchange [C02F 1/42](#); {arrangements of air intake cleaners in gas turbine plants [F02C 7/05](#)}; arrangements or mounting of filters in air-conditioning, air-humidification or ventilation [F24F 13/28](#))

NOTES

## 1. This subclass covers:

- evaporation, distillation, crystallisation, filtration, dust precipitation, gas cleaning, absorption, adsorption;
- similar processes which are not concerned with, or limited to, separation (except in the case of absorption or adsorption).

## 2. In this subclass the terms or expressions are used with the meaning indicated:

- "filtration" and analogous terms include straining solids from fluids;
- "filter medium" is a porous material or porous arrangement of material used to filter solids from fluids;
- "filtering element" is a section of filter medium in addition to parts to which the medium is demountably or permanently fixed, including other sections of medium, end caps, peripheral frames or edge strips, but excluding housings;
- "filter housing" is the fluid-constraining impervious vessel, whether open or closed, which contains, or is adapted to contain, one or more filtering elements or filter media;
- "filter chamber" is the space within a housing, where filtering elements or filter media are located. Partitions may divide a single housing into a plurality of chambers;
- "filtering apparatus" consists of filtering elements combined with housings, cleaning arrangements, motor or the like parts, which are characteristic of the particular type of apparatus. Ancillary devices such as pumps or valves are considered part of a filtering apparatus when inside the apparatus. Ancillary devices performing similar or different unit operation such as comminutors, mixers or non-filtering separators, whether or not inside the apparatus, are not considered part of a filtering apparatus. The term does not extend to apparatus, e.g. washing machines, of which the filter forms only a part.

3. For apparatus used in drying or evaporation, [F26](#) takes precedence over [B01D](#).4. Group [B01D 59/00](#) takes precedence over the other groups of this subclass and over other subclasses in class [B01](#)WARNINGS

1. -The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these *IPC* groups is classified in the following *CPC* groups:

|                             |            |   |
|-----------------------------|------------|---|
| <b>B01D19/0454</b>          | covered by | <a href="#">B01D 9/00</a>                               |
| <a href="#">B01D 15/04</a>  | covered by | <a href="#">B01J 39/00</a> - <a href="#">B01J 49/90</a> |
| <a href="#">B01D 17/022</a> | covered by | <a href="#">B01D 17/0202</a>                            |
| <a href="#">B01D 17/025</a> | covered by | <a href="#">B01D 17/0208</a>                            |
| <a href="#">B01D 17/028</a> | covered by | <a href="#">B01D 17/0211</a>                            |
| <a href="#">B01D 17/032</a> | covered by | <a href="#">B01D 17/0214</a>                            |
| <a href="#">B01D 17/035</a> | covered by | <a href="#">B01D 17/0205</a>                            |

|                             |            |   |
|-----------------------------|------------|---|
| <a href="#">B01D 17/038</a> | covered by | <a href="#">B01D 17/0217</a>                              |
| <a href="#">B01D 17/05</a>  | covered by | <a href="#">B01D 17/047</a>                               |
| <a href="#">B01D 17/09</a>  | covered by | <a href="#">B01D 17/005</a>                               |
| <a href="#">B01D 17/12</a>  | covered by | <a href="#">B01D 17/00</a>                                |
| <a href="#">B01D 25/133</a> | covered by | <a href="#">B01D 25/285</a>                               |
| <a href="#">B01D 25/168</a> | covered by | <a href="#">B01D 25/285</a>                               |
| <a href="#">B01D 25/21</a>  | covered by | <a href="#">B01D 25/164</a>                               |
| <a href="#">B01D 29/075</a> | covered by | <a href="#">B01D 29/62</a> , <a href="#">B01D 29/76</a>   |
| <a href="#">B01D 29/37</a>  | covered by | <a href="#">B01D 29/336</a> , <a href="#">B01D 29/356</a> |
| <a href="#">B01D 33/052</a> | covered by | <a href="#">B01D 33/64</a>                                |
| <a href="#">B01D 35/01</a>  | covered by | <a href="#">B01D 36/001</a>                               |
| <a href="#">B01D 61/26</a>  | covered by | <a href="#">A61M 1/1656</a>                               |
| <a href="#">B01D 61/34</a>  | covered by | <a href="#">A61M 1/16</a>                                 |

2. 5. The group [B01D 24/00](#) was introduced in March 1989. This group includes subject matter of [B01D 23/00](#), [B01D 25/06](#), [B01D 25/10](#), [B01D 29/0027](#), [B01D 33/0032](#) and [B01D 33/0054](#).

3. 6. Documents from the backlog of the group [B01D 23/00](#), and the subgroups [B01D 25/06](#), [B01D 25/10](#), [B01D 29/0027](#), [B01D 33/0032](#) and [B01D 33/0054](#) are in the process of being revised and also systematically transferred to [B01D 24/00](#).

4. 7. The groups [B01D 29/01](#) - [B01D 29/43](#) and [B01D 29/50](#) - [B01D 29/965](#) were introduced in March 1989; these subgroups include the subject matter of the subgroups of groups [B01D 29/0002](#), which are from this date no longer use for the classification of new documents.

5. 8. The documents from the backlog of the subgroups of group [B01D 29/0002](#) are in the process of being systematically transferred to the other subgroups of group [B01D 29/00](#).

6. 11. The documents from the backlog of the subgroups of group [B01D 33/0003](#) are in the process of being systematically transferred to the other subgroups of group [B01D 33/00](#).

7. 9. Groups [B01D 25/16](#), [B01D 25/18](#) and [B01D 25/20](#) are no longer used for the classification of new. Patent documents are continuously being reclassified to groups [B01D 29/44](#), [B01D 29/46](#) and [B01D 29/48](#).

8. 10. The groups [B01D 25/04](#), [B01D 25/08](#), [B01D 25/121](#), [B01D 25/122](#), [B01D 25/124](#), [B01D 25/125](#), [B01D 25/14](#), are no longer used for classification of new documents from December 1, 2011 onwards. The backlog of those groups are being continuously reclassified to groups [B01D 25/00](#), [B01D 29/00](#) and subgroups.

**Project: MP0179 (B01D)**

- M** B01D 61/00 - B01D 71/00 **Processes of separation using semi-permeable membranes, e.g. dialysis, osmosis, *or* ultrafiltration; Apparatus specially adapted therefor; Semi-permeable membranes or their production (~~separation of gases or vapours by diffusion B01D 53/22; treatment of milk by dialysis, reverse osmosis or ultrafiltration A23C 9/142, by electrodialysis A23C 9/144; artificial kidneys A61M 1/14; {manufacture of films of plastics B29, C08J 5/18, of ion-exchange membranes C08J 5/22} ; treatment of water by dialysis, osmosis or reverse osmosis C02F 1/44, by electrodialysis C02F 1/469; apparatus for enzymology or microbiology with dialysis means C12M 1/12; production or purification of sugar juices, e.g. by osmosis, C13D3/16; extraction of sugar from molasses, e.g. by osmosis, C13J1/08; diaphragms for electrolysis C25B 13/00, C25C 7/04; osmosis as energy source F03G 7/00)~~**

**NOTE**

In groups [B01D 61/00](#) - [B01D 71/00](#), *the last place priority rule is applied, i.e. at each hierarchical level*, in the absence of an indication to the contrary, classification is made in the last appropriate place ~~{(in with respect of to~~ [B01D 71/00](#), see also Note (1) following that group)-}.

**WARNING**

~~Attention is drawn to the WARNING after the subclass title of A61M~~

**Project: N/A (B01D)**

- U** B01D 2259/00 **Type of treatment**
- U** B01D 2259/45 • Gas separation or purification devices adapted for specific applications
- U** B01D 2259/455 • • for transportable use (portable devices [B01D 2259/4541](#))
- B01D 2259/4558 • • • for being employed as mobile cleaners for ambient air, i.e. the ~~earth's~~*earth's* atmosphere

**Project: N/A (B01F)****B01F**

**MIXING, e.g. DISSOLVING, EMULSIFYING, DISPERSING ({miscellaneous implements for preparing food, e.g. machines for domestic use for mixing, egg-whisks, cream beaters [A47J 43/00](#)}; mixing paints [B44D 3/06](#); {apparatus specially adapted for mixing radioactively contaminated material [G21F 9/008](#)})**

**NOTE**

In this subclass, the following term or expression is used with the meaning indicated:

- "mixing" covers stirring of a single material.

**WARNING**

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~*The subject* matter ~~covered by for~~ these *IPC* groups is classified in the following *CPC* groups:

[B01F 17/02-B01F 17/56](#) covered by [B01F 17/00-B01F 17/0092](#)

- U** B01F 2215/00 **Auxiliary or complementary information in relation with mixing**
- U** B01F 2215/0001 • Field of application of the mixing device
- B01F 2215/008 • • Mixing water with other ingredients, e.g. air, detergents, ~~desinfectants~~*disinfectants*, in water-taps (domestic plumbing installations [E03C](#))

## Project: MP0396 (B01J)

M B01J

CHEMICAL OR PHYSICAL PROCESSES, e.g. CATALYSIS, ~~OR COLLOID CHEMISTRY; THEIR RELEVANT APPARATUS~~ (processes or apparatus for specific applications, see the relevant places for these processes or apparatus, e.g. F26B 3/08)

## NOTES

1. In this subclass, the following terms or expressions are used with the meanings indicated :

- "solid particles" includes such particles whether catalysts, reactants or inert in solid, semi-solid or pasty state;
- "fluidised particles" means finely divided solid particles lifted and agitated by a stream of fluid;
- "fluidised bed-technique" means fluid-solid contacting technique in which finely divided particles are lifted and agitated by a rising stream of fluid, said stream having such a speed as to form a lower dense phase (the "bed") and an upper dilute fluidised phase of "fluidised particles";
- "processes conducted in the presence of solid particles" does not include processes wherein the only solid particles present are formed during the reaction.

2. In this subclass, tradenames that are often found in scientific and patent literature have been used in order to define precisely the scope of the groups

## WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

B01J 37/025

covered by

[B01J 37/02](#)

B01D 15/04

covered by

[B01J 39/00-B01J 49/90](#)

M B01J 2/00

Processes or devices for granulating materials; ~~{, e.g. fertilisers}~~ in general (granulating metals B22F 9/00, ~~{granulating slag C21B 3/06}~~, ores or scrap C22B 1/14; mechanical aspects of working of plastics or substances in a plastic state to make granules B29B 9/00; processes for granulating fertilisers characterised by their chemical constitution, see the relevant groups in C05B - C05G; chemical aspects of powdering or granulating of macromolecular substances C08J 3/12); Rendering particulate materials free flowing in general, e.g. making them hydrophobic

M B01J 3/00

Processes of utilising sub-atmospheric or super-atmospheric pressure to effect chemical or physical change of matter; Apparatus therefor (apparatus for compacting or sintering of metal powders B22F 3/00; pressure vessels in general F16J 12/00; pressure vessels for containing or storing compressed, liquefied or solidified gases [F17C](#); ~~pressure vessels for nuclear reactors G21C~~)

M B01J 8/00

Chemical or physical processes in general, conducted in the presence of fluids and solid particles; Apparatus for such processes (processes or devices for granulating material B01J 2/00; furnaces F27B ~~{~~; heat exchange apparatus F28C 3/10; F28D 13/00, F28D 17/00, F28D 19/00)

U B01J 8/08

- with moving particles (with fluidised particles [B01J 8/18](#))

M B01J 8/14

- • moving in free vortex flow apparatus (~~free vortex flow apparatus in general B04C~~)

U B01J 8/18

- with fluidised particles {(combustion apparatus with fluidised bed in general [F23C 10/00](#); furnaces with fluidised bed [F27B 15/00](#))}

M B01J 8/24

- • according to "fluidised-bed" technique ([B01J 8/20](#) takes precedence; combustion apparatus in which combustion takes place in a fluidised bed of fuel or other particles F23C 10/00)



- M B01J 13/00** Colloid chemistry, e.g. the production of colloidal materials or their solutions, not otherwise provided for; Making microcapsules or microballoons ~~(use of substances as emulsifying, wetting, dispersing or foam producing agents B01F 17/00)~~
- M B01J 19/00** Chemical, physical, or physico-chemical processes in general ~~(physical treatment of fibres, threads, yarns, fabrics, feathers or fibrous goods made from such materials, see the relevant places for such treatment, e.g. D06M 10/00); Their relevant apparatus (packings, fillings or grids specially adapted for biological treatment of water, waste water or sewage C02F 3/10; splashing boards or grids specially adapted for trickle coolers F28F 25/08)~~
- U B01J 19/08** • Processes employing the direct application of electric or wave energy, or particle radiation; Apparatus therefor (application of shock waves [B01J 3/08](#))
- M B01J 19/10** • • employing sonic or ultrasonic vibrations ~~(for auxiliary pretreatment of gases or vapours to be cleaned B01D 51/08; for cleaning B08B 3/12 {-; for degasification of liquids B01D 19/0073; for mixing purposes B01F 11/02})~~
- M B01J 19/14** • Production of inert gas mixtures; Use of inert gases in general ~~(apparatus for generating gases B01J 7/00; separation of gases or vapours B01D 53/00 {-; application in storage tanks B65D 90/44})~~
- U B01J 19/18** • Stationary reactors having moving elements inside ([B01J 19/08](#), [B01J 19/26](#) take precedence)
- M B01J 19/20** • • in the form of helices, e.g. screw reactors ~~(thin-film reactors B01J 10/02)~~
- M B01J 19/28** • Moving reactors, e.g. rotary drums ([B01J 19/08](#) takes precedence; ~~rotary drum furnaces F27B 7/00~~)
- M B01J 20/00** Solid sorbent compositions or filter aid compositions; Sorbents for chromatography; Processes for preparing, regenerating or reactivating thereof ~~(use of sorbent compositions in liquid separation B01D 15/00, use of filter aid compositions B01D 37/02; use of sorbent compositions in gas separation B01D 53/02, B01D 53/14)~~
- U B01J 20/02** • comprising inorganic material
- M B01J 20/20** • • comprising free carbon; comprising carbon obtained by carbonising processes ~~(active carbon C01B 32/30)~~

**Project: N/A (B01J)**

- U B01J 31/00** Catalysts comprising hydrides, coordination complexes or organic compounds (catalyst compositions used only in polymerisation reactions [C08](#) {-; catalytic antibodies [C12N 9/0002](#)})

**NOTES**

1. Group [B01J 31/003](#) takes precedence over groups [B01J 31/02](#) - [B01J 31/24](#) (catalytic antibodies [C12N 9/0002](#) )

2. In this group, the following terms or expressions are used with the meanings indicated:

- "Organic compound" a compound in which carbon is bonded to
  - (1)a second carbon;
  - (2)at least one atom of hydrogen or halogen; or
  - (3)nitrogen by a single or double bond; except cyanic acid (HOCN), cyanogen (NCCN), cyanamide (H<sub>2</sub>NCN), cyanogen halide (HalCN), hydrocyanic acid (HCN) isocyanic acid (HNCO) fulminic acid (HCNO)and metal carbides (MCCM) (catalysts comprising any of these exceptions or their salts [B01J 27/20](#) - [B01J 27/26](#).
- "Organometallic compounds" includes all organic compounds wherein a metal or metalloid atom is bonded directly to a carbon fragment, the latter being formally anionic, no further neutral ligands being coordinated to the metal and the compound requiring no further cations for charge



balance; e.g.  $M(1-CR_3)_n$  with  $M$ = main group metal,  $n$ = valency of metal and  $R$ = H or hydrocarbyl. (Compounds comprising anionic organonitrogen, organooxygen and organosulfur fragments, excluding carboxylates, with a metal bonded to these heteroatoms [B01J 31/02](#) - [B01J 31/0254](#); unsaturated carbon fragments in combination with transition metals [B01J 31/2282](#)).

- "Coordination complexes" includes any donor-acceptor compounds or complex ions comprising organic or inorganic, anionic or neutral Lewis basic ligands, attached to a Lewis acid central metal or metal ion through one or several complexing donor atoms with at least one lone-pair of electrons, e.g. N, O, S, P, to provide at least a Sigma-bond. Typically the maximum number of same or different ligands according to the coordination number, spatial requirements of the ligand and electronic configuration of the metal is bound in a predictable geometry. Complexes of neutral, cationic or anionic hydrocarbon ligands with delocalised charge and/or bonding site, e.g. Pd-olefin complexes or metallocenes, are also included (the following groups take precedence: simple hydrocarbyl metal compounds, e.g. of main group metal(oids) [B01J 31/12](#); oxoacid salts [B01J 31/04](#) - [B01J 31/10](#); other compounds comprising anionic organonitrogen, organooxygen and organosulfur fragments with a metal bonded to these heteroatoms [B01J 31/02](#) - [B01J 31/0254](#)).
- "Organometallic complexes" includes all coordination complexes comprising a M-C bond, e.g. metal carbonyls (complex cyanides such as  $M_4[Fe(CN)_6]$  [B01J 27/26](#) ). Included are furthermore complexes which are not strictly organometallic per se, e.g. comprising only N, O, S and/or P coordinated ligands, but are described as involving, or known to involve, organometallic intermediates and/or transition states during use, e.g. Group 8-10 metal complexes for a variety of catalytic reactions or steps thereof, such as oxidative addition, e.g. of  $ArX$ , hydrogenation, carbonylation, epoxidation, etc.
- "Organic complexes" includes all coordination complexes comprising organic ligands (groups [B01J 31/1608](#) - [B01J 31/1895](#) take precedence).
- "Polymer" includes any macromolecular substance (typically  $M > 10000$  g/mol), which comprises repeating units made up of one or several kinds of atoms or groups of atoms, which are identically connected to one another. Oligomers, i.e. more than two identical repeating units connected to one another and typically  $500 < M < 10000$  g/mol, are grouped with the respective polymers (polymers per se [C08](#)).

3. In this group, if two or more aspects are of equal importance, these are each classified, e.g. two components in a catalyst system such as:

- support and pendant or otherwise immobilised coordination complex; or
- coordination complex and essential additive.

However, if two components, even if separately added, are described as forming, or known to form, a coordination complex, only the latter is classified, e.g. phosphine and Group 8-10 metal such as rhodium. The groups [B01J 31/26](#) - [B01J 31/38](#) are not to be used for the central metals in coordination complexes but rather for separately added further inorganic ingredients. Each specifically disclosed alternative is separately classified, i.e. specifically disclosed by ways of worked examples, specific claims and/or explicit alternatives therein.

4. {When classifying in [B01J 31/00](#), additional information for the catalysts is provided as follows:

- (4-1) the specifically disclosed intended uses are indexed in [B01J 2231/00](#);
- (4-2) general aspects of the complexes of group [B01J 31/16](#) and the specifically disclosed central metal(s) therein, as well as additional information regarding any special solvents used for any catalyst system of this group are indexed in [B01J 2531/00](#).

(4-3) conceptual articles, e.g. reviews, are separately indexed in [B01J 2231/005](#) and [B01J 2531/001](#);  
(4-4) additional information regarding the complexes or ligands classified in [B01J 31/16](#) - [B01J 31/24](#) and indexed in [B01J 2531/00](#) is indexed in [B01J 2540/00](#), e.g. non-coordinating substituents on the ligand periphery

}

- U B01J 31/02                   • containing organic compounds or metal hydrides
- U B01J 31/0234             • • {Nitrogen-, phosphorus-, arsenic- or antimony-containing compounds}
- U B01J 31/0255             • • • {Phosphorus containing compounds}
- U B01J 31/0257             • • • • {Phosphorus acids or phosphorus acid esters}
- B01J 31/0258             • • • • • {Phosphoric acid mono-, di- or triesters ((RO)(R'<sup>1</sup>OR'<sup>2</sup>O)2P=O), i.e. R= C, R'<sup>1</sup>= C, H}
- B01J 31/0259             • • • • • {comprising phosphorous acid (-ester) groups ((RO)P(OR'<sup>1</sup>)2) or the isomeric phosphonic acid (-ester) groups (R(R'<sup>1</sup>OR'<sup>2</sup>O)2P=O), i.e. R= C, R'<sup>1</sup>= C, H}
- B01J 31/0261             • • • • • {comprising phosphonous acid (-ester) groups (RP(OR'<sup>1</sup>)2) or the isomeric phosphinic acid (-ester) groups (R2(R'<sup>1</sup>OR'<sup>2</sup>O)P=O), i.e. R= C, R'<sup>1</sup>= C, H}
- B01J 31/0262             • • • • • {comprising phosphinous acid (-ester) groups (R2P(OR'<sup>1</sup>)) or the isomeric phosphine oxide groups (R3P=O) , i.e. R= C, R'<sup>1</sup>= C, H}
- U B01J 2540/00           Compositional aspects of coordination complexes or ligands in catalyst systems**
- U B01J 2540/50             • Non-coordinating groups comprising phosphorus
- U B01J 2540/52             • • Phosphorus acid or phosphorus acid ester groups
- B01J 2540/522             • • • being phosphoric acid mono-, di- or triester groups ((RO)(R'<sup>1</sup>OR'<sup>2</sup>O)2P=O), i.e. R= C, R'<sup>1</sup>= C, H
- B01J 2540/525             • • • being phosphorous acid (-ester) groups ((RO)P(OR'<sup>1</sup>)2) or the isomeric phosphonic acid (-ester) groups (R(R'<sup>1</sup>OR'<sup>2</sup>O)2P=O), i.e. R= C, R'<sup>1</sup>= C, H
- B01J 2540/527             • • • being phosphonous acid (-ester) groups (RP(OR'<sup>1</sup>)2) or the isomeric phosphinic acid (-ester) groups (R2(R'<sup>1</sup>OR'<sup>2</sup>O)P=O), i.e. R= C, R'<sup>1</sup>= C, H

**Project: N/A (B01L)****B01L**

**CHEMICAL OR PHYSICAL LABORATORY APPARATUS FOR GENERAL USE** (apparatus for medical or pharmaceutical purposes [A61](#); apparatus for industrial purposes or laboratory apparatus whose construction and performance are comparable to that of similar industrial apparatus, see the relevant classes for industrial apparatus, particularly subclasses of [B01](#) and [C12](#); separating or distilling apparatus [B01D](#); mixing or stirring devices [B01F](#); atomisers [B05B](#); {vibrating devices, e.g. shaking tables,} sieves [B07B](#); corks, bungs [B65D](#); handling liquids in general [B67](#); vacuum pumps [F04](#); siphons [F04F 10/00](#); taps, stop-cocks [F16K](#); tubes, tube joints [F16L](#); apparatus specially adapted for investigating or analysing materials [G01](#), particularly [G01N](#); electrical or optical apparatus, see the relevant classes in Sections [G](#) and [H](#))

NOTE

This subclass covers only laboratory apparatus which is either applicable solely to laboratory purposes or which, by reason of its simple construction and adaptability, is such as would not be suitable for industrial use.

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

- [B01L 3/14](#) covered by [B01L 3/50](#)

**Project: N/A (B02C)****U B02C 19/00**

**Other disintegrating devices or methods (for grain [B02C 9/00](#))**

**U B02C 19/0056**

· {specially adapted for specific materials not otherwise provided for}

**B02C 19/0075**

· · {specially adapted for ~~desintegrating~~ *disintegrating* medical waste (disposal of medical waste [B09B 3/0075](#), sterilisation of refuse [A61L 11/00](#))}

**Project: N/A (B03D)****B03D**

**FLOTATION; DIFFERENTIAL SEDIMENTATION** (sedimentation in general [B01D 21/00](#); in combination with other separation of solids [B03B](#); sink-float separation [B03B 5/28](#); detergents, soaps [C11D](#))

WARNINGS

1. The following groups are not complete:

[B03D 1/023](#), see also [B03D 1/02](#)

[B03D 1/025](#), see also [B03D 1/02](#)

[B03D 1/026](#), see also [B03D 1/02](#)

[B03D 1/028](#), see also [B03D 1/02](#)

[B03D 1/082](#), see also [B03D 1/08](#)

[B03D 1/085](#), see also [B03D 1/08](#)

[B03D 1/087](#), see also [B03D 1/08](#)

[B03D 1/1406](#), see also [B03D 1/14](#)

[B03D 1/1443](#), see also [B03D 1/14](#)

[B03D 1/145](#), see also [B03D 1/14](#)

[B03D 1/1456](#), see also [B03D 1/14](#)

[B03D 1/1462](#), see also [B03D 1/14](#)

[B03D 1/1468](#), see also [B03D 1/14](#)

[B03D 1/1475](#), see also [B03D 1/14](#)

[B03D 1/1487](#), see also [B03D 1/14](#)

[B03D 1/1493](#), see also [B03D 1/14](#)

[B03D 1/242](#), see also [B03D 1/24](#)

[B03D 1/247](#), see also [B03D 1/24](#)

2. The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by for** these *IPC* groups is classified in the following CPC groups:

[B03D 101/00-B03D 103/10](#) covered by

#### Project: MP0161 (B05B)

- U B05B 11/00 Single-unit, i.e. unitary, hand-held apparatus {comprising a container and a discharge nozzle attached thereto}, in which flow of liquid or other fluent material is produced by {the muscular energy of} the operator at the moment of use {or by an equivalent manipulator independent from the apparatus (apparatus with an external source or the possibility of permanent accumulation of pressure for discharging the liquid or fluid material [B05B 7/00](#), [B05B 9/00](#))}
- U B05B 11/30     • {the flow being effected by a pump}
- U B05B 11/3042     • • {Components or details}
- U B05B 11/3052     • • • {Actuation means (locking means therefor [B05B 11/3059](#); [B05B 11/309](#) takes precedence)}
- M B05B 11/3053     • • • • {*combined with means, other than pressure, for automatically opening a valve during actuation; {Manually-actuated combined with means located downstream for automatically removing closures or covers from the discharge nozzle for closing or covering it, e.g. shutters, during actuation}*}{*automatically removed during actuation of a spray pump B05B 11/3053*}}

#### Project: N/A (B05C)

##### B05C

APPARATUS FOR APPLYING LIQUIDS OR OTHER FLUENT MATERIALS TO SURFACES, IN GENERAL (spraying apparatus, atomising apparatus, nozzles [B05B](#); plant for applying liquids or other fluent materials to objects by electrostatic spraying [B05B 5/08](#); processes for applying liquids or other fluent materials to surfaces [B05D](#); {coating of foodstuffs [A23P 20/15](#), [A23P 20/17](#), [A23P 20/18](#), of shaped or preshaped ceramic articles [B28B 11/04](#)})

##### NOTES

1. This subclass covers apparatus or hand tools, in general, for applying liquids or other fluent materials to a surface or a part thereof, by any mechanical or physical method, in particular apparatus for obtaining a uniform distribution of liquids or other fluent materials on a surface.

2. Attention is drawn to the Note following the title of class [B05](#).

##### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by for** these *IPC* groups is classified in the following CPC groups:

[B05C 5/04](#) covered by [B05C 5/001](#), [B05C 11/1042](#)

**Project: N/A (B07B)****B07B**

**SEPERATING SOLIDS FROM SOLIDS BY SIEVING, SCREENING, OR SIFTING OR BY USING GAS CURRENTS; OTHER SEPARATING BY DRY METHODS APPLICABLE TO BULK MATERIAL, e.g. LOOSE ARTICLES FIT TO BE HANDLED LIKE BULK MATERIAL (combinations of dry separating apparatus with wet separating apparatus [B03B](#); hand sorting, postal sorting, sorting by switching or other devices actuated in response to detection or measurement of some feature of articles or samples of material [B07C](#))**

NOTE

In this subclass any sorting or grading of bulk material or loose articles fit to be handled like bulk material results automatically from the construction of the apparatus and properties of the material, e.g. by a trap opening under an object of a certain minimum weight, by an aperture of graduated size. Sorting of articles is included in so far as the same conditions apply, e.g. sorting of timber by passing it over successively longer openings; the articles may or may not be orientated for the purpose of sorting.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

[B07B 1/32](#)

covered by

**Project: N/A (B09C)****B09C**

**RECLAMATION OF CONTAMINATED SOIL (gatherers for removing stone or the like from the soil [A01B 43/00](#); sterilising soil by steam [A01G 11/00](#); processes for making harmful chemical substances harmless or less harmful by effecting chemical change in the substance [A62D 3/00](#); separation in general [B01D](#); cleaning beaches [E01H 12/00](#); removing undesirable matter, e.g. rubbish, from the land [E01H 15/00](#))**

NOTE

In this subclass, the following term is used with the meaning indicated:

- "reclamation" means the partial or total elimination or the fixing of contaminants in soil.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

[B09C 1/04](#)

covered by

[B09C 1/02](#)

**Project: N/A (B22C)****B22C**

**FOUNDRY MOULDING (moulding refractory materials in general [B28B](#))**

NOTE

This subclass covers:

- the making of moulds for casting metals or of other refractory moulds;
- selection or preparation of materials therefor;
- the necessary patterns, processes, machines, accessory devices or tools.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

[B22C 3/02](#)

covered by

[B22C 3/00](#)

[B22C 5/13](#)

covered by

[B22C 5/12](#)

|   |            |                            |
|---|------------|----------------------------|
| <a href="#">B22C 7/05</a>                                 | covered by | <a href="#">B22C 7/04</a>  |
| <a href="#">B22C 9/11</a>                                 | covered by | <a href="#">B22C 9/10</a>  |
| <a href="#">B22C 9/14</a>                                 | covered by | <a href="#">B22C 9/12</a>  |
| <a href="#">B22C 9/16</a>                                 | covered by | <a href="#">B22C 9/12</a>  |
| <a href="#">B22C 15/264</a> - <a href="#">B22C 15/276</a> | covered by | <a href="#">B22C 15/23</a> |
| <a href="#">B22C 19/01</a>                                | covered by | <a href="#">B22C 19/00</a> |

**Project: N/A (B22F)**

**B22F**

**WORKING METALLIC POWDER; MANUFACTURE OF ARTICLES FROM METALLIC POWDER; MAKING METALLIC POWDER** (processes or devices for granulating materials in general [B01J 2/00](#); making ceramics by compacting or sintering [C04B](#), e.g. [C04B 35/64](#); for the production of metals as such, **see** class [C22](#); reduction or decomposition of metal compounds in general [C22B](#); making alloys by powder metallurgy [C22C](#); electrolytic production of metal powder [C25C 5/00](#))

NOTES

1. This subclass covers the making of metallic powder only insofar as powder with specific physical characteristics is made;
2. In this subclass, the following terms or expressions are used with the meanings indicated:
  - "metallic powder" covers powders containing a substantial proportion of non-metallic material;
  - "powder" includes somewhat larger particles which are worked, obtained or behave in a manner similar to powder, e.g. fibres.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

|                            |            |                           |
|----------------------------|------------|---------------------------|
| <a href="#">B22F 3/035</a> | covered by | <a href="#">B22F 3/03</a> |
|----------------------------|------------|---------------------------|

**Project: N/A (B23B)**

**B23B**

**TURNING; BORING (arrangements for copying or controlling [B23Q](#))**

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

|                           |            |   |
|---------------------------|------------|---|
| <a href="#">B23B 3/18</a> | covered by | <a href="#">B23B 3/16</a>                               |
| <a href="#">B23B 3/20</a> | covered by | <a href="#">B23B 3/16</a>                               |
| <a href="#">B23B 3/28</a> | covered by | <a href="#">B23B 3/00</a>                               |
| <a href="#">B23B 5/22</a> | covered by | <a href="#">B23B 31/00</a>                              |
| <a href="#">B23B 5/24</a> | covered by | <a href="#">B23Q 27/00</a> ; <a href="#">B23B 35/00</a> |
| <a href="#">B23B 5/30</a> | covered by | <a href="#">B23Q 35/00</a>                              |
| <a href="#">B23B 5/34</a> | covered by | <a href="#">B23B 31/00</a> ; <a href="#">B23B 33/00</a> |
| <a href="#">B23B 5/42</a> | covered by | <a href="#">B23Q 35/00</a>                              |
| <a href="#">B23B 5/44</a> | covered by | <a href="#">B23Q 27/00</a>                              |
| <a href="#">B23B 7/08</a> | covered by | <a href="#">B23B 7/04</a>                               |
| <a href="#">B23B 7/14</a> | covered by | <a href="#">B23B 7/12</a>                               |
| <a href="#">B23B 7/16</a> | covered by | <a href="#">B23B 7/12</a>                               |
| <a href="#">B23B 9/04</a> | covered by | <a href="#">B23B 9/02</a>                               |
| <a href="#">B23B 9/06</a> | covered by | <a href="#">B23B 9/02</a>                               |
| <a href="#">B23B 9/10</a> | covered by | <a href="#">B23B 9/08</a>                               |

|                             |            |   |
|-----------------------------|------------|---|
| <a href="#">B23B 9/12</a>   | covered by | <a href="#">B23B 9/08</a>                               |
| <a href="#">B23B 15/00</a>  | covered by | <a href="#">B23Q 7/00</a>                               |
| <a href="#">B23B 17/00</a>  | covered by | <a href="#">B23Q 1/01</a> ; <a href="#">B23Q 1/03</a> ; |
|                             |            | <a href="#">B23Q 1/25</a>                               |
| <a href="#">B23B 19/00</a>  | covered by | <a href="#">B23Q 1/70</a>                               |
| <a href="#">B23B 19/02</a>  | covered by | <a href="#">B23Q 1/70</a>                               |
| <a href="#">B23B 21/00</a>  | covered by | <a href="#">B23Q 1/00</a>                               |
| <a href="#">B23B 29/30</a>  | covered by | <a href="#">B23B 29/28</a>                              |
| <a href="#">B23B 31/163</a> | covered by | <a href="#">B23B 31/16004</a>                           |
| <a href="#">B23B 31/165</a> | covered by | <a href="#">B23B 31/16045</a>                           |
| <a href="#">B23B 31/167</a> | covered by | <a href="#">B23B 31/16045</a>                           |
| <a href="#">B23B 31/169</a> | covered by | <a href="#">B23B 31/16083</a>                           |
| <a href="#">B23B 31/171</a> | covered by | <a href="#">B23B 31/1612</a>                            |
| <a href="#">B23B 31/173</a> | covered by | <a href="#">B23B 31/16158</a>                           |
| <a href="#">B23B 31/175</a> | covered by | <a href="#">B23B 31/16195</a>                           |
| <a href="#">B23B 31/177</a> | covered by | <a href="#">B23B 31/16233</a>                           |
| <a href="#">B23B 41/08</a>  | covered by | <a href="#">F16L 41/04</a>                              |
| <a href="#">B23B 45/14</a>  | covered by | <a href="#">B25H 1/0021</a>                             |
| <a href="#">B23B 45/16</a>  | covered by | <a href="#">B25D 16/00</a>                              |
| <a href="#">B23B 47/02</a>  | covered by | <a href="#">B23Q 5/00</a>                               |
| <a href="#">B23B 47/04</a>  | covered by | <a href="#">B23Q 5/00</a>                               |
| <a href="#">B23B 47/06</a>  | covered by | <a href="#">B23Q 5/00</a>                               |
| <a href="#">B23B 47/08</a>  | covered by | <a href="#">B23Q 5/00</a>                               |
| <a href="#">B23B 47/10</a>  | covered by | <a href="#">B23Q 5/00</a>                               |
| <a href="#">B23B 47/12</a>  | covered by | <a href="#">B23Q 5/00</a>                               |
| <a href="#">B23B 47/14</a>  | covered by | <a href="#">B23Q 5/00</a>                               |
| <a href="#">B23B 47/16</a>  | covered by | <a href="#">B23Q 5/00</a>                               |
| <a href="#">B23B 47/18</a>  | covered by | <a href="#">B23Q 5/00</a>                               |
| <a href="#">B23B 47/20</a>  | covered by | <a href="#">B23Q 5/00</a>                               |
| <a href="#">B23B 47/22</a>  | covered by | <a href="#">B23Q 5/00</a>                               |
| <a href="#">B23B 47/24</a>  | covered by | <a href="#">B23Q 16/00</a>                              |

## Project: N/A (B23K)

### B23K

**SOLDERING OR UNSOLDERING; WELDING; CLADDING OR PLATING BY SOLDERING OR WELDING; CUTTING BY APPLYING HEAT LOCALLY, e.g. FLAME CUTTING; WORKING BY LASER BEAM (making metal-coated products by extruding metal [B21C 23/22](#); building up linings or coverings by casting [B22D 19/08](#); casting by dipping [B22D 23/04](#); manufacture of composite layers by sintering metal powder [B22F 7/00](#); arrangements on machine tools for copying or controlling [B23Q](#); covering metals or covering materials with metals, not otherwise provided for [C23C](#); burners [F23D](#))**

#### NOTES

1. This subclass covers also electric circuits specially adapted for the purposes covered by the title of the subclass.
2. In this subclass, the following term is used with the meaning indicated:
  - "soldering" means uniting metals using solder and applying heat without melting either of the parts to be united

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:



|                         |            |  |
|-------------------------|------------|--|
| B23K 35/04 - B23K 35/20 | covered by | <a href="#">B23K 35/0205</a> -<br><a href="#">B23K 35/0294</a> |
| B23K 35/363             | covered by | <a href="#">B23K 35/3601</a> -<br><a href="#">B23K 35/3618</a> |

**Project: N/A (B23Q)**

**B23Q**

**DETAILS, COMPONENTS, OR ACCESSORIES FOR MACHINE TOOLS, e.g. ARRANGEMENTS FOR COPYING OR CONTROLLING (tools of the kind used in lathes or boring machines [B23B 27/00](#)); MACHINE TOOLS IN GENERAL CHARACTERISED BY THE CONSTRUCTION OF PARTICULAR DETAILS OR COMPONENTS; COMBINATIONS OR ASSOCIATIONS OF METAL-WORKING MACHINES, NOT DIRECTED TO A PARTICULAR RESULT**

NOTES

1. In this subclass, groups designating parts of machine tools cover machine tools characterised by constructional features of such parts.
2. In this subclass, the following terms or expressions are used with the meanings indicated:
  - "controlling" means influencing a variable in any way, e.g. changing its direction or its value (including changing it to or from zero), maintaining it constant, limiting its range of variation;
  - "regulation" means maintaining a variable automatically at a desired value or within a desired range of values. The desired value or range may be fixed, or manually varied, or may vary with time according to a predetermined "programme" or according to variation of another variable. Regulation is a form of control;
  - "automatic control" is often used in the art as a synonym for regulation.
  - **"Machine tool"** means a mechanical working machine that removes material from a workpiece with a mechanical cutting edge to perform a shaping operation, essentially through drilling, milling, turning or cutting, e.g. sawing. The workpiece is generally made of metal, wood or plastic and is not a human body, food or clothes.
3. Attention is drawn to the Notes following the title of class [B23](#).

**Project: N/A (B25B)**

**B25B**

**TOOLS OR BENCH DEVICES NOT OTHERWISE PROVIDED FOR, FOR FASTENING, CONNECTING, DISENGAGING OR HOLDING**

NOTE

This subclass is to be understood as covering those hand tools for fastening, connecting, disengaging, or holding which are not provided for in another subclass such as [B25C](#) (nailing or stapling tools) or in an application class such as [B65B](#) (packaging) or [B21F](#) (working of wire)

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these **IPC** groups is classified in the following CPC groups:

|                             |            |  |
|-----------------------------|------------|--|
| <a href="#">B25B 23/143</a> | covered by | <a href="#">B25B 23/1422</a>                             |
| <a href="#">B25B 23/144</a> | covered by | <a href="#">B25B 23/1425</a>                             |
| <a href="#">B25B 23/151</a> | covered by | <a href="#">B25B 23/14</a> , <a href="#">B25B 23/147</a> |
| <a href="#">B25B 23/153</a> | covered by | <a href="#">B25B 23/1415</a>                             |
| <a href="#">B25B 23/155</a> | covered by | <a href="#">B25B 23/141</a>                              |
| <a href="#">B25B 23/157</a> | covered by | <a href="#">B25B 23/14</a>                               |
| <a href="#">B25B 23/159</a> | covered by | <a href="#">B25B 23/14</a>                               |

|                             |            |                             |
|-----------------------------|------------|-----------------------------|
| <a href="#">B25B 27/067</a> | covered by | <a href="#">B25B 27/06</a>  |
| <a href="#">B25B 27/073</a> | covered by | <a href="#">B25B 27/062</a> |

**Project: N/A (B25D)**

**B25D**

**PERCUSSIVE TOOLS** {(percussive machines for forging [B21J](#); hand-held drilling machines, in general [B23B 45/00](#), for wood [B27C 3/08](#); drilling machines, used for mining or quarrying, with reciprocating tool which is turned intermittently when out of contact with the working face [E21B 1/00](#))}

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the following CPC groups:

|                            |            |   |
|----------------------------|------------|---|
| <a href="#">B25D 13/00</a> | covered by | <a href="#">B25D 11/064</a>                       |
| <a href="#">B25D 15/00</a> | covered by | <a href="#">B25D 11/066</a>                       |
| <a href="#">B25D 15/02</a> | covered by | <a href="#">B25D 11/068</a>                       |
| <a href="#">B25D 17/10</a> | covered by | <a href="#">B25D 17/00</a> , <a href="#">F16P</a> |
| <a href="#">B25D 17/14</a> | covered by | <a href="#">B23Q 11/0042</a>                      |
| <a href="#">B25D 17/16</a> | covered by | <a href="#">B23Q 11/0042</a>                      |
| <a href="#">B25D 17/18</a> | covered by | <a href="#">B23Q 11/0042</a>                      |

**Project: N/A (B25J)**

**B25J**

**MANIPULATORS; CHAMBERS PROVIDED WITH MANIPULATION DEVICES** ({manipulators specially adapted for use in surgery [A61B 34/70](#); manipulators used in cleaning hollow articles [B08B 9/04](#) ; manipulators associated with rolling mills [B21B 39/20](#); manipulators associated with forging machines [B21J 13/10](#); {manipulators associated with picking-up and placing mechanisms [B23P 19/007](#) ; means for holding wheels or parts thereof [B60B 30/00](#); {vehicles with ground-engaging propulsion means, e.g. walking members [B62D 57/02](#), [B62D 57/032](#); devices for picking-up and depositing articles or materials between conveyors [B65G 47/90](#), [B65G 47/91](#); manipulators with gripping or holding means for transferring packages [B65H 67/065](#); cranes [B66C](#); {manipulators used in the protection or supervision of pipe-line installations [F17D 5/00](#); walking equipment adapted for nuclear steam-generators [F22B 37/006](#); manipulators specially adapted for, or associated with, nuclear reactors [G21C](#); {apparatus used for handling wafers during manufacture or treatment of semiconductor [H01L 21/68](#)})

NOTE

In this subclass, the following term is used with the meaning indicated :

- "manipulator" covers handling tools, devices, or machines having a gripping or work head capable of bodily movement in space and of change of orientation, such bodily movement and change of orientation being controlled, at will, by means remote from the head.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the following CPC groups:

|                           |            |  |
|---------------------------|------------|--|
| <a href="#">B25J 9/18</a> | covered by | <a href="#">B25J 9/16</a>                                |
| <a href="#">B25J 9/22</a> | covered by | <a href="#">B25J 9/1656</a> , <a href="#">G05B 19/42</a> |

**Project: N/A (B27B)****B27B**

**SAWS FOR WOOD OR SIMILAR MATERIAL; COMPONENTS OR ACCESSORIES THEREFOR** (saws specially adapted for pruning or debranching [A01G 3/08](#); sawing apparatus specially adapted for felling trees [A01G 23/091](#); features not restricted to a particular type of wood saw [B23D](#), e.g. attaching saw blades [B23D 51/00](#); machine tool frames, beds, pillars or like members, in general [B23Q 1/01](#))

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

[B27B 33/18](#)

covered by

**Project: N/A (B27G)****B27G**

**ACCESSORY MACHINES OR APPARATUS; TOOLS; SAFETY DEVICES, e.g. THOSE FOR SAWS** (clamping devices for mitre joints, presses for producing frames, press frames, or cages equipped with clamping devices [B25B](#); woodworkers' benches [B25H](#))

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

[B27G 17/08](#)

covered by

[B25D 3/00](#)**Project: N/A (B27L)****B27L 5/00**

**Manufacture of veneer (working veneer or plywood [B27D](#) ){~~Preparatory processing therefor (drying F26B)~~; *Preparatory processing therefor (drying F26B)* }**

**Project: N/A (B27M)****U B27M 3/00**

**Manufacture or reconditioning of specific semi-finished or finished articles (features of copying devices [B23Q](#); manufacture of plywood or veneer, shaping plywood or veneer into articles [B27D](#); of central layers for plywood [B27D 1/06](#); nailing or stapling machines in general [B27F 7/00](#); of elements for cooperage or wheel making [B27H](#) {; presses therefor [B27D 3/00](#) )}**

**B27M 3/34**

• of cases, trunks, or boxes, of wood or equivalent material which cannot satisfactorily be bent without softening (nailing or stapling in general [B25C](#), [B27F](#); of cardboard, paper, or similarly workable material [B31B](#) ){~~Manufacture of cleats therefor (manufacture of tubes, coops or barrels B27D 1/00; B27D 1/08; by folding grooved panels B27G 5/00)~~; *Manufacture of cleats therefor (manufacture of tubes, coops or barrels B27D 1/00, B27D 1/08; by folding grooved panels B27G 5/00)* }

**Project: N/A (B28B)****B28B**

**SHAPING CLAY OR OTHER CERAMIC COMPOSITIONS, SLAG, OR MIXTURES CONTAINING CEMENTITIOUS MATERIAL, e.g. PLASTER** (foundry moulding [B22C](#); working stone or stone-like material [B28D](#); shaping of substances in a plastic state, in general [B29C](#); making layered products not composed wholly of these substances [B32B](#); shaping *in situ*, see the relevant classes of section [E](#))

NOTE

In this subclass, the following term is used with the meaning indicated:

- "the material" means:

- a. clay or other ceramic compositions;
- b. slag;
- c. mixtures with water-setting properties given by clay, cementitious material, or slag.

#### WARNING

The following IPC ~~group(s)~~groups are not ~~used~~ in the CPC scheme. ~~Subject~~ ~~The~~ ~~subject~~ matter ~~covered by~~ for these ~~IPC~~ groups is classified in the following ~~CPC~~ groups:

[B28B 23/08](#) covered by [B28B 21/60](#), [B28B 23/06](#)

#### Project: N/A (B28C)

- U B28C 7/00 **Controlling the operation of apparatus for producing mixtures of clay or cement with other substances; Supplying or proportioning the ingredients for mixing clay or cement with other substances; Discharging the mixture {(B28C 5/42 takes precedence; feeding material in general B65G; proportioning in general G01F, G01G; controlling in general G05)}**
- U B28C 7/0046
  - {Storage or weighing apparatus for supplying ingredients (B28C 7/04 takes precedence)}
- B28C 7/0053
  - {Storage containers, e.g. hoppers, silos, bins (B28C 7/0084 takes ~~precedences~~precedence)}

#### Project: N/A (B29B)

- U B29B 17/00 **Recovery of plastics or other constituents of waste material containing plastics; ({volume reduction of waste plastics, e.g. by mechanical compacting or melting disposal of solid waste B09B; } chemical recovery C08J 11/00)**
- U B29B 17/02
  - Separating plastics from other materials
- B29B 17/0206
  - {Selectively separating reinforcements from matrix material by destroying the interface bound before ~~desintegrating~~disintegrating the matrix to particles or powder, e.g. from tires or belts}
- U B29B 17/04
  - Disintegrating plastics, {e.g. by milling}(B29B 9/02, B29B 11/02, B29B 13/10, {B29B 17/02} take precedence)
- U B29B 2017/0424
  - {Specific disintegrating techniques; devices therefor}
- B29B 2017/0456
  - • {Pressing tools with calibrated openings, e.g. in sizing plates, for ~~desintegrating~~disintegrating solid materials}

#### Project: RP0353 (B29C)

- U B29C 35/00 **Heating, cooling or curing, e.g. crosslinking, vulcanising; Apparatus therefor (moulds with incorporated heating or cooling means B29C 33/02; {thermal after-treatment of shaped articles B29C 71/02} ; curing devices for plastics dental prostheses A61C 13/14; before moulding B29B 13/00; chemical aspects C08J 3/00)**
- U B29C 35/02
  - Heating or curing, e.g. crosslinking, vulcanising {during moulding, e.g. in a mould}(coldvulcanisation B29C 35/18; {vulcanising tyres, presses therefor B29D 30/0601})
- D B29C 2035/0205
  - {Not used}
  - <administratively transferred to [B29C 2035/0211](#)>
- E B29C 2035/0211
  - • {resistance heating (B29C 2035/0811 takes precedence)}
- M B29C 2035/0216
  - • {using Peltier-effect}

**Project: N/A (B29C)****U B29C 71/00**

**After-treatment of articles without altering their shape; Apparatus therefor (B29C 73/00 takes precedence; surface shaping B29C 59/00; {for joined or sealed parts B29C 66/03; after-treatment specially adapted for vulcanising tyres B29D 30/0633} ; chemical aspects C08J 7/00)**

B29C 71/0009

- {using liquids, e.g. solvents, swelling agents (spectacle cases, e.g. for cleaning contact lenses A45C 11/04; ~~desinfecting or sterilising contact lenses A61L 12/00, using liquid substances A61L 2/20~~; ~~desinfecting or sterilising contact lenses A61L 12/00, using liquid substances A61L 2/20~~; cleaning involving the use of liquid in general B08B 3/00; for hydrating contact lenses B29D 11/00067)}

**Project: N/A (B29K)****B29K****INDEXING SCHEME ASSOCIATED WITH SUBCLASSES B29B, B29C OR B29D, RELATING TO MOULDING MATERIALS****NOTES**

1. This subclass constitutes an indexing scheme associated with subclasses [B29B](#), [B29C](#) or [B29D](#).
2. In this subclass, the following term is used with the meaning indicated:
  - "rubber" covers:
    - a. natural or conjugated diene rubbers;
    - b. rubber in general (for a specific rubber, other than a natural rubber or a conjugated diene rubber, see the group provided for such macromolecular compounds
3. Documents relating to compositions or properties of the materials to be shaped, said compositions having a particular influence on the shaping technique, should be classified in the shaping technique, e.g. [B29C 39/003](#), [B29C 41/003](#), [B29C 43/003](#), [B29C 45/0001](#), [B29C 47/0004](#), [B29C 49/0005](#), [B29C 51/002](#), [B29C 53/005](#), [B29C 55/005](#), [B29C 61/003](#), [B29C 63/0017](#) and **B2965/00S**

Copolymers are indexed with the same indexing code as the majority polymers

**WARNINGS**

1. -The following IPC ~~indexing codes groups~~ are not being used: ~~B29K 105/02~~, ~~B29K 105/22~~, ~~B29K 105/28~~, ~~B29K 105/30~~, ~~B29K 105/32~~ and ~~B29K 105/34~~  
 The aspect of B29K 105/02 is covered by B29K 2995/0064  
 The aspect of B29K 105/22 is covered by B29K 2705/00 in the CPC scheme.  
 The subject matter for these IPC groups is classified in the following CPC groups:

|                    |                   |   |
|--------------------|-------------------|---|
| <i>B29K 105/02</i> | <i>covered by</i> | <i><a href="#">B29K 2995/0064</a></i>   |
| <i>B29K 105/22</i> | <i>covered by</i> | <i><a href="#">B29K 2705/00</a></i>   |
| <i>B29K 105/28</i> | <i>covered by</i> | <i><a href="#">B29K 2995/0025</a></i>   |
| <i>B29K 105/30</i> | <i>covered by</i> | <i><a href="#">B29K 2995/003</a></i>  |
| <i>B29K 105/32</i> | <i>covered by</i> | <i><a href="#">B29K 2995/0026</a></i>   |
| <i>B29K 105/34</i> | <i>covered by</i> | <i><a href="#">B29K 2995/002</a>,<br/><a href="#">B29K 2995/0007</a> and<br/><a href="#">B29K 2995/0015</a></i> |

~~The aspect of B29K 105/28 is covered by B29K 2995/0025~~

~~The aspect of B29K 105/30 is covered by B29K 2995/003~~

~~The aspect of B29K 105/32 is covered by B29K 2995/0026~~

~~The aspects of B29K 105/34 are covered by B29K 2995/002, B29K 2995/0007 and B29K 2995/0015~~

Subclass indexes

Compositions for moulding materials, condition, form or state of moulded material: **B29K1/00 - B29K105/00**

Compositions for reinforcements: **B29K201/00 - B29K313/00**

Compositions for fillers: **B29K401/00 - B29K511/00**

Compositions for preformed parts: **B29K601/00 - B29K713/00**

Compositions for moulds: **B29K801/00 - B29K913/00**

Properties of moulding materials, reinforcements, fillers, preformed parts or moulds: **B29K995/00**

Compositions for moulding materials;

Condition, form or state of moulded material

2. From the date indicated below, the following groups have been deleted from the classification scheme. The documents of these groups have been transferred to the new groups as follows :

**B29K105/28** transferred to [B29K 2995/0025](#)

**B29K105/30** transferred to [B29K 2995/003](#)

**B29K105/32** transferred to [B29K 2995/0026](#)

**B29K105/34** transferred to [B29K 2995/002](#), [B29K 2995/0007](#), **B29K00D4**

|                     |   |
|---------------------|---|
| <b>B29K 2005/00</b> | <b>{Polysaccharides or derivatives (as such <a href="#">C08L 5/00</a>)}</b>   |
| <b>B29K 2039/00</b> | <b>{Use of polymers with unsaturated aliphatic radicals and with a nitrogen or a heterocyclic ring containing nitrogen in a side chain or derivatives thereof as moulding material (as such <a href="#">C08L 39/00</a>)}</b>  |
| B29K 2039/06        | • {Polymers of N-vinyl-pyrrolidones (as such <a href="#">C08L 39/06</a> )}  |
| B29K 2039/08        | • {Polymers of vinyl-pyridine (as such <a href="#">C08L 39/08</a> )}  |
| <b>B29K 2049/00</b> | <b>{Use of polyacetylene or cyanic ester resins, i.e. polymers having one or more carbon-to carbon triple bonds or derivatives thereof, as moulding material (as such <a href="#">C08L 49/00</a>)}</b>  |
| <b>B29K 2055/00</b> | <b>Use of specific polymers obtained by polymerisation reactions only involving carbon-to-carbon unsaturated bonds, not provided for in a single one of main groups <a href="#">B29K 2023/00</a> - {<del>B29K49/00</del><a href="#">B29K 2049/00</a>, e.g. having a vinyl group}, as moulding material {(as such <a href="#">C08L 55/00</a>)}</b> |
| <b>B29K 2065/00</b> | <b>{Use of polyphenylenes (as such <a href="#">C08L 65/02</a>) or polyxylylenes (as such <a href="#">C08L 65/04</a>) as moulding material}</b>  |
| <b>B29K 2089/00</b> | <b>{Use of proteins, e.g. casein, gelatine or derivatives thereof, as moulding material (as such <a href="#">C08L 89/00</a>)}</b>   |
| <b>B29K 2093/00</b> | <b>{Use of natural resins (as such <a href="#">C08L 93/00</a>), e.g. shellac (as such <a href="#">C08L 93/02</a>) or derivatives thereof, as moulding material (<a href="#">B29K 2001/00</a>, <a href="#">B29K 2003/00</a>, <a href="#">B29K 2005/00</a>, <a href="#">B29K 2007/00</a> and <a href="#">B29K 2089/00</a> take precedence)}</b>     |
| <b>B29K 2205/00</b> | <b>{Polysaccharides or derivatives (as such <a href="#">C08L 5/00</a>)}</b>   |
| <b>B29K 2239/00</b> | <b>{Use of polymers with unsaturated aliphatic radicals and with a nitrogen or a heterocyclic ring containing nitrogen in a side chain or derivatives thereof, as reinforcement (as such <a href="#">C08L 39/00</a>)}</b>   |
| B29K 2239/06        | • {Polymers of N-vinyl-pyrrolidones (as such <a href="#">C08L 39/06</a> )}  |
| B29K 2239/08        | • {Polymers of vinyl-pyridine (as such <a href="#">C08L 39/08</a> )}  |
| <b>B29K 2249/00</b> | <b>{Use of polyacetylene or cyanic ester resins, i.e. polymers having one or more carbon-to carbon triple bonds or derivatives thereof, as reinforcement (as such <a href="#">C08L 49/00</a>)}</b>  |



- B29K 2265/00 {Use of polyphenylenes (as such [C08L 65/02](#)) or polyxylylenes (as such [C08L 65/04](#)), as reinforcement}
- B29K 2289/00 {Use of proteins, e.g. casein, gelatine or derivatives thereof, as reinforcement (as such [C08L 89/00](#))}
- B29K 2293/00 {Use of natural resins (as such [C08L 93/00](#)), e.g. shellac (as such [C08L 93/02](#)) or derivatives thereof, as reinforcement ([B29K 2201/00](#), [B29K 2203/00](#), [B29K 2205/00](#), [B29K 2207/00](#) and [B29K 2289/00](#) take precedence)}

## Project: MP0362 (B29K)

- U B29K 2296/00 Use of specified macromolecular materials not provided for in a single one of main groups [B29K 2201/00](#) - [B29K 2295/00](#), as reinforcement
- M B29K 2296/02 • Graft polymers (~~B29K 2255/02 takes precedence~~)
- M B29K 2296/04 • Block polymers (~~B29K 2255/02 takes precedence~~)

## Project: N/A (B29K)

- B29K 2313/00 {Textile products, fabrics ([B29K 2105/06](#) takes precedence)}
- B29K 2313/02 • {coated}
- B29K 2405/00 {Polysaccharides or derivatives (as such [C08L 5/00](#))}
- B29K 2439/00 {Use of polymers with unsaturated aliphatic radicals and with a nitrogen or a heterocyclic ring containing nitrogen in a side chain or derivatives thereof, as filler (as such [C08L 39/00](#))}
- B29K 2439/06 • {Polymers of N-vinyl-pyrrolidones (as such [C08L 39/06](#))}
- B29K 2439/08 • {Polymers of vinyl-pyridine (as such [C08L 39/08](#))}
- B29K 2449/00 {Use of polyacetylene or cyanic ester resins, i.e. polymers having one or more carbon-to carbon triple bonds or derivatives thereof, as filler (as such [C08L 49/00](#))}
- B29K 2465/00 {Use of polyphenylenes (as such [C08L 65/02](#)) or polyxylylenes (as such [C08L 65/04](#)), as filler}
- B29K 2489/00 {Use of proteins, e.g. casein, gelatine or derivatives thereof, as filler (as such [C08L 89/00](#))}
- B29K 2493/00 {Use of natural resins (as such [C08L 93/00](#)), e.g. shellac (as such [C08L 93/02](#)) or derivatives thereof, as filler ([B29K 2401/00](#), [B29K 2403/00](#), [B29K 2405/00](#), [B29K 2407/00](#) and [B29K 2489/00](#) take precedence)}
- B29K 2605/00 {Polysaccharides or derivatives (as such [C08L 5/00](#))}
- B29K 2639/00 {Use of polymers with unsaturated aliphatic radicals and with a nitrogen or a heterocyclic ring containing nitrogen in a side chain or derivatives thereof, for preformed parts, e.g. inserts (as such [C08L 39/00](#))}
- B29K 2639/06 • {Polymers of N-vinyl-pyrrolidones (as such [C08L 39/06](#))}
- B29K 2639/08 • {Polymers of vinyl-pyridine (as such [C08L 39/08](#))}
- B29K 2649/00 {Use of polyacetylene or cyanic ester resins, i.e. polymers having one or more carbon-to carbon triple bonds or derivatives thereof, for preformed parts, e.g. inserts (as such [C08L 49/00](#))}
- B29K 2665/00 {Use of polyphenylenes (as such [C08L 65/02](#)) or polyxylylenes (as such [C08L 65/04](#)), for preformed parts, e.g. inserts}



**B29K 2689/00** {Use of proteins, e.g. casein, gelatine or derivatives thereof, for preformed parts, e.g. inserts (as such [C08L 89/00](#))}

**B29K 2693/00** {Use of natural resins (as such [C08L 93/00](#)), e.g. shellac (as such [C08L 93/02](#)) or derivatives thereof, for preformed parts, e.g. inserts ([B29K 2601/00](#), [B29K 2603/00](#), [B29K 2605/00](#), [B29K 2607/00](#) and [B29K 2689/00](#) take precedence)}

### Project: MP0362 (B29K)

**U B29K 2696/00** Use of specified macromolecular materials not provided for in a single one of main groups [B29K 2601/00](#) - [B29K 2695/00](#), for preformed parts, e.g. inserts

**M B29K 2696/02** • Graft polymers (~~B29K-2655/02 takes precedence~~)

**M B29K 2696/04** • Block polymers (~~B29K-2655/02 takes precedence~~)

### Project: N/A (B29K)

**B29K 2713/00** {Textile products, fabrics ([B29K 2105/06](#) takes precedence)}

**B29K 2713/005** • {Fleece}

**B29K 2713/02** • {coated}

#### NOTE

Copolymers are indexed with the same indexing code as the majority polymers

**B29K 2715/00** {Condition, form or state of preformed parts, e.g. inserts}

**B29K 2715/003** • {Cellular or porous}

**B29K 2715/006** • {Glues, adhesives, e.g. hot melts, thermofusible adhesives}

**B29K 2801/00** {Use of cellulose, modified cellulose or cellulose derivatives, e.g. viscose, as mould material (as such [C08L 1/00](#))}

**B29K 2801/08** • {Cellulose derivatives (as such [C08L 1/08](#))}

**B29K 2801/12** • • {Cellulose acetate (as such [C08L 1/12](#))}

**B29K 2801/14** • • {Cellulose acetate-butyrate (as such [C08L 1/14](#))}

**B29K 2801/18** • • {Cellulose nitrate (as such [C08L 1/18](#))}

**B29K 2803/00** {Use of starch or derivatives as mould material (as such [C08L 3/00](#))}

**B29K 2805/00** {Polysaccharides or derivatives (as such [C08L 5/00](#))}

**B29K 2807/00** {Use of natural rubber as mould material (as such [C08L 7/00](#))}

**B29K 2809/00** {Use of rubber derived from conjugated dienes as mould material (as such [C08L 9/00](#))}

**B29K 2811/00** {Use of rubber derived from chloroprene as mould material (as such [C08L 11/00](#))}

**B29K 2819/00** {Use of rubber not provided for in a single one of main groups [B29K 2807/00](#) - [B29K 2811/00](#), as mould material}

**B29K 2821/00** {Use of unspecified rubbers as mould material (as such [C08L 21/00](#))}

**B29K 2821/003** • {Thermoplastic elastomers}

**B29K 2821/006** • {Thermosetting elastomers}

**B29K 2823/00** {Use of polyalkenes or derivatives thereof as mould material (as such [C08L 23/00](#))}

|                     |  |
|---------------------|--|
| B29K 2823/04        | • {Polymers of ethylene (as such <a href="#">C08L 23/04</a> )}   |
| B29K 2823/06        | • • {PE, i.e. polyethylene (as such <a href="#">C08L 23/06</a> )}  |
| B29K 2823/0608      | • • • {characterised by its density}   |
| B29K 2823/0616      | • • • • {VLDPE, i.e. very low density polyethylene}  |
| B29K 2823/0625      | • • • • {LLDPE, i.e. linear low density polyethylene}  |
| B29K 2823/0633      | • • • • {LDPE, i.e. low density polyethylene}  |
| B29K 2823/0641      | • • • • {MDPE, i.e. medium density polyethylene}   |
| B29K 2823/065       | • • • • {HDPE, i.e. high density polyethylene}   |
| B29K 2823/0658      | • • • {characterised by its molecular weight}  |
| B29K 2823/0666      | • • • • {ULMWPE, i.e. ultra low molecular weight polyethylene}   |
| B29K 2823/0675      | • • • • {HMWPE, i.e. high molecular weight polyethylene}   |
| B29K 2823/0683      | • • • • {UHMWPE, i.e. ultra high molecular weight polyethylene}  |
| B29K 2823/0691      | • • • {PEX, i.e. crosslinked polyethylene}   |
| B29K 2823/08        | • • {Use of copolymers of ethylene as mould material (as such <a href="#">C08L 23/08</a> ; <a href="#">B29K 2823/16</a> takes precedence)}   |
| B29K 2823/083       | • • • {EVA, i.e. ethylene vinyl acetate copolymer}   |
| B29K 2823/086       | • • • {EVOH, i.e. ethylene vinyl alcohol copolymer}  |
| B29K 2823/10        | • {Polymers of propylene (as such <a href="#">C08L 23/10</a> )}  |
| B29K 2823/12        | • • {PP, i.e. polypropylene (as such <a href="#">C08L 23/12</a> )}   |
| B29K 2823/14        | • • {Copolymers of polypropylene (as such <a href="#">C08L 23/14</a> ; <a href="#">B29K 2823/16</a> takes precedence)}   |
| B29K 2823/16        | • {EPM, i.e. ethylene-propylene copolymers; EPDM, i.e. ethylene-propylene-diene copolymers; EPT, i.e. ethylene-propylene terpolymers (as such <a href="#">C08L 23/16</a> )}                |
| B29K 2823/18        | • {Polymers of hydrocarbons having four or more carbon atoms, e.g. polymers of butylene (e.g. PB, i.e. polybutylene) (as such <a href="#">C08L 23/18</a> )}                                |
| B29K 2823/22        | • • {Copolymers of isobutene, e.g. butyl rubber (as such <a href="#">C08L 23/22</a> )}   |
| B29K 2823/38        | • {Polymers of cycloalkenes, e.g. norbornene, cyclopentene}  |
| <b>B29K 2825/00</b> | <b>{Use of polymers of vinyl-aromatic compounds or derivatives thereof as mould material (as such <a href="#">C08L 25/00</a>)}</b>   |
| B29K 2825/04        | • {Polymers of styrene (as such <a href="#">C08L 25/04</a> )}  |
| B29K 2825/06        | • • {PS, i.e. polystyrene (as such <a href="#">C08L 25/06</a> )}   |
| B29K 2825/08        | • • {Copolymers of styrene, e.g. AS or SAN, i.e. acrylonitrile styrene (as such <a href="#">C08L 25/08</a> ; <a href="#">B29K 2855/02</a> takes precedence)}                               |
| <b>B29K 2827/00</b> | <b>{Use of polyvinylhalogenides or derivatives thereof as mould material (as such <a href="#">C08L 27/00</a>)}</b>   |
| B29K 2827/06        | • {PVC, i.e. polyvinylchloride (as such <a href="#">C08L 27/06</a> )}  |
| B29K 2827/08        | • {PVDC, i.e. polyvinylidene chloride (as such <a href="#">C08L 27/08</a> )}   |
| B29K 2827/12        | • {containing fluorine (as such <a href="#">C08L 27/12</a> )}  |
| B29K 2827/14        | • • {PVF, i.e. polyvinyl fluoride (as such <a href="#">C08L 27/14</a> )}   |
| B29K 2827/16        | • • {PVDF, i.e. polyvinylidene fluoride (as such <a href="#">C08L 27/16</a> )}   |
| B29K 2827/18        | • • {PTFE, i.e. polytetrafluorethene (as such <a href="#">C08L 27/18</a> ), e.g. ePTFE, i.e. expanded polytetrafluorethene, Gore Tex (R)}  |
| <b>B29K 2829/00</b> | <b>{Use of polyvinylalcohols, polyvinylethers, polyvinylaldehydes, polyvinylketones or polyvinylketals or derivatives thereof, as mould material (as such <a href="#">C08L 29/00</a>)}</b> |

- B29K 2829/04      • {PVOH, i.e. polyvinyl alcohol (as such [C08L 29/04](#); [B29K 2831/04](#) takes precedence)}
- B29K 2829/14      • {Polyvinylacetals}
- B29K 2831/00**      **{Use of polyvinylesters or derivatives thereof as mould material (as such [C08L 31/00](#))}**
- B29K 2831/04      • {Polymers of vinyl acetate, e.g. PVAc, i.e. polyvinyl acetate (as such [C08L 31/04](#))}
- B29K 2833/00**      **{Use of polymers of unsaturated acids or derivatives thereof as mould material (as such [C08L 33/00](#); [B29K 2835/00](#) takes precedence)}**
- B29K 2833/04      • {Polymers of esters (as such [C08L 33/04](#))}
- B29K 2833/08      • • {Polymers of acrylic acid esters, e.g. PMA, i.e. polymethylacrylate (as such [C08L 33/08](#))}
- B29K 2833/12      • • {Polymers of methacrylic acid esters, e.g. PMMA, i.e. polymethylmethacrylate (as such [C08L 33/12](#))}
- B29K 2833/18      • {Polymers of nitriles (as such [C08L 33/18](#))}
- B29K 2833/20      • • {PAN, i.e. polyacrylonitrile (as such [C08L 33/20](#))}
- B29K 2833/26      • {Polymers of acrylamide or methacrylamide (as such [C08L 33/26](#))}
- B29K 2835/00**      **{use of polymers of unsaturated polycarboxylic acids or derivatives thereof as mould material (as such [C08L 35/00](#))}**
- B29K 2839/00**      **{Use of polymers with unsaturated aliphatic radicals and with a nitrogen or a heterocyclic ring containing nitrogen in a side chain or derivatives thereof, as mould material (as such [C08L 39/00](#))}**
- B29K 2839/06      • {Polymers of N-vinyl-pyrrolidones (as such [C08L 39/06](#))}
- B29K 2839/08      • {Polymers of vinyl-pyridine (as such [C08L 39/08](#))}
- B29K 2845/00**      **{Use of polymers of unsaturated cyclic compounds having no unsaturated aliphatic groups in a side-chain, e.g. coumarone-indene resins or derivatives thereof, as mould material (as such [C08L 45/00](#))}**
- B29K 2849/00**      **{Use of polyacetylene or cyanic ester resins, i.e. polymers having one or more carbon-to carbon triple bonds or derivatives thereof, as mould material (as such [C08L 49/00](#))}**
- B29K 2855/00**      **{Use of specific polymers obtained by polymerisation reactions only involving carbon-to-carbon unsaturated bonds, not provided for in a single one of main groups [B29K 2823/00](#) - [B29K 2849/00](#), e.g. having a vinyl group, as mould material (as such [C08L 55/00](#))}**
- B29K 2855/02      • {ABS polymers, i.e. acrylonitrile-butadiene-styrene polymers (as such [C08L 55/02](#))}
- B29K 2859/00**      **{Use of polyacetals, e.g. POM, i.e. polyoxymethylene; or derivatives thereof, as mould material (as such [C08L 59/00](#))}**
- B29K 2861/00**      **{Use of condensation polymers of aldehydes or ketones or derivatives thereof, as mould material (as such [C08L 61/00](#))}**
- B29K 2861/04      • {Phenoplasts (as such [C08L 61/04](#))}
- B29K 2861/20      • {Aminoplasts (as such [C08L 61/20](#))}
- B29K 2863/00**      **{Use of EP, i.e. epoxy resins or derivatives thereof as mould material (as such [C08L 63/00](#))}**
- B29K 2865/00**      **{Use of polyphenylenes (as such [C08L 65/02](#)) or polyxylylenes (as such [C08L 65/04](#)), as mould material}**

|               |  |
|---------------|--|
|               | <b>B29K 2867/00</b> <b>{Use of polyesters or derivatives thereof as mould material (as such <a href="#">C08L 67/00</a>)}</b>   |
| B29K 2867/003 | <ul style="list-style-type: none"> <li>• {PET, i.e. polyethylene terephthalate}</li> </ul>   |
| B29K 2867/006 | <ul style="list-style-type: none"> <li>• {PBT, i.e. polybutylene terephthalate}</li> </ul>   |
| B29K 2867/04  | <ul style="list-style-type: none"> <li>• {Polyesters derived from hydroxycarboxylic acids (as such <a href="#">C08L 67/04</a>)}</li> </ul>   |
| B29K 2867/043 | <ul style="list-style-type: none"> <li>• • {PGA, i.e. polyglycolic acid or polyglycolide}</li> </ul>   |
| B29K 2867/046 | <ul style="list-style-type: none"> <li>• • {PLA, i.e. polylactic acid or polylactide}</li> </ul>   |
| B29K 2867/06  | <ul style="list-style-type: none"> <li>• {Unsaturated polyesters (as such <a href="#">C08L 67/06</a>)}</li> </ul>  |
|               |  |
|               | <b>B29K 2869/00</b> <b>{Use of PC, i.e. polycarbonates or derivatives thereof as mould material (as such <a href="#">C08L 69/00</a>)}</b>  |
|               |  |
| U             |  |
| B29K 2871/00  | <b>{Use of polyethers, e.g. PEEK, i.e. polyether-etherketone or PEK, i.e. polyetherketone or derivatives thereof}, as mould material (as such <a href="#">C08L 71/00</a>)</b>  |
| B29K 2871/02  | <ul style="list-style-type: none"> <li>• {Polyalkylene oxides, e.g. PEO, i.e. polyethylene oxide or derivatives thereof (as such <a href="#">C08L 71/02</a>)}</li> </ul>   |
| B29K 2871/12  | <ul style="list-style-type: none"> <li>• {PPO, i.e. polyphenylene oxide (as such <a href="#">C08L 71/12</a>); PPE, i.e. polyphenylene ether}</li> </ul>  |
|               |  |
| B29K 2873/00  | <b>{use of other polymers having oxygen as the only hetero atom in the main chain, as mould material (as such <a href="#">C08L 73/00</a>)}</b>   |
|               |  |
| B29K 2875/00  | <b>{Use of PU, i.e. polyureas or polyurethanes or derivatives thereof, as mould material (as such <a href="#">C08L 75/00</a>)}</b>   |
| B29K 2875/02  | <ul style="list-style-type: none"> <li>• {Polyureas (as such <a href="#">C08L 75/02</a>)}</li> </ul>   |
|               |  |
| U             |  |
| B29K 2877/00  | <b>{Use of PA, i.e.} polyamides, e.g. polyesteramides or derivatives thereof, as mould material [ (as such <a href="#">C08L 77/00</a>)]</b>  |
| B29K 2877/10  | <ul style="list-style-type: none"> <li>• {Aromatic polyamides (Polyaramides) or derivatives thereof (as such <a href="#">C08L 77/10</a>)}</li> </ul>   |
|               |  |
| U             |  |
| B29K 2879/00  | <b>{Use of polymers having nitrogen, with or without oxygen, or carbon only, in the main chain not provided for in groups <a href="#">B29K 2861/00</a> - <a href="#">B29K 2877/00</a>}, as mould material {(as such <a href="#">C08L 79/00</a>)}</b> |
| B29K 2879/08  | <ul style="list-style-type: none"> <li>• {PI, i.e. polyimides or derivatives thereof (as such <a href="#">C08L 79/08</a>)}</li> </ul>  |
| B29K 2879/085 | <ul style="list-style-type: none"> <li>• • {Thermoplastic polyimides, e.g. polyesterimides, polyetherimides [PEI], polyamideimides; Derivatives thereof}</li> </ul>  |
|               |  |
| B29K 2881/00  | <b>{Use of polymers having sulfur, with or without nitrogen, oxygen, or carbon only, in the main chain, as mould material (as such <a href="#">C08L 81/00</a>)}</b>  |
| B29K 2881/04  | <ul style="list-style-type: none"> <li>• {Polysulfides, e.g. PPS, i.e. polyphenylene sulfide or derivatives thereof (as such <a href="#">C08L 81/04</a>)}</li> </ul>   |
| B29K 2881/06  | <ul style="list-style-type: none"> <li>• {PSU, i.e. polysulfones; PES, i.e. polyethersulfones or derivatives thereof (as such <a href="#">C08L 81/06</a>)}</li> </ul>  |
|               |  |
| B29K 2883/00  | <b>{Use of polymers having silicon, with or without sulfur, nitrogen, oxygen, or carbon only, in the main chain, as mould material (as such <a href="#">C08L 83/00</a>)}</b>   |
| B29K 2883/005 | <ul style="list-style-type: none"> <li>• {Liquid Silicone Rubbers [LSR] or derivatives thereof}</li> </ul>   |
|               |  |
| B29K 2885/00  | <b>{Use of polymers having other elements than silicon, sulfur, nitrogen, oxygen, and carbon in the main chain, as mould material (as such <a href="#">C08L 85/00</a>)}</b>  |

|   |   |
|---|---|
| B29K 2886/00  | {Use of specific polymers obtained by polycondensation or polyaddition, not provided for in a single one of main groups <a href="#">B29K 2859/00</a> - <a href="#">B29K 2885/00</a> , as mould material}  |
| B29K 2889/00  | {Use of proteins, e.g. casein, gelatine or derivatives thereof, as mould material (as such <a href="#">C08L 89/00</a> )}  |
| B29K 2891/00  | {Use of waxes as mould material (as such <a href="#">C08L 91/06</a> )}  |
| B29K 2893/00  | {Use of natural resins (as such <a href="#">C08L 93/00</a> ), e.g. shellac (as such <a href="#">C08L 93/02</a> ) or derivatives thereof, as mould material ( <a href="#">B29K 2801/00</a> , <a href="#">B29K 2803/00</a> , <a href="#">B29K 2805/00</a> , <a href="#">B29K 2807/00</a> and <a href="#">B29K 2889/00</a> take precedence)} |
| B29K 2895/00  | {Use of bituminous materials, as mould material (as such <a href="#">C08L 95/00</a> )}  |
| B29K 2896/00  | {Use of specified macromolecular materials not provided for in a single one of main groups <a href="#">B29K 2801/00</a> - <a href="#">B29K 2895/00</a> , as mould material}   |
| B29K 2896/005   | • {Ionomers}  |
| B29K 2896/02  | • {Graft polymers ( <a href="#">B29K 2855/02</a> takes precedence)}   |
| B29K 2896/04  | • {Block polymers ( <a href="#">B29K 2855/02</a> takes precedence)}   |
| B29K 2901/00  | {Use of unspecified macromolecular compounds as mould material (unspecified rubbers <a href="#">B29K 2821/00</a> ; as such <a href="#">C08L 101/00</a> )}   |
| B29K 2901/10  | • {Thermosetting resins}  |
| B29K 2901/12  | • {Thermoplastic materials}   |
| B29K 2903/00  | {Use of resin-bonded materials as mould material}   |
| B29K 2903/04  | • {Inorganic materials}   |
| B29K 2903/06  | • • {Metal powders, metal carbides or the like}   |
| B29K 2903/08  | • • {Mineral aggregates, e.g. sand, clay or the like}   |
| B29K 2905/00  | {Use of metals, their alloys or their compounds, as mould material}   |
| NOTE  |   |
| Alloys or compounds of specified metals are indexed with the same code as the specified metals. |   |
| B29K 2905/02  | • {Aluminium}   |
| B29K 2905/04  | • {Lead}  |
| B29K 2905/06  | • {Tin}   |
| B29K 2905/08  | • {Transition metals}   |
| B29K 2905/10  | • • {Copper}  |
| B29K 2905/12  | • • {Iron}  |
| B29K 2905/14  | • • {Noble metals, e.g. Silver, Gold, Platinum}   |
| B29K 2907/00  | {Use of elements other than metals as mould material}   |
| B29K 2907/02  | • {Boron}   |
| B29K 2907/04  | • {Carbon}  |
| B29K 2907/045   | • • {Diamond}   |
| B29K 2909/00  | {Use of inorganic materials not provided for in groups <a href="#">B29K 2803/00</a> - <a href="#">B29K 2807/00</a> , as mould material}   |
| B29K 2909/02  | • {Ceramics}  |
| B29K 2909/04  | • • {Carbides; Nitrides}  |

|                     |   |
|---------------------|---|
| B29K 2909/06        | • {Concrete}  |
| B29K 2909/08        | • {Glass}   |
| B29K 2909/10        | • {Mica}  |
| B29K 2909/12        | • {Asbestos}  |
| B29K 2909/14        | • {Stones}  |
| <b>B29K 2911/00</b> | <b>{Use of natural products or their composites, not provided for in groups B29K 2801/00 - B29K 2809/00, as mould material}</b> |
| B29K 2911/02        | • {Cork}  |
| B29K 2911/04        | • {Linoleum}  |
| B29K 2911/06        | • {Bone, horn, ivory}   |
| B29K 2911/08        | • {Leather}   |
| B29K 2911/10        | • {Natural fibres, e.g. wool, cotton}   |
| B29K 2911/12        | • {Paper, e.g. cardboard}   |
| B29K 2911/123       | • • {Coated}  |
| B29K 2911/126       | • • {Impregnated}   |
| B29K 2911/14        | • {Wood, e.g. woodboard, fibreboard}  |
| <b>B29K 2913/00</b> | <b>{Textile products, fabrics}</b>  |
| B29K 2913/02        | • {coated}  |
| <b>B29K 2995/00</b> | <b>{Properties of moulding materials, reinforcements, fillers, preformed parts or moulds}</b>                                   |
| B29K 2995/0001      | • {having particular accoustical properties}  |
| B29K 2995/0002      | • • {insulating}  |
| B29K 2995/0003      | • {having particular electrical or magnetic properties, e.g. piezoelectric}   |
| B29K 2995/0005      | • • {Conductive}  |
| B29K 2995/0006      | • • {Dielectric}  |
| B29K 2995/0007      | • • {Insulating}  |
| B29K 2995/0008      | • • {Magnetic, paramagnetic}  |
| B29K 2995/001       | • • {Electrostatic}   |
| B29K 2995/0011      | • • {Electromagnetic wave shielding material}   |
| B29K 2995/0012      | • {having particular thermal properties}  |
| B29K 2995/0013      | • • {Conductive}  |
| B29K 2995/0015      | • • {Insulating}  |
| B29K 2995/0016      | • • {Non-inflammable, resistant to heat}  |
| B29K 2995/0017      | • • {Heat stable}   |
| B29K 2995/0018      | • {having particular optical properties, e.g. fluorescent, phosphorescent}  |
| B29K 2995/002       | • • {Coloured}  |
| B29K 2995/0021      | • • • {Multi-coloured}  |
| B29K 2995/0022      | • • {Bright, glossy, shiny surface}   |
| B29K 2995/0024      | • • {Matt surface}  |
| B29K 2995/0025      | • • {Opaque}  |
| B29K 2995/0026      | • • {Transparent}   |
| B29K 2995/0027      | • • • {for light outside the visible spectrum}  |
| B29K 2995/0029      | • • {Translucent}   |
| B29K 2995/003       | • • {Reflective}  |



|                |   |
|----------------|---|
| B29K 2995/0031 | • • {Refractive}  |
| B29K 2995/0032 | • • • {Birefringent}  |
| B29K 2995/0034 | • • {Polarising}  |
| B29K 2995/0035 | • • {Fluorescent}   |
| B29K 2995/0036 | • • {Electroluminescent}  |
| B29K 2995/0037 | • {Other properties}  |
| B29K 2995/0039 | • • {Amorphous}   |
| B29K 2995/004  | • • {Semi-crystalline}  |
| B29K 2995/0041 | • • {Crystalline}   |
| B29K 2995/0043 | • • • {non-uniform}   |
| B29K 2995/0044 | • • {Anisotropic}   |
| B29K 2995/0045 | • • {Isotropic}   |
| B29K 2995/0046 | • • {Elastic}   |
| B29K 2995/0048 | • • {Without internal tensions}   |
| B29K 2995/0049 | • • {Heat shrinkable}   |
| B29K 2995/005  | • • {Oriented}  |
| B29K 2995/0051 | • • • {mono-axially}  |
| B29K 2995/0053 | • • • {bi-axially}  |
| B29K 2995/0054 | • • • {multi-axially}   |
| B29K 2995/0055 | • • {Resistive to light}  |
| B29K 2995/0056 | • • {Biocompatible, e.g. biopolymers, bioelastomers (bio-degradable<br><a href="#">B29K 2995/006</a> )} |
| B29K 2995/0058 | • • {Inert to chemical degradation}   |
| B29K 2995/0059 | • • {Degradable}  |
| B29K 2995/006  | • • • {Bio-degradable, e.g. bioabsorbable, bioresorbable or bioerodible}                                |
| B29K 2995/0062 | • • • {water-soluble}   |
| B29K 2995/0063 | • • {Density}   |
| B29K 2995/0064 | • • • {Non-uniform density}   |
| B29K 2995/0065 | • • {Permeability to gases}   |
| B29K 2995/0067 | • • • {non-permeable}   |
| B29K 2995/0068 | • • {Permeability to liquids, adsorption}   |
| B29K 2995/0069 | • • • {non-permeable}   |
| B29K 2995/007  | • • {Hardness}  |
| B29K 2995/0072 | • • {Roughness, e.g. anti-slip}   |
| B29K 2995/0073 | • • • {smooth}  |
| B29K 2995/0074 | • • • {patterned, grained}  |
| B29K 2995/0075 | • • • {flocked}   |
| B29K 2995/0077 | • • {Yield strength; Tensile strength}  |
| B29K 2995/0078 | • • {Shear strength}  |
| B29K 2995/0079 | • • {Torsion strength; Torsion stiffness}   |
| B29K 2995/0081 | • • {Tear strength}   |
| B29K 2995/0082 | • • {Flexural strength; Flexion stiffness}  |
| B29K 2995/0083 | • • {Creep}   |
| B29K 2995/0084 | • • {Cryogenic properties}  |



- B29K 2995/0086 . . {Fatigue strength}
- B29K 2995/0087 . . {Wear resistance}
- B29K 2995/0088 . . {Molecular weight}
- B29K 2995/0089 . . {Impact strength, toughness}
- B29K 2995/0091 . . {Damping, energy absorption}
- B29K 2995/0092 . . {hydrophilic}
- B29K 2995/0093 . . {hydrophobic}
- B29K 2995/0094 . . {Geometrical properties}
- B29K 2995/0096 . . . {Dimensional stability}
- B29K 2995/0097 . . . {Thickness}
- B29K 2995/0098 . . {Peel strength, peelable}

**Project: N/A (B32B)****B32B****LAYERED PRODUCTS, i.e. PRODUCTS BUILT-UP OF STRATA OF FLAT OR NON-FLAT, e.g. CELLULAR OR HONEYCOMB, FORM**NOTES1. This subclass covers:

- layered products comprising different kinds of material or layered products not characterised by the particular kind of material used;
- a product similar to a layered product but comprising only material in the form of a sheet or network embedded in a mass of plastics or of physically-similar substances which mass penetrates the said sheet or network and lies on both sides of the latter (e.g. so that the sheet or network reinforces the plastics substance) PROVIDED THAT the embedded sheet or network extends coherently or connectedly over substantially the whole area of the product; thus the embedded sheet or network may be a fabric or a series of rods connected by cross wires. The manner of making such a product is, however, classified in this subclass only if it is essentially a process of building-up an assembly of layers of which at least one outer layer is preformed. If the embedded material comprises only a series of unconnected rods, the product is not classified in this subclass.

2. This subclass does not cover:

- processes or apparatus used in, or in connection with, the production or treatment of any product, if the process or apparatus is fully classifiable in a single other class or subclass for processes or apparatus, e.g. [B05](#), [B29](#), [B44D](#), [C08J](#), [C09J](#), [C23](#);
- compositions or preparation or treatment thereof, unless they are essentially restricted to layered products and cannot be fully classified in another class without ignoring this restriction;
- etched metallic pattern on the surface of a printed circuit board.

## 3. In this subclass:

- a film formed on a layer by spreading a substance thereon is not considered to constitute a layer itself if it serves only as an adhesive or its purpose is merely to finish a surface of a product;
- groups designating products cover also methods or apparatus specially adapted for producing such products.

## 4. In this subclass, the following terms or expressions are used with the meanings indicated:

- "layer" is a sheet or strip or anything else having a small thickness relatively to its other dimensions which, together with at least one other layer, exists in a product, whether it pre-existed, e.g. as a separate sheet or strip, or was formed during the production of the layered product. It may or may not be homogeneous or cohesive; it may be an assembly of fibres or pieces of material. It may be discontinuous, e.g. in the form of a grating,

honeycomb, or frame. It may may or may not be in complete contact with the next layer, e.g. a corrugated layer against a flat layer;

- "layered product" comprises at least two layers secured together. The term "secured" includes any method of uniting layers, e.g. needling, stitching, gluing, nailing, dovetailing or the interposition of an adhesive or adhesive impregnated support. It may also be an intermediate stage in the production of an article which is not layered in its final form, e.g. a panel with a protective layer which is stripped off when the panel is placed in its position of use. The layers are preformed layers or layers formed IN SITU on a preformed layer and may consist of coherent solid materials, including honeycombs and other cellular materials or of non-coherent solid materials composed of assemblies of strands, strips, fibres, tiles or the like;
- "filamentary layer" means a layer of threads or filaments of any substance (e.g. wires) of more or less unlimited length placed in an orderly arrangement and secured together; it may be woven, knitted, braided, or netted, or formed of threads crossed or laid side by side and bonded together;
- "fibrous layer" means a random assembly of fibres of limited length, e.g. felt, fleece; the fibres {being} interengaged or connected, e.g. by adhesive.

5. In this subclass,

- "First place rule" is used in the following groups [B32B 9/04](#), [B32B 11/04](#), [B32B 13/04](#), [B32B 15/04](#), [B32B 19/04](#), [B32B 21/04](#), [B32B 23/046](#) - [B32B 23/12](#), [B32B 25/04](#), [B32B 27/06](#), [B32B 29/002](#).

However, when these groups are not characterised by the specific material adjacency to be classified, then, multiple classification is given, e.g. a layered product having a stone layer next to a bituminous layer would be classified in [B32B 9/04](#) and in [B32B 11/04](#). For a cellulosic plastic layer next to a metal layer or to a wood layer [B32B 23/042](#) or [B32B 23/044](#), respectively, take precedence (i.e. first rule does not apply). For layered products comprising at least two ceramic layers, products comprising only ceramic layers are classified in group [B32B 18/00](#) and products comprising two ceramics layers and at least one layer of another material are classified in [B32B 18/00](#) and [B32B 9/04](#).

#### WARNING

-The following IPC **groups** are not **used** in the CPC scheme-**Subject**. **The subject** matter **covered by theses for these IPC** groups is classified in the following CPC groups:

|   |            |   |
|---|------------|---|
| <a href="#">B32B 1/04</a>                             | covered by | <a href="#">B32B 3/02</a> - <a href="#">B32B 3/08</a>   |
| <a href="#">B32B 1/06</a>                             | covered by | <a href="#">B32B 13/02</a>  |
| <a href="#">B32B 3/08</a> - <a href="#">B32B 3/22</a> | covered by | <a href="#">B32B 3/08</a> - <a href="#">B32B 3/22</a>   |
| <a href="#">B32B 3/24</a>                             | covered by | <a href="#">B32B 3/266</a>  |
| <a href="#">B32B 5/28</a>                             | covered by | <a href="#">B32B 2260/021</a> - <a href="#">B32B 2260/023</a>   |
| <a href="#">B32B 17/02</a>                            | covered by | <a href="#">B32B 2262/101</a>   |
| <a href="#">B32B 17/04</a>                            | covered by | <a href="#">B32B 2262/101</a> and <a href="#">B32B 2260/04</a>  |
| <a href="#">B32B 17/12</a>                            | covered by | <a href="#">B32B 17/067</a>   |
| <a href="#">B32B 23/02</a>                            | covered by | <a href="#">B32B 2262/04</a> and <a href="#">B32B 5/02</a> - <a href="#">B32B 5/12</a>                                  |
| <a href="#">B32B 27/02</a>                            | covered by | <a href="#">B32B 2262/02</a> - <a href="#">B32B 2262/0292</a> and <a href="#">B32B 5/02</a> - <a href="#">B32B 5/12</a> |
| <a href="#">B32B 27/04</a>                            | covered by | <a href="#">B32B 2260/048</a>   |

**Project: RP0505 (B44C)**

- U B44C 1/00** Processes, not specifically provided for elsewhere, for producing decorative surface effects (decorating textiles [D06Q](#))
- U B44C 1/10** • Applying flat materials, e.g. leaflets, pieces of fabrics (paperhanging [B44C 7/00](#))
- B44C 1/105** • {comprising an adhesive layer (decalcomania [B44C 1/16](#); adhesive tapes [G09J 7/02](#) [C09J 7/20](#))}

**Project: N/A (B60B)**

- U B60B 3/00** Disc wheels, i.e. wheels with load-supporting disc body (non-metallic [B60B 5/00](#); wheel cover discs [B60B 7/00](#) {; disc wheels comprising rail-engaging elements [B60B 17/0006](#)})
- B60B 3/14** • Attaching disc body to hub (resiliently [B60B 9/00](#); attaching rim to wheel body [B60B 23/00](#) ) {~~Wheel adapters~~; [Wheel adapters](#)}
- B60B 35/00** Axle units; Parts thereof (steerable vehicle stub axles [B62D](#) ) {~~Arrangements for lubrication of axles~~; [Arrangements for lubrication of axles](#)}

**Project: N/A (B60C)**

**B60C** **VEHICLE TYRES (manufacture [B29](#)); TYRE INFLATION; TYRE CHANGING OR REPAIRING; REPAIRING, OR CONNECTING VALVES TO, INFLATABLE ELASTIC BODIES IN GENERAL; DEVICES OR ARRANGEMENTS RELATED TO TYRES (testing of tyres [G01M 17/02](#))**

NOTES

1. In this subclass, the term "tyre" is to be understood as a separate ground-engaging, continuous element outside the periphery of the wheel rim and includes the tyre casing, cover, or jacket and any insert, e.g. inner tube. In the groups relating to repair or connection of valves, the term "tyre" is to be understood to include also inflatable elastic bodies other than tyres or inner tubes

2. Attention is drawn to the note following the title of class [B60](#).

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ [The subject](#) matter ~~covered by~~ [for](#) these [IPC](#) groups is classified in the following CPC groups:

|                             |            |                              |
|-----------------------------|------------|------------------------------|
| <a href="#">B60C 11/113</a> | covered by | <a href="#">B60C 11/0311</a> |
| <a href="#">B60C 11/117</a> | covered by | <a href="#">B60C 11/032</a>  |

**Project: N/A (B60G)**

**B60G** **VEHICLE SUSPENSION ARRANGEMENTS (air-cushion vehicles [B60V](#); {cycle suspensions [B62K 25/00](#)})**

NOTES

1. Attention is drawn to the explanatory note following the class title [B60](#)

2. Indexing codes [B60G 2200/00](#) - [B60G 2800/00](#) are dedicated to particular aspects of suspension arrangements:

- [B60G 2200/00](#) refers to the type of suspension arrangement;
- [B60G 2202/00](#) refers to the suspension elements used (springs, dampers and actuators);
- [B60G 2204/00](#) refers to mounting features of suspension elements;
- [B60G 2206/00](#) refers to constructional and manufacturing details of suspension elements;
- [B60G 2300/00](#) refers to the type of vehicle;

- [B60G 2400/00](#) - [B60G 2800/00](#) refer to the electronic control of suspension arrangements, whereby:
  - [B60G 2400/00](#) refers to input parameters of the control;
  - [B60G 2401/00](#) refers to types of sensors used;
  - [B60G 2500/00](#) refers to the controlled action or device;
  - [B60G 2600/00](#) refers to particular details of the control system;
  - [B60G 2800/00](#) refers to the result to be achieved by the control action.

3. Groups [B60G 2200/00](#) - [B60G 2800/00](#) are to be used in multi-aspect classification, so that subject matter characterised by aspects covered by more than one of these groups, which is considered to represent information of interest for search, should be classified in a combination of at least one relevant "invention information" symbol in association with indexing codes from each of these groups.

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the following CPC groups:

[B60G 23/00](#) covered by [B60G 17/0165](#)

## Project: N/A (B60P)

### B60P

**VEHICLES ADAPTED FOR LOAD TRANSPORTATION OR TO TRANSPORT, TO CARRY, OR TO COMPRISE SPECIAL LOADS OR OBJECTS (vehicles with special provisions for transporting patients or disabled persons, or their personal conveyances [A61G 3/00](#))**

#### NOTE

Attention is drawn to the Explanatory Note following the class title ([B60](#))

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the following CPC groups:

|                            |            |                             |
|----------------------------|------------|-----------------------------|
| <a href="#">B60P 1/46</a>  | covered by | <a href="#">B60P 1/4421</a> |
| <a href="#">B60P 3/022</a> | covered by | <a href="#">E04G 21/14</a>  |
| <a href="#">B60P 3/325</a> | covered by | <a href="#">B60P 3/32</a>   |
| <a href="#">B60P 3/33</a>  | covered by | <a href="#">B60P 3/34</a>   |
| <a href="#">B60P 3/335</a> | covered by | <a href="#">B60P 3/32</a>   |
| <a href="#">B60P 3/345</a> | covered by | <a href="#">B60P 3/34</a>   |
| <a href="#">B60P 3/35</a>  | covered by | <a href="#">B60P 3/34</a>   |
| <a href="#">B60P 3/355</a> | covered by | <a href="#">B60P 3/34</a>   |
| <a href="#">B60P 3/363</a> | covered by | <a href="#">B60P 3/36</a>   |
| <a href="#">B60P 3/367</a> | covered by | <a href="#">B60P 3/36</a>   |
| <a href="#">B60P 3/37</a>  | covered by | <a href="#">B60P 3/343</a>  |
| <a href="#">B60P 3/373</a> | covered by | <a href="#">B60P 3/32</a>   |
| <a href="#">B60P 3/377</a> | covered by | <a href="#">B60P 3/34</a>   |
| <a href="#">B60P 5/00</a>  | covered by | <a href="#">G01G 19/08</a>  |

## Project: RP0503 (B60Q)

## M B60Q

## ARRANGEMENT OF SIGNALLING OR LIGHTING DEVICES, THE MOUNTING OR SUPPORTING THEREOF OR CIRCUITS THEREFOR, FOR VEHICLES IN GENERAL

## NOTES

1. - This subclass ~~covers also:~~ *also covers the operation and control of lighting devices, for example:*

- ~~electric signalling of lighting circuits so far as specially arranged in vehicles;~~
- ~~arrangements~~*arrangement* or ~~adaptations~~*adaptation* of lighting switches or signal-initiating means *for vehicles.*
- *control of lighting devices in relation to the vehicle as a whole, e.g. for levelling, swivelling or aiming.*

2. This subclass *does not cover optical, mechanical, thermal or electrical arrangement of elements within lighting devices, which are covered by groups F21S 41/00 – F21S 45/00.*

~~2.~~ 3. Attention is drawn to the Note following the title of class [B60](#).

4. *Attention is drawn to the following places:*

~~3.~~ 5. *Attention is drawn to the following places:*

[B60K 28/00](#) Safety devices, e.g. sleeping driver

[B60R 25/00](#) Anti-theft

[B62D](#) Driving assistance

[B62D 15/02](#) Steering aids

[B60K 31/0008](#) Cruise control

~~F21S 48/00~~ *Lighting devices or systems specially adapted for vehicles*

~~G01S~~ *Infra-red* ~~Infrared~~ *night vision*

~~G01S 13/931~~ *Anti-Collision* ~~-collision~~

[G05D 1/00](#) Automatic pilot

[G06K 9/00](#) Pattern recognition

[G06T 3/00](#) Image transformation

[G06T 5/00](#) Image enhancement

[G06T 7/00](#) Image analysis

[G08B 21/00](#) Alarms in general

[G08G](#) Traffic control

[G08G 1/16](#) Anti-collision systems

[H04N](#) Television systems

## WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[B60Q 1/128](#) covered by [B60Q 1/124](#)

[B60Q 1/132](#) covered by [B60Q 1/124](#)

[B60Q 1/136](#) covered by [B60Q 1/124](#)

## U B60Q 1/00

Arrangements or adaptations of optical signalling or lighting devices (for lighting vehicle interior [B60Q 3/00](#); {circuit arrangements for electric light sources in general [H05B 37/00](#)})

B60Q 1/0064 • {with provision for maintenance, e.g. changing the light bulb (swivel arrangements [B60Q 1/0425](#); fastening of covers ~~F21S 48/15~~ [F21S 41/50](#); changing light sources in general [F21V 19/04](#); fastening of light sources or lamp holders ~~F21S 48/1104~~ [F21S 41/19](#), ~~F21S 48/211~~ [F21S 43/19](#))}

B60Q 1/007 • {via a removable cap (fastening of the light source by a cap holding the light source ~~F21S 48/1104~~ [F21S 41/19](#), ~~F21S 48/211~~ [F21S 43/19](#))}

B60Q 1/0088

- {Details of electrical connections ([B60Q 1/305](#) takes precedence; electrical connectors in general [H01R](#); electrical connection of the light source itself ~~F21S 48/1109~~ [F21S 41/192](#), ~~F21S 48/212~~ [F21S 43/195](#))}

**Project: N/A (B60Q)**

B60Q 1/0094

- {Arrangement of electronic circuits separated from the light source (, e.g. mounting of housings for starter circuits for discharge lamps, circuits per se [H05B](#), arrangements being part of the light source holder [F21V 17/06](#), ~~F21S 48/1109~~ [F21S 41/192](#), ~~F21S 48/212~~ [F21S 43/195](#))}

**Project: RP0503 (B60Q)**

U B60Q 1/02

- the devices being primarily intended to illuminate the way ahead or to illuminate other areas of way or environments

U B60Q 1/04

- the devices being headlights

U B60Q 1/0408

- {built into the vehicle body, e.g. details concerning the mounting of the headlamps on the vehicle body ([B60Q 1/0491](#), [B60Q 1/05](#) take precedence, integrated front ends [B62D 25/00](#))}

B60Q 1/0458

- {the front cover being directly mounted onto the vehicle body (mounting the cover on the housing ~~F21S 48/15~~ [F21S 41/50](#))}

U B60Q 1/18

- being additional front lights {(bracket mounted headlights [B60Q 1/0483](#))}

B60Q 1/20

- Fog lights {([single shaped beam lighting devices specially adapted for vehicles for penetrating fog or preventing glare](#))} ~~(single shaped beam lighting devices specially adapted for vehicles for penetrating fog or preventing glare F21S 8/12)~~

B60Q 1/26

- the devices being primarily intended to indicate the vehicle, or parts thereof, or to give signals, to other traffic {(~~such devices mounted on the vehicle rear part F21S 48/20~~; [such devices mounted on the vehicle rear part](#); means for the lighting or illuminating of aerials, e.g. for purpose of warning [H01Q 1/06](#))}

**Project: MP0394 (B60R)**

U B60R 11/00

**Arrangements for holding or mounting articles, not otherwise provided for**

M B60R 11/02

- for radio sets, television sets, telephones, or the like; ~~Arrangements~~ [Arrangement](#) of controls thereof ~~(stowing of tape cartridges, compact discs or the like B60R 7/088; of aerials H01Q)~~

**Project: N/A (B60T)**

B60T

**VEHICLE BRAKE CONTROL SYSTEMS OR PARTS THEREOF; BRAKE CONTROL SYSTEMS OR PARTS THEREOF, IN GENERAL** (electrodynamic brake systems for vehicle, in general [B60L](#); brakes per se, i.e. devices where braking effect occurs, including ultimate brake actuators, [F16D](#)); **ARRANGEMENT OF BRAKING ELEMENTS ON VEHICLES IN GENERAL; PORTABLE DEVICES FOR PREVENTING UNWANTED MOVEMENT OF VEHICLES; VEHICLE MODIFICATIONS TO FACILITATE COOLING OF BRAKES**

NOTE

In this subclass, the term "brake control systems" includes brake control systems for vehicles or of general applicability

WARNING

The following IPC groups are not **used** in the CPC scheme. ~~Subject~~ [The subject](#) matter ~~covered by~~ [for](#) these [IPC](#) groups is classified in the following CPC groups:

[B60T 8/20](#)

covered by

[B60T 8/18](#)[B60T 8/22](#)

covered by

[B60T 8/18](#)

|                       |            |   |
|-----------------------|------------|---|
| B60T 8/60 - B60T 8/70 | covered by | <a href="#">B60T 8/17</a>                                 |
| B60T 8/78 - B60T 8/84 | covered by | <a href="#">B60T 8/17</a>                                 |
| B60T 13/122           | covered by | <a href="#">B60T 13/147</a> , <a href="#">B60T 13/167</a> |
| B60T 13/125           | covered by | <a href="#">B60T 13/141</a>                               |
| B60T 13/128           | covered by | <a href="#">B60T 13/145</a> , <a href="#">B60T 13/165</a> |
| B60T 13/13            | covered by | <a href="#">B60T 13/146</a> , <a href="#">B60T 13/166</a> |
| B60T 13/132           | covered by | <a href="#">B60T 13/143</a> , <a href="#">B60T 13/162</a> |
| B60T 13/135           | covered by | <a href="#">B60T 13/144</a> , <a href="#">B60T 13/163</a> |
| B60T 13/138           | covered by | <a href="#">B60T 13/148</a> , <a href="#">B60T 13/168</a> |
| B60T 13/60            | covered by | <a href="#">B60T 13/58</a>                                |
| B60T 15/06            | covered by | <a href="#">B60T 15/04</a>                                |
| B60T 15/08            | covered by | <a href="#">B60T 15/04</a>                                |

## Project: RP0503 (B61L)

|               |   |
|---------------|---|
| U B61L 5/00   | <b>Local operating mechanisms for points or track-mounted scotch-blocks (track-mounted scotch-blocks <i>per se</i> <a href="#">B61K</a>); Visible or audible signals; Local operating mechanisms for visible or audible signals (<a href="#">B61L 11/00</a> takes precedence)</b>   |
| U B61L 5/12   | <ul style="list-style-type: none"> <li>Visible signals {(signalling means on the vehicle <a href="#">B61L 15/00</a>; signalling means for classification yards, or the like, with multiple indicating means <a href="#">B61L 17/023</a>; signalling means for road crossings <a href="#">B61L 29/24</a>; lighting in general <a href="#">F21</a>; visible signalling arrangements in general <a href="#">G08B 5/00</a>)}</li> </ul> |
| U B61L 5/18   | <ul style="list-style-type: none"> <li>Light signals; Mechanisms associated therewith, e.g. blinders</li> </ul>   |
| U B61L 5/1809 | <ul style="list-style-type: none"> <li>{Daylight signals}</li> </ul>  |
| B61L 5/1854   | <ul style="list-style-type: none"> <li>{Mounting and focussing of the light source in a lamp, fixing means <i>(focussing of the light source in reflecting mirrors)</i> <del><i>(focussing of the light source in reflecting mirrors F21S 48/00)</i></del>}</li> </ul>  |

## Project: N/A (B62B)

### B62B HAND-PROPELLED VEHICLES, e.g. HAND CARTS, PERAMBULATORS; SLEDGES

#### NOTES

- In this subclass, the term "hand carts" also embraces hand-propelled wheeled devices in so far as the features thereof are generic to hand carts. This term also embraces pedestrian-controlled power-driven vehicles in so far as the features thereof are generic to hand carts
- Rollers are taken as being equivalent to wheels

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[B62B 3/065](#) covered by



**Project: N/A (B62D)****B62D**

**MOTOR VEHICLES; TRAILERS** (steering, or guiding on a desired track, of agricultural machines or implements [A01B 69/00](#); wheels, castors, axles, increasing wheel adhesion [B60B](#); vehicle tyres, tyre inflation or tyre changing [B60C](#); connections between vehicles of a train or the like [B60D](#); vehicles for use on rail and road, amphibious or convertible vehicles [B60F](#); suspension arrangements [B60G](#); heating, cooling, ventilating or other air treating devices [B60H](#); windows, windscreens, non-fixed roofs, doors or similar devices, protective coverings for vehicles not in use [B60J](#); propulsion plant arrangements, auxiliary drives, transmissions, controls, instrumentation or dashboards [B60K](#); electric equipment or propulsion of electrically-propelled vehicles [B60L](#); power supply for electrically-propelled vehicles [B60M](#); passenger accommodation not otherwise provided for [B60N](#); adaptations for load transportation or to carry special loads or objects [B60P](#); arrangement of signalling or lighting devices, the mounting or supporting thereof or circuits therefor, for vehicles in general [B60Q](#); vehicles, vehicle fittings or vehicle parts not otherwise provided for [B60R](#); servicing, cleaning, repairing, supporting, lifting, or manoeuvring, not otherwise provided for, [B60S](#); brake arrangements, brake control systems or parts thereof [B60T](#); air-cushion vehicles [B60V](#); motor-cycles, accessories therefor [B62J](#), [B62K](#); testing of vehicles [G01M](#))

NOTE

In this subclass, the following terms are used with the meanings indicated:

- "vehicles" include motor vehicles and trailers;
- "trailers" include forecars or sidecars.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

|   |            |  |
|---|------------|--|
| <a href="#">B62D 25/13</a>              | covered by | <a href="#">B60J 1/20</a> , <a href="#">B60R 13/07</a> |
| <a href="#">B62D 25/22</a>              | covered by | <a href="#">B60R 3/00</a>                              |
| <a href="#">B62D 65/08</a>              | covered by | <a href="#">B60J 10/45</a>                             |
| <a href="#">B62D 101/00-B62D 137/00</a> | covered by |  |

**Project: N/A (B62H)****B62H**

**CYCLE STANDS; SUPPORTS OR HOLDERS FOR PARKING OR STORING CYCLES; APPLIANCES PREVENTING OR INDICATING UNAUTHORIZED USE OR THEFT OF CYCLES; LOCKS INTEGRAL WITH CYCLES; DEVICES FOR LEARNING TO RIDE CYCLES**

NOTE

In this subclass, the term "cycles" also embraces scooters

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

|                           |            |                           |
|---------------------------|------------|---------------------------|
| <a href="#">B62H 5/16</a> | covered by | <a href="#">B62H 5/14</a> |
|---------------------------|------------|---------------------------|

**Project: N/A (B64C)****B64C**

**AEROPLANES; HELICOPTERS** (air-cushion vehicles [B60V](#))

NOTE

As far as possible, classification is made according to constructional features; classification according to particular kinds of aircraft is normally regarded as

being of secondary importance, except in cases where this is considered to be the characteristic feature.

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:  
[B64C 35/02](#) covered by [B64C 35/00](#)

**Project: MP0394 (B64C)**

- U B64C 1/00 Fuselages; Constructional features common to fuselages, wings, stabilising surfaces and the like (aerodynamical features common to fuselages, wings, stabilising surfaces, and the like [B64C 23/00](#); flight-deck installations [B64D](#))
- M B64C 1/36
  - adapted to receive ~~aerials~~ *antennas* or radomes (~~aerials or radomes per se~~ *H01Q antennas or radomes per se H01Q*)

**Project: RP0263 (B64C)**

- U B64C 13/00 Control systems or transmitting systems for actuating flying-control surfaces, lift-increasing flaps, air brakes, or spoilers
- U B64C 13/02
  - Initiating means
- C B64C 13/04
  - actuated personally

WARNING

Group [B64C 13/04](#) is impacted by reclassification into groups [B64C 13/042](#), [B64C 13/0421](#), [B64C 13/0423](#), [B64C 13/0425](#), [B64C 13/0427](#), and [B64C 13/044](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B64C 13/042
  - {operated by hand}

WARNING  
Groups [B64C 13/042](#), [B64C 13/0421](#), [B64C 13/0423](#), [B64C 13/0425](#), and [B64C 13/0427](#) are incomplete pending reclassification of documents from groups [B64C 13/04](#), [B64C 13/06](#), [B64C 13/08](#), [B64C 13/10](#), [B64C 13/12](#), and [B64C 13/14](#).  
All groups listed in this Warning should be considered in order to perform a complete search.

- N B64C 13/0421
  - {control sticks for primary flight controls}
- N B64C 13/0423
  - {yokes or steering wheels for primary flight controls}
- N B64C 13/0425
  - {for actuating trailing or leading edge flaps, air brakes or spoilers}
- N B64C 13/0427
  - {for actuating trim}
- N B64C 13/044
  - {operated by feet, e.g. pedals}

WARNING

Group [B64C 13/044](#) is incomplete pending reclassification of documents from groups [B64C 13/04](#), [B64C 13/06](#), [B64C 13/08](#), [B64C 13/10](#), [B64C 13/12](#), and [B64C 13/14](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- C B64C 13/06      • • • adjustable to suit individual persons
- WARNING  
*Group B64C 13/06 is impacted by reclassification into groups B64C 13/042, B64C 13/0421, B64C 13/0423, B64C 13/0425, B64C 13/0427, and B64C 13/044. All groups listed in this Warning should be considered in order to perform a complete search.*
- C B64C 13/08      • • • Trimming zero positions
- WARNING  
*Group B64C 13/08 is impacted by reclassification into groups B64C 13/042, B64C 13/0421, B64C 13/0423, B64C 13/0425, B64C 13/0427, and B64C 13/044. All groups listed in this Warning should be considered in order to perform a complete search.*
- C B64C 13/10      • • • comprising warning devices
- WARNING  
*Group B64C 13/10 is impacted by reclassification into groups B64C 13/042, B64C 13/0421, B64C 13/0423, B64C 13/0425, B64C 13/0427, and B64C 13/044. All groups listed in this Warning should be considered in order to perform a complete search.*
- C B64C 13/12      • • • Dual control apparatus
- WARNING  
*Group B64C 13/12 is impacted by reclassification into groups B64C 13/042, B64C 13/0421, B64C 13/0423, B64C 13/0425, B64C 13/0427, and B64C 13/044. All groups listed in this Warning should be considered in order to perform a complete search.*
- C B64C 13/14      • • • lockable (locking in position to suit individual persons [B64C 13/06](#))
- WARNING  
*Group B64C 13/14 is impacted by reclassification into groups B64C 13/042, B64C 13/0421, B64C 13/0423, B64C 13/0425, B64C 13/0427, and B64C 13/044. All groups listed in this Warning should be considered in order to perform a complete search.*
- U B64C 13/24      • Transmitting means
- U B64C 13/26      • • without power amplification or where power amplification is irrelevant
- C B64C 13/28      • • • mechanical
- WARNING  
*Groups B64C 13/28, B64C 13/30, B64C 13/32, and B64C 13/34 are impacted by reclassification into groups B64C 13/341, B64C 13/343, and B64C 13/345. All groups listed in this Warning should be considered in order to perform a complete search.*
- C B64C 13/30      • • • using cable, chain, or rod mechanisms
- C B64C 13/32      • • • using cam mechanisms
- C B64C 13/34      • • • using toothed gearing

- N B64C 13/341      . . . {having duplication or stand-by provisions}
- WARNING  
Group [B64C 13/341](#) is incomplete pending reclassification of documents from groups [B64C 13/28](#), [B64C 13/30](#), [B64C 13/32](#), [B64C 13/34](#), [B64C 13/42](#), [B64C 13/44](#), and [B64C 13/46](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64C 13/343      . . . {overriding of personal controls; with automatic return to inoperative position}
- WARNING  
Group [B64C 13/343](#) is incomplete pending reclassification of documents from groups [B64C 13/28](#), [B64C 13/30](#), [B64C 13/32](#), [B64C 13/34](#), [B64C 13/42](#), [B64C 13/44](#), and [B64C 13/46](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64C 13/345      . . . {with artificial feel}
- WARNING  
Group [B64C 13/345](#) is incomplete pending reclassification of documents from groups [B64C 13/28](#), [B64C 13/30](#), [B64C 13/32](#), [B64C 13/34](#), [B64C 13/42](#), [B64C 13/44](#), and [B64C 13/46](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- U B64C 13/38      . . with power amplification
- C B64C 13/40      . . . using fluid pressure
- WARNING  
Group [B64C 13/40](#) is impacted by reclassification into groups [B64C 13/504](#), [B64C 13/505](#), [B64C 13/506](#), and [B64C 13/507](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- C B64C 13/42      . . . having duplication or stand-by provisions
- WARNING  
Group [B64C 13/42](#) is impacted by reclassification into groups [B64C 13/341](#), [B64C 13/343](#), [B64C 13/345](#), [B64C 13/504](#), [B64C 13/505](#), [B64C 13/506](#), and [B64C 13/507](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- C B64C 13/44      . . . overriding of personal controls; with automatic return to inoperative position
- WARNING  
Group [B64C 13/44](#) is impacted by reclassification into groups [B64C 13/341](#), [B64C 13/343](#), [B64C 13/345](#), [B64C 13/504](#), [B64C 13/505](#), [B64C 13/506](#), and [B64C 13/507](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- C B64C 13/46      . . . with artificial feel
- WARNING  
Group [B64C 13/46](#) is impacted by reclassification into groups [B64C 13/341](#), [B64C 13/343](#), [B64C 13/345](#), [B64C 13/504](#), [B64C 13/505](#), [B64C 13/506](#), and [B64C 13/507](#).

*All groups listed in this Warning should be considered in order to perform a complete search.*

- U B64C 13/48
  - • • characterised by the fluid being gaseous
- C B64C 13/50
  - • • using electrical energy

WARNING

*Group B64C 13/50 is impacted by reclassification into groups [B64C 13/504](#), [B64C 13/505](#), [B64C 13/506](#), and [B64C 13/507](#).  
All groups listed in this Warning should be considered in order to perform a complete search.*

- C B64C 13/503
  - • • {Fly-by-Wire}

WARNING

*Group B64C 13/503 is impacted by reclassification into groups [B64C 13/504](#), [B64C 13/505](#), [B64C 13/506](#), and [B64C 13/507](#).  
All groups listed in this Warning should be considered in order to perform a complete search.*

- Q B64C 13/504
  - • • {using electro-hydrostatic actuators [EHA's]}

WARNING

*Group [B64C 13/504](#) is incomplete pending reclassification of documents from groups [B64C 13/40](#), [B64C 13/42](#), [B64C 13/44](#), [B64C 13/46](#), [B64C 13/50](#), and [B64C 13/503](#). Group [B64C 13/504](#) is also impacted by reclassification into groups [B64C 13/505](#), [B64C 13/506](#), and [B64C 13/507](#).  
All groups listed in this Warning should be considered in order to perform a complete search.*

- N B64C 13/505
  - • • {having duplication or stand-by provisions}

WARNING

*Group [B64C 13/505](#) is incomplete pending reclassification of documents from groups [B64C 13/40](#), [B64C 13/42](#), [B64C 13/44](#), [B64C 13/46](#), [B64C 13/50](#), and [B64C 13/503](#).  
All groups listed in this Warning should be considered in order to perform a complete search.*

- N B64C 13/506
  - • • {overriding of personal controls; with automatic return to inoperative position}

WARNING

*Group [B64C 13/506](#) is incomplete pending reclassification of documents from groups [B64C 13/40](#), [B64C 13/42](#), [B64C 13/44](#), [B64C 13/46](#), [B64C 13/50](#), and [B64C 13/503](#).  
All groups listed in this Warning should be considered in order to perform a complete search.*

- D B64C 2013/506
  - • • • {using electro-hydrostatic actuators (EHA's)}  
<administratively transferred to [B64C 13/504](#)>

- N B64C 13/507
  - • • {with artificial feel}

WARNING

*Group [B64C 13/507](#) is incomplete pending reclassification of documents from groups [B64C 13/40](#), [B64C 13/42](#), [B64C 13/44](#), [B64C 13/46](#), [B64C 13/50](#), and [B64C 13/503](#).  
All groups listed in this Warning should be considered in order to perform a complete search.*

**Project: N/A (B64D)****B64D**

**EQUIPMENT FOR FITTING IN OR TO AIRCRAFT; FLYING SUITS; PARACHUTES; ARRANGEMENTS OR MOUNTING OF POWER PLANTS OR PROPULSION TRANSMISSIONS IN AIRCRAFT**

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                             |            |                            |
|-----------------------------|------------|----------------------------|
| <a href="#">B64D 15/18</a>  | covered by | <a href="#">B64D 15/16</a> |
| <a href="#">B64D 25/102</a> | covered by | <a href="#">B64D 25/10</a> |
| <a href="#">B64D 25/105</a> | covered by | <a href="#">B64D 25/10</a> |
| <a href="#">B64D 25/108</a> | covered by | <a href="#">B64D 25/10</a> |
| <a href="#">B64D 25/11</a>  | covered by | <a href="#">B64D 25/10</a> |
| <a href="#">B64D 25/112</a> | covered by | <a href="#">B64D 25/10</a> |
| <a href="#">B64D 25/115</a> | covered by | <a href="#">B64D 25/10</a> |
| <a href="#">B64D 25/118</a> | covered by | <a href="#">B64D 25/10</a> |

**Project: N/A (B64F)****B64F**

**GROUND OR AIRCRAFT-CARRIER-DECK INSTALLATIONS SPECIALLY ADAPTED FOR USE IN CONNECTION WITH AIRCRAFT; DESIGNING, MANUFACTURING, ASSEMBLING, CLEANING, MAINTAINING OR REPAIRING AIRCRAFT, NOT OTHERWISE PROVIDED FOR; HANDLING, TRANSPORTING, TESTING OR INSPECTING AIRCRAFT COMPONENTS, NOT OTHERWISE PROVIDED FOR**

NOTE

In this subclass, the following terms or expressions are used with the meaning indicated:

- *"installations"* embraces equipment, including mobile equipment, peculiar to use in connection with aircraft and not fitted thereto;
- *"ground installations"* embraces waterborne installations.

**Project: MP0394 (B64G)****U B64G 1/00****Cosmonautic vehicles**

U B64G 1/22

- Parts of, or equipment specially adapted for fitting in or to, cosmonautic vehicles

M B64G 1/66

- Arrangements or adaptations of apparatus or instruments, not otherwise provided for (instruments per se, ~~see~~ *see* the relevant classes, e.g. ~~aerials~~ *antennas* for use in satellites [H01Q 1/28](#))

## Project: N/A (B65B)

## B65B

**MACHINES, APPARATUS OR DEVICES FOR, OR METHODS OF, PACKAGING ARTICLES OR MATERIALS; UNPACKING (bundling and pressing devices for cigars [A24C 1/44](#); paper-bag holders as shop or office accessories [A47F 13/08](#); apparatus for coating, e.g. by dipping, [B05C](#); devices for tensioning and securing binders adapted to be supported by the article or articles to be bound [B25B](#), [B65B 13/00](#); nailing or stapling devices *per se* [B25C](#), [B27F](#); {cutting or severing in general [B26D](#), [B26F](#);} inserting documents in envelopes and closing the latter [B43M 3/00](#), [B43M 5/00](#); wrappers, containers or other packaging elements, e.g. binders protective caps [B65D](#); stacking articles in, or removing them from, pallets [B65G](#); devices for handling sheets or webs of interest apart from their application in packaging machines [B65H](#); packaging of matches [C06F](#); wrapping sugar during manufacture [C13B 45/00](#); {filling of grease guns [F16N 37/02](#); packing of shotgun cartridges for immediate use [F42B](#); wrapping of coins [G07D 9/00](#)}; making containers or receptacles *per se*, *see the appropriate subclasses*)**

NOTE

The term "packaging" should be understood as including mainly the following operations:

- filling portable containers or receptacles with materials or small articles to form packages
- inserting articles, or groups of articles, into containers or receptacles
- closing filled containers or receptacles otherwise than by metal-, glass-, or wood-working operations
- enclosing, or partially enclosing, articles or quantities of material, in sheets, strips, blanks, webs, or tubes of thin flexible material, e.g. wrapping
- bundling articles, e.g. holding articles together in groups by applying string or wire
- attaching articles to cards, sheets, or webs

Operations of these types employed in the manufacture of articles other than packages are classified in other appropriate subclasses, e.g. making confectionery products by casting in moulds formed by wrappers [A23G](#), filling ammunition cartridges [F42B](#) Methods of packaging which are wholly characterised by the form of the package produced, or the form of the container or packaging-element utilised, are to be classified in [B65D](#) rather than in this subclass In the following elaborations, the term "package" is used to mean the end product of a packaging operation, e.g. a filled and closed container, an article enclosed in a wrapper, a group of articles held together by string or wire, a crate of bottles In the following elaborations, the term "materials" is to be understood as embracing matter, or masses of articles, which are to be packaged, as distinct from separate or individual articles Machines, apparatus or methods of general application for packaging articles or materials

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:  
[B65B 51/09](#) covered by [B65B 51/00](#)



## Project: RP0398 (B65D)

## M B65D

CONTAINERS FOR STORAGE OR TRANSPORT OF ARTICLES OR MATERIALS, e.g. BAGS, BARRELS, BOTTLES, BOXES, CANS, CARTONS, CRATES, DRUMS, JARS, TANKS, HOPPERS, FORWARDING CONTAINERS; ACCESSORIES, CLOSURES, OR FITTINGS THEREFOR; PACKAGING ELEMENTS; PACKAGES (~~containers specially adapted for storing agricultural or horticultural products A01F 25/14; containers specially adapted for use in dairies A01J; travelling bags or baskets, suitcases A45C; travelling or camp equipment A45F; {linkable display containers A47B87/00C}; household or table equipment A47G; letter-boxes for home use A47G 29/12; kitchen equipment A47J; associated with vehicles, see the appropriate subclass of B60 - B64; machines, apparatus, or devices for, or methods of, packaging articles or materials B65B; sack holders B65B 67/00; refuse receptacles B65F 1/00; handling sheets, webs or filamentary material B65H; load-engaging elements or devices attached to lifting or lowering gear of cranes or adapted for connection therewith for transmitting lifting forces B66C; liquid handling B67; storing gases F17; {packaging for photosensitive or like materials G03, e.g. G03C 3/00}; making containers, see subclasses dealing with the working of the material concerned)~~

## NOTES

1. In this subclass, the indexing codes of [B65D 2519/00004](#) - [B65D 2519/00995](#) should be added, if applicable
2. This subclass covers:
  - containers, packaging elements or packages with auxilliary means or provisions for displaying articles or materials;
  - methods of packaging which are wholly characterised by the form of the package produced or the form of the container or packaging element used, as distinct from the operations performed or the apparatus employed, which are covered by subclass [B65B](#)
3. This subclass, which is intended to be as comprehensive as possible, only excludes containers or packages of a nature clearly confined to a single other subclass, which are classified in that subclass
4. In this subclass, groups [B65D 5/00](#), [B65D 27/00](#), [B65D30/00](#), [B65D 29/00](#), [B65D 31/00](#) or [B65D 65/00](#) include constructional features of foldable or erectable container or wrapper blanks as well as the containers or wrappers formed by folding or erecting such blanks
5. Containers, packaging elements or packages classified in group [B65D 85/00](#), are also classified according to the constructional or functional features, if such features are of interest
6. In this subclass, the following terms or expressions are used with the meanings indicated:
  - "rigid or semi-rigid containers" includes:
    - a. containers not deformed by, or not taking-up the shape of, their contents;
    - b. containers adapted to be temporarily deformed to expel their contents;
    - c. pallets;
    - d. trays;
  - "flexible containers" includes:
    - a. containers deformed by, or taking-up the shape of, their contents;
    - b. containers adapted to be permanently deformed to expel their contents;
  - "packaging elements" includes:
    - a. elements, other than containers, for covering, protecting, stiffening, or holding together articles or materials to be stored or transported;

- b. packaging materials of special type or form not provided for in other subclasses;
  - "packages" includes:
    - a. combination of containers or packaging elements with articles or materials to be stored or transported;
    - b. articles joined together for convenience of storage or transport;
  - "paper" includes materials, e.g. cardboard, plastic sheet materials, laminated materials, or metal foils, worked in a manner analogous to paper;
  - "large containers", in groups [B65D 88/00](#) or [B65D 90/00](#), means containers having about the size of containers used in container traffic, sometimes referred to as freight, forwarding or "ISO" (International Standardization) containers, or larger containers
7. Tamper-indicating means for containers or closures are classified in the group appropriate to the type of container or closure, e.g. [B65D 5/54](#), [B65D 17/00](#), [B65D 27/30](#), [B65D 27/30](#), [B65D 27/34](#), [B65D 33/34](#), [B65D 41/32](#), [B65D 47/36](#), [B65D 49/12](#), [B65D 51/20](#), [B65D 55/06](#)

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the following CPC groups:

|   |            |  |
|---|------------|--|
| <a href="#">B65D 5/34</a>   | covered by | <a href="#">B65D 5/325</a>   |
| <a href="#">B65D 5/35</a>   | covered by | <a href="#">B65D 5/32</a>  |
| <a href="#">B65D 5/355</a>  | covered by | <a href="#">B65D 5/0005</a>  |
| <a href="#">B65D 5/43</a>   | covered by | <a href="#">B65D 5/42</a>  |
| <a href="#">B65D 5/462</a>  | covered by | <a href="#">B65D 5/46008</a> -<br><a href="#">B65D 5/46032</a>   |
| <a href="#">B65D 5/465</a>  | covered by | <a href="#">B65D 5/46008</a> -<br><a href="#">B65D 5/46032</a>   |
| <a href="#">B65D 5/468</a>  | covered by | <a href="#">B65D 5/4608</a>  |
| <a href="#">B65D 5/472</a>  | covered by | <a href="#">B65D 5/46048</a>   |
| <a href="#">B65D 5/475</a>  | covered by | <a href="#">B65D 5/46008</a>   |
| <a href="#">B65D 5/478</a>  | covered by | <a href="#">B65D 5/46056</a>   |
| <a href="#">B65D 5/4805</a> - <a href="#">B65D 5/489</a>                                | covered by | <a href="#">B65D 5/48002</a>   |
| <a href="#">B65D 5/49</a> - <a href="#">B65D 5/499</a>                                  | covered by | <a href="#">B65D 5/48024</a>   |
| <a href="#">B65D 5/63</a>   | covered by | <a href="#">B65D 5/72</a>  |
| <a href="#">B65D 6/00</a> - <a href="#">B65D 6/40</a>                                   | covered by | <a href="#">B65D 7/00</a> , <a href="#">B65D 9/00</a> ,<br><a href="#">B65D 11/00</a> , <a href="#">B65D 15/00</a> |
| <a href="#">B65D 8/00</a> - <a href="#">B65D 8/22</a>                                   | covered by | <a href="#">B65D 7/00</a> , <a href="#">B65D 9/00</a> ,<br><a href="#">B65D 11/00</a> , <a href="#">B65D 15/00</a> |
| <a href="#">B65D 19/22</a>  | covered by | <a href="#">B65D 19/0004</a> & subgroups   |
| <a href="#">B65D 19/24</a>  | covered by | <a href="#">B65D 19/0004</a> & subgroups   |
| <a href="#">B65D 19/26</a>  | covered by | <a href="#">B65D 19/0004</a> & subgroups   |
| <a href="#">B65D 19/28</a>  | covered by | <a href="#">B65D 19/0004</a> & subgroups   |
| <a href="#">B65D 19/30</a>  | covered by | <a href="#">B65D 19/0004</a> & subgroups   |
| <a href="#">B65D 19/31</a>  | covered by | <a href="#">B65D 19/0004</a> & subgroups   |
| <a href="#">B65D 19/34</a>  | covered by | <a href="#">B65D 19/0004</a> & subgroups   |
| <a href="#">B65D 17/28</a> - <a href="#">B65D 17/48</a> ,<br><a href="#">B65D 17/52</a> | covered by | <a href="#">B65D 17/16</a> - <a href="#">B65D 17/26</a>  |
| <a href="#">B65D 19/32</a>  | covered by | <a href="#">B65D 19/0002</a> ,<br><a href="#">B65D 19/0004</a>   |
| <a href="#">B65D 21/024</a>   | covered by | <a href="#">B65D 21/0201</a>   |
| <a href="#">B65D 21/028</a>   | covered by | <a href="#">B65D 21/0204</a>   |
| <a href="#">B65D 21/032</a>   | covered by | <a href="#">B65D 21/0211</a>   |

|   |                       |   |
|---|-----------------------|---|
| B65D 21/036                             | covered by            | <a href="#">B65D 21/0217</a>                                    |
| B65D 25/26                              | covered by            | <a href="#">B65D 81/02</a>                                      |
| B65D 30/00 - <a href="#">B65D 30/28</a> | covered by            | <a href="#">B65D 29/00</a> , <a href="#">B65D 31/00</a>         |
| B65D 33/17                              | covered by            | <a href="#">B65D 33/1633</a>                                    |
| B65D 33/36                              | covered by            | <a href="#">B65D 75/58</a>                                      |
| B65D 33/38                              | covered by            | <a href="#">B65D 75/5861</a>                                    |
| B65D 35/48 - <a href="#">B65D 35/54</a> | covered by            | <a href="#">B65D 47/2018</a>                                    |
| B65D 39/18                              | covered by            | <a href="#">B65D 39/00</a> +s.gr.                               |
| B65D 41/01                              | covered by            | <a href="#">B65D 41/00</a>                                      |
| B65D 43/03                              | covered by            | <a href="#">B65D 43/00</a> +<br><a href="#">B65D 2543/00027</a> |
| B65D 43/04                              | covered by            |   |
| B65D 43/10                              | covered by            |   |
| B65D 47/22                              | covered by            | <a href="#">B65D 47/20</a>                                      |
| B65D 47/34                              | covered by            | <a href="#">B05B 11/00</a>                                      |
| B65D 50/06                              | covered by            |   |
| B65D 50/08                              | covered by            | <a href="#">B65D 55/02</a>                                      |
| B65D 50/10                              | covered by            | <a href="#">B65D 55/02</a>                                      |
| B65D 50/12                              | covered by            | <a href="#">B65D 55/02</a>                                      |
| B65D 50/14                              | covered by            | <a href="#">B65D 55/02</a>                                      |
| B65D 65/26 - <a href="#">B65D 65/32</a> | covered by            | <a href="#">B65D 75/58</a>                                      |
| B65D 65/34                              | covered by            | <a href="#">B65D 75/66</a>                                      |
| B65D 65/36                              | covered by            | <a href="#">B65D 75/58</a>                                      |
| B65D 71/52 - <a href="#">B65D 71/68</a> | covered by            | <a href="#">B65D 71/0003</a> -<br><a href="#">B65D 71/0077</a>  |
| B65D 75/60 - <a href="#">B65D 75/64</a> | covered by            | <a href="#">B65D 75/58</a>                                      |
| B65D 81/15                              | covered by            | <a href="#">B65D 81/05</a>                                      |
| B65D 81/17                              | covered by            | <a href="#">B65D 81/02</a>                                      |
| B65D 83/18 - <a href="#">B65D 83/74</a> | covered by            | <a href="#">B65D 83/14</a> , <a href="#">B65D 83/16</a>         |
| B65D 83/18                              | covered by            | <a href="#">B65D 83/201</a>                                     |
| B65D 83/58                              | covered by            | <a href="#">B65D 83/44</a>                                      |
| B65D 83/76                              | covered by            | <a href="#">B65D 83/0005</a>                                    |
| <del>B65D 85/07</del>                   | <del>covered by</del> |   |
| B65D 85/57                              | covered by            | <a href="#">G11B 23/00</a>                                      |
| B65D 85/575                             | covered by            | <a href="#">G11B 23/00</a>                                      |
| B65D 85/86 - <a href="#">B65D 85/90</a> | covered by            | <a href="#">H01L 21/00</a> , <a href="#">H05K 13/00</a>         |
| <b>B65D91/00</b>                        | covered by            | <a href="#">A47G 29/12</a>                                      |

- M B65D 3/00** **Containers** *Rigid or semi-rigid containers* having bodies or peripheral walls of curved or partially -curved cross-section made by winding or bending paper without folding along defined lines ~~(with end walls of different materials B65D 15/00)~~
- U B65D 3/10** • characterised by form of integral or permanently secured end closure
- M B65D 3/12** • • Flanged discs permanently secured, e.g. by adhesives; *or* by heat-sealing
- M B65D 5/00** **Containers** *Rigid or semi-rigid containers* of polygonal cross-section, e.g. boxes, cartons; *or* trays, formed by folding or erecting one or more blanks made of paper (~~pallets B65D 19/00; bundles of articles held together by packaging elements for convenience of storage or transport, e.g. portable segregating carriers for plural receptacles such as beer cans, pop bottles, B65D 71/00; forming foldable or erectable blanks B31B~~ *rigid pallets with side walls B65D 19/02*)

- M B65D 5/0005 • {of variable capacity ~~(in general B65D 21/08)~~}
- M B65D 5/001 • {stackable ~~(in general B65D 21/02)~~}
- U B65D 5/02 • by folding or erecting a single blank to form a tubular body with or without subsequent folding operations, or the addition of separate elements, to close the ends of the body ([B65D 5/36](#) takes precedence)
- M B65D 5/0227 • • {with end closures formed by inward folding of flaps and securing them by heat-sealing, *by applying* adhesive ~~applied~~ to the flaps or *by* staples ~~(by adhesive tapes B65D 5/0236)~~}
- M B65D 5/04 • • the tubular body having no end closures ~~(shells of drawer and shell type containers B65D 5/38)~~
- U B65D 5/42 • Details of containers or of foldable or erectable container blanks
- U B65D 5/44 • • Integral, inserted or attached portions forming internal or external fittings {not used, see subgroups}
- M B65D 5/52 • • • External stands or display elements for contents ~~((adjustable or foldable display stands made of cardboard, paper or the like, without packaging function A47F 5/11))~~
- M B65D 5/56 • • Linings or internal coatings; {, e.g. pre-formed trays provided with a blow- or thermoformed layer} (to protect the articles from mechanical damage [B65D 81/127](#))
- M B65D 17/00 **Containers** *Rigid or semi-rigid containers* specially constructed to be opened by cutting or piercing, or by tearing of frangible *member members* or ~~portion portions~~ (*opening devices for containers made by winding, bending, or folding paper B65D 3/00, B65D 5/00; frangible inner closure members associated with caps, lids, or covers B65D 51/20; opening devices added or incorporated during filling or closing of containers B65D 77/30; separate devices for opening closed containers B67B 7/00*) *{containers made of paper B65D 3/00, B65D 5/00;} frangible inner closure members associated with caps, lids or covers B65D 51/20*
- U B65D 17/06 • {Integral, or permanently secured, end or side closures}
- U B65D 17/12 • • {Closures secured by soldering, welding, or otherwise uniting opposed surfaces}
- U B65D 17/14 • • • {by cold or hot pressing of plastic sealing material}
- D B65D 17/16 • {Opening arrangements or devices incorporated in or attached to, containers (~~B65D 17/50~~ takes precedence)}  
<administratively transferred to [B65D 17/28](#)>
- D B65D 17/161 • • {for tearing along a line or from a point of weakness provided in an end wall}  
<administratively transferred to [B65D 17/401](#)>
- D B65D 17/163 • • • {for opening completely by means of a tearing tab}  
<administratively transferred to [B65D 17/4011](#)>
- D B65D 17/165 • • • {for opening partially by means of a tearing tab}  
<administratively transferred to [B65D 17/4012](#)>
- D B65D 17/166 • • • • {and provided with attached means for reclosing or resealing}  
<administratively transferred to [B65D 17/4014](#)>
- D B65D 17/168 • • {for tearing along a line or from a point of weakness provided in the side wall (~~B65D 17/20~~ takes precedence)}  
<administratively transferred to [B65D 17/402](#)>
- D B65D 17/18 • • {Attached can-cutting devices}  
<administratively transferred to [B65D 17/521](#)>
- D B65D 17/20 • • {Tearing strips or wires}  
<administratively transferred to [B65D 17/462](#)>

- D B65D 17/22
  - • {with tongues or tags for engagement by slotted keys}
    - <administratively transferred to [B65D 17/464](#)>
- D B65D 17/24
  - • {Lines of weakness}
    - <administratively transferred to [B65D 17/404](#)>
- D B65D 17/26
  - • {Attachments of slotted keys to preserving cans or tins}
    - <administratively transferred to [B65D 17/523](#)>
- Q B65D 17/28
  - at lines or points of weakness

WARNINGS

1. Group [B65D 17/28](#) is impacted by reclassification into groups [B65D 17/30](#), [B65D 17/32](#), [B65D 17/34](#), [B65D 17/347](#), [B65D 17/353](#), [B65D 17/36](#), [B65D 17/38](#), [B65D 17/40](#), [B65D 17/42](#), [B65D 17/44](#), [B65D 17/46](#), [B65D 17/48](#), and [B65D 17/52](#).

All groups listed in this Warning should be considered in order to perform a complete search.

2. Groups [B65D 17/30](#) – [B65D 17/40](#) are incomplete pending reclassification of documents from group [B65D 17/28](#).

Groups [B65D 17/30](#) – [B65D 17/40](#) and [B65D 17/28](#) should be considered in order to perform a complete search.
- N B65D 17/30
  - • using cutting devices
- N B65D 17/32
  - • having non-detachable members or portions
- N B65D 17/34
  - • Arrangement or construction of pull or lift tabs ([B65D 17/32](#) takes precedence)
- N B65D 17/347
  - • • characterised by the connection between the tab and a detachable member or portion of the container
- N B65D 17/353
  - • • the connecting means being integral with the tab or with the detachable member or portion
- N B65D 17/36
  - • • adapted for engagement with opening tools, e.g. slotted keys (attachment of opening tools, e.g. slotted keys, to containers [B65D 17/52](#))
- N B65D 17/38
  - • • with strip or tool guides
- N B65D 17/40
  - • characterised by having the line of weakness extending circumferentially of the container mouth
- N B65D 17/401
  - • {characterised by having the line of weakness provided in an end wall}
- N B65D 17/4011
  - • • {for opening completely by means of a tearing tab}
- N B65D 17/4012
  - • • {for opening partially by means of a tearing tab}
- N B65D 17/4014
  - • • • {and provided with attached means for reclosing or resealing}
- N B65D 17/402
  - • {characterised by having the line of weakness provided in the side wall ([B65D 17/46](#) takes precedence)}
- N B65D 17/404
  - • {Details of the lines of weakness}
- N B65D 17/42
  - with cutting, punching, or cutter accommodating means (for opening at lines or points of weakness [B65D 17/28](#))

WARNING

Groups [B65D 17/42](#) – [B65D 17/46](#) are incomplete pending reclassification of documents from group [B65D 17/28](#).

Groups [B65D 17/42](#) – [B65D 17/46](#) and [B65D 17/28](#) should be considered in order to perform a complete search.
- N B65D 17/44
  - • in which the puncturing tool serves as closure
- N B65D 17/46
  - • Wires, strings or the like, e.g. rip cords
- N B65D 17/462
  - • • {Tearing-strips or -wires}
- N B65D 17/464
  - • • • {with tongues or tags for engagement by slotted keys}

- N B65D 17/48
- • • located in the seam-adjoining parts of the container
- WARNING  
Group [B65D 17/48](#) is incomplete pending reclassification of documents from group [B65D 17/28](#).  
Groups [B65D 17/48](#) and [B65D 17/28](#) should be considered in order to perform a complete search.
- C B65D 17/50
- Non-integral frangible members applied to, or inserted in, a preformed opening openings, e.g. tearable strips, or plastic plugs ([B65D 53/08](#) takes precedence)
- WARNING  
Group [B65D 17/50](#) is impacted by reclassification into group [B65D 53/08](#).  
Groups [B65D 17/50](#) and [B65D 53/08](#) should be considered in order to perform a complete search.
- C B65D 17/501
- • {Flexible tape or foil-like material}
- WARNING  
Group [B65D 17/501](#) is impacted by reclassification into group [B65D 53/08](#).  
Groups [B65D 17/501](#) and [B65D 53/08](#) should be considered in order to perform a complete search.
- C B65D 17/502
- • • {applied to the external part of the container wall only ([B65D 17/505](#) takes precedence)}
- WARNING  
Group [B65D 17/502](#) is impacted by reclassification into group [B65D 53/08](#).  
Groups [B65D 17/502](#) and [B65D 53/08](#) should be considered in order to perform a complete search.
- C B65D 17/503
- • • {applied to the internal part of the container wall only ([B65D 17/505](#) takes precedence)}
- WARNING  
Group [B65D 17/503](#) is impacted by reclassification into group [B65D 53/08](#).  
Groups [B65D 17/503](#) and [B65D 53/08](#) should be considered in order to perform a complete search.
- C B65D 17/505
- • • {applied to the external and internal part of the container wall}
- WARNING  
Group [B65D 17/505](#) is impacted by reclassification into group [B65D 53/08](#).  
Groups [B65D 17/505](#) and [B65D 53/08](#) should be considered in order to perform a complete search.
- C B65D 17/506
- • {Rigid or semi-rigid members, e.g. plugs}
- WARNING  
Group [B65D 17/506](#) is impacted by reclassification into group [B65D 53/08](#).  
Groups [B65D 17/506](#) and [B65D 53/08](#) should be considered in order to perform a complete search.
- C B65D 17/507
- • • {moulded in situ, e.g. during production of container}
- WARNING  
Group [B65D 17/507](#) is impacted by reclassification into group [B65D 53/08](#).  
Groups [B65D 17/507](#) and [B65D 53/08](#) should be considered in order to perform a complete search.



- C B65D 17/508
- • • {and combined with a rigid or semi-rigid, e.g. metallic sheet and a moulded plastic body}
- WARNING**  
*Group B65D 17/508 is impacted by reclassification into group B65D 53/08.  
 Groups B65D 17/508 and B65D 53/08 should be considered in order to perform a complete search.*
- N B65D 17/52
- Attachment of opening tools, e.g. slotted keys, to containers
- WARNING**  
*Group B65D 17/52 is incomplete pending reclassification of documents from group B65D 17/28.  
 Groups B65D 17/52 and B65D 17/28 should be considered in order to perform a complete search.*
- N B65D 17/521
- {Attached can-cutting devices}
- N B65D 17/523
- {Attachments of slotted keys to preserving cans or tins}
- M B65D 21/00
- Nestable, stackable, or joinable containers; Containers of variable capacity ~~(large containers B65D 88/00; {containers for display purposes A47B 87/0276})~~**
- U B65D 33/00
- Details of, or accessories for, sacks or bags**
- M B65D 33/01
- Ventilation or drainage of bags, ~~{e.g. disaligned apertures, labyrinth welds (pressure-relief valves comprising at least one elastic element B65D 77/225; connection of valves to inflatable elastic bodies B60C 29/00)}~~
- M B65D 33/02
- Local reinforcements or stiffening inserts, e.g. wires, strings, strips, ~~or~~ frames {(B65D 33/007 takes precedence)}
- U B65D 33/16
- End- or aperture-closing arrangements or devices (valves of valve bags {B65D 31/14} ; removable stoppers or caps B65D 39/00, B65D 41/00; closures of filled bags B65D 77/10; closing filled bags in association with packaging B65B 7/00, B65B 51/00)
- M B65D 33/18
- • using adhesive applied to integral parts, e.g. to flaps ~~(of envelopes B65D 27/14)~~
- M B65D 33/25
- • Riveting; Dovetailing; Screwing; using press buttons or slide fasteners ~~{{slide fasteners per se A44B 19/00}}~~
- M B65D 35/00
- Pliable tubular containers adapted to be permanently {or temporarily} deformed to expel contents, e.g. collapsible tubes for toothpaste or other plastic or semi-liquid material; Holders therefor ~~{{packages for tubes B65D 85/14}}~~**
- M B65D 41/00
- Caps, e.g. crown caps, ~~or~~ crown seals, i.e. members having parts arranged for engagement with the external periphery of a neck or wall defining a pouring opening or discharge aperture; Protective cap-like covers for closure members, e.g. decorative covers of metal foil or paper (B65D 45/00 takes precedence; ~~combinations of caps and protective cap-like covers B65D 51/18; making closures by working metal sheet B21D 51/44; affixing labels B65C 3/06~~)**
- U B65D 41/32
- Caps or cap-like covers with lines of weakness, tearing-strips, tags, or like opening or removal devices, e.g. to facilitate formation of pouring openings
- U B65D 41/46
- • Snap-on caps or cap-like covers
- M B65D 41/48
- • • non-metallic, e.g. made of paper, ~~or~~ plastics {(B65D 41/47 takes precedence)}



- M B65D 41/54
- Caps or cap-like covers made of shrinkable material or formed in situ by dipping, e.g. using gelatine, ~~or~~ celluloid
- M B65D 41/62
- Secondary protective cap-like outer covers for closure members ~~(arrangements of closures with protective outer cap-like covers or of two or more co-operating closures B65D 51/18)~~
- U B65D 45/00**
- Clamping or other pressure-applying devices for securing or retaining closure members (screw-threaded or bayonet connections between stoppers or caps and containers [B65D 39/08](#), [B65D 41/04](#), [B65D 41/34](#); expansible stoppers [B65D 39/12](#); for pressure vessels in general [F16J 13/00](#))**
- U B65D 45/02
- for applying axial pressure to engage closure with sealing surface
- U B65D 45/04
- comprising U-shaped or bifurcated members coacting with containers {these members remaining connected with the closure and with the container when the container is open}, e.g. pivoted bails
- M B65D 45/06
- associated with toggle levers, e.g. swing stopper arrangements ~~(forming levers or links by working wire B21F 45/04)~~
- U B65D 45/16
- Clips, hooks, or clamps {which are removable, or which remain connected either with the closure or with the container when the container is open}, e.g. C-shaped (U-shaped or bifurcated members [B65D 45/04](#))
- U B65D 45/20
- pivoted
- M B65D 45/24
- incorporating pressure-applying means, e.g. screws, ~~or~~ toggles
- M B65D 45/30
- Annular members, e.g. with snap-over action, ~~or~~ screw-threaded ({[B65D 45/32](#) takes precedence})
- U B65D 50/00**
- Closures with means for discouraging unauthorised opening or removal thereof, with or without indicating means, e.g. child-proof closures (tamper-indicating closures without means for discouraging, see the relevant groups, e.g. [B65D 41/32](#), [B65D 51/20](#))**
- U B65D 50/02
- openable or removable by the combination of plural actions
- M B65D 50/04
- requiring the combination of simultaneous actions, e.g. ~~depress~~~~depressing~~ and ~~turn~~~~turning~~, ~~lift~~~~lifting~~ and ~~turn~~~~turning~~, ~~maintain~~~~maintaining~~ a part and ~~turn~~~~turning~~ another one ({[B65D 55/02](#) takes precedence; caps or covers secured by rotation with bayonet cams [B65D 41/06](#), [B65D 41/36](#))
- U B65D 51/00**
- Closures not otherwise provided for (covers or similar closures as engineering elements for pressure vessels in general [F16J 13/00](#))**
- M B65D 51/18
- Arrangements of closures with protective outer cap-like covers or of two or more co-operating closures ~~{(secondary protective cap-like outer covers for caps B65D 41/62; {[B65D 51/247](#) takes precedence})}~~
- U B65D 53/00**
- Sealing or packing elements (sealings in general [F16J 15/00](#)); Sealings formed by liquid or plastics material**
- NOTE**
- Sealings or packing means combined with particular closures are classified with the closures, e.g. in subgroups of [B65D 39/00](#) together with indexing codes out of [B65D 339/00](#), or in the groups [B65D 41/005](#), [B65D 41/0435](#)
- E B65D 53/08
- Flexible adhesive strips adapted to seal filling or discharging apertures

**WARNING**

*Group B65D 53/08 is incomplete pending reclassification of documents from groups B65D 17/50 – B65D 17/508.  
Groups B65D 53/08 and B65D 17/50 – B65D 17/508 should be considered in order to perform a complete search.*

|          |                   |  |
|----------|-------------------|--|
| <b>U</b> | <b>B65D 55/00</b> | <b>Accessories for container closures not otherwise provided for</b>   |
| M        | B65D 55/02        | <ul style="list-style-type: none"> <li>Locking devices; Means for discouraging or indicating unauthorised opening or removal of closure (<del>protective covers for bottles B65D 23/08</del>; <del>{B65D 41/32 takes precedence }</del>; <del>protective covers for bottles B65D 23/08</del>; protective cap-like outer covers for bottle or jar closures <del>B65D 41/28</del> <del>B65D 41/62</del>; pressure-applying means <del>B65D 45/00</del>; <del>closures with means for discouraging unauthorised opening or removal of closures B65D 50/00</del>)</li> </ul> |
| M        | B65D 55/04        | <ul style="list-style-type: none"> <li>• Spring clips, e.g. of wire, <del>or</del> of sheet metal</li> </ul>   |
| M        | B65D 55/06        | <ul style="list-style-type: none"> <li>• Deformable or tearable wires, strings, or strips (containers specially constructed to be opened by tear-strips, strings or the like <del>B65D 17/00</del>; caps or cap-like closures with tear-strips <del>B65D 41/32</del>; Use of seals {, e.g. destructible locking pins ({<del>B65D 55/022 takes precedence }</del>; <del>applying labels to bottles B65C 3/06</del>, <del>B65C 9/00</del>; <del>seals per se G09F 3/00</del>)})</li> </ul>   |
| U        | B65D 55/08        | <ul style="list-style-type: none"> <li>• • Annular elements encircling container necks</li> </ul>  |
| U        | B65D 55/0818      | <ul style="list-style-type: none"> <li>• • • {Destructible or permanently removable bands, e.g. adhesive}</li> </ul>   |
| M        | B65D 55/0836      | <ul style="list-style-type: none"> <li>• • • • {Metallic strips, e.g. soldered on container and lid (containers with integral tearing strips with tongues or tags for engagement by slotted keys <del>B65D 17/22</del> <del>B65D 17/464</del>)}</li> </ul>   |
| M        | B65D 55/12        | <ul style="list-style-type: none"> <li>• • Devices or means with relatively-moving parts co-operating with abutments on bottle or jar <del>{({B65D 55/022 takes precedence }</del>; <del>applications of locks B65D 55/14</del>)}</li> </ul>   |
| <b>M</b> | <b>B65D 63/00</b> | <b>Flexible elongated elements, e.g. straps, for bundling or supporting articles <del>{(attached to or integral with bags or sacks B65D 33/165; for securing load B60P 7/0823; for supporting pipes, cables or protective tubing F16L 3/137; {for bundling pipes F16L 3/233})}</del></b>   |
| M        | B65D 63/10        | <ul style="list-style-type: none"> <li>Non-metallic straps, tapes, or bands; Filamentary elements, e.g. strings, threads, <del>or</del> wires; Joints between ends thereof</li> </ul>  |
| M        | B65D 63/1009      | <ul style="list-style-type: none"> <li>• {Adhesive tapes <del>(composition of the tapes C09J 7/00)</del>}</li> </ul>   |
| <b>M</b> | <b>B65D 71/00</b> | <b>Bundles of articles held together by packaging elements for convenience of storage or transport, e.g. portable segregating carrier for plural receptacles such as beer cans, <del>or</del> pop bottles; Bales of material <del>(binding of hay or straw A01D, A01F 1/00; bundling or baling B65B, e.g. B65D 13/00; B65D 27/00)</del></b>  |
| U        | B65D 71/06        | <ul style="list-style-type: none"> <li>Packaging elements holding or encircling completely or almost completely the bundle of articles, e.g. wrappers</li> </ul>   |
| M        | B65D 71/08        | <ul style="list-style-type: none"> <li>• Wrappers shrunk by heat {or under tension, e.g. stretch films, <del>or</del> films tensioned by compressed articles <del>(wrappers formed by folding a single blank B65D 71/12; wrappers formed by folding two or more blanks B65D 71/38)</del>}</li> </ul>   |
| U        | B65D 71/70        | <ul style="list-style-type: none"> <li>Trays provided with projections or recesses in order to assemble multiple articles, e.g. intermediate elements for stacking</li> </ul>  |
| M        | B65D 71/72        | <ul style="list-style-type: none"> <li>• formed by folding one or more blanks, the articles being inserted in openings in a wall <del>{(trays with apertures located within an external paper container B65D 5/5038)}</del></li> </ul>   |
| <b>M</b> | <b>B65D 73/00</b> | <b>Packages comprising articles attached to cards, sheets, <del>or</del> webs <del>{({B65D 85/18 takes precedence }</del>; <del>cards for buttons, collar-studs, or sleeve-links A44B 7/00; attaching articles to cards, sheets, or webs B65B 15/00)</del>}</b>  |
| M        | B65D 73/0064      | <ul style="list-style-type: none"> <li>{the articles being supported by or suspended from a tag-like element <del>(hangers for wearing apparel A47G 25/00)</del>}</li> </ul>   |
| <b>M</b> | <b>B65D 77/00</b> | <b>Packages formed by enclosing articles or materials in preformed containers, e.g. boxes, cartons, sacks, <del>or</del> bags</b>  |

- M B65D 77/10 • Container closures formed after filling ~~{{for sacks or bags B65D 33/16}}; closing filled containers in association with packaging B65B 7/00, B65B 51/00~~
- M B65D 77/12 • • by collapsing and flattening the mouth portion of the container and securing without folding, e.g. by pressure-sensitive adhesive, heat-sealing, welding, ~~or~~ applying ~~a~~ separate securing ~~member~~ *members*
- M **B65D 81/00**  
- ~~B65D 90/00~~  
*B65D 85/00*
- U B65D 81/02 • specially adapted to protect contents from mechanical damage {{containers of polygonal cross-section provided with internal protecting elements for contents *B65D 5/50*; devices to locate articles in containers *B65D 25/10*}}
- U B65D 81/05 • • maintaining contents at spaced relation from package walls, or from other contents {{*B65D 81/022*, *B65D 81/025*, } *B65D 81/03* take precedence}
- M B65D 81/09 • • using flowable discrete elements of shock-absorbing material, e.g. pellets; ~~popcorn~~ ~~{ or popcorn (B65D 81/051 takes precedence)}~~
- M **B65D 83/00** Containers or packages with special means for dispensing contents (dispensing means incorporated in removable or non-permanently secured container closures *B65D 47/00*; for shops, stores, offices, bars, or the like *A47F 1/04*; showcases or *show* cabinets with dispensing arrangements *A47F 3/02*; ~~{for surgical articles A61B 50/30}~~; magazines for screws or nuts in combination with spanners, wrenches or ~~screw-drivers~~ *screwdrivers B25B 23/06*; ~~nail dispensers B25C 3/00~~; for use in connection with the handling of sheets, webs, or filamentary material *B65H*; ~~coin deliverers G07D 1/00~~; ~~{coin freed apparatus for dispensing discrete articles G07F 11/00}~~)
- M B65D 83/02 • for dispensing rod-shaped articles, e.g. needles {{~~{packages for cigarettes provided with dispensing means *B65D 85/1009*}~~; ~~cigar or cigarette receptacles or boxes A24F 15/00~~; {dispensers for drinking straws *A47G 21/184*}}
- M B65D 83/04 • for dispensing annular, disc-shaped, *or* spherical; ~~or~~ like small articles, e.g. tablets; ~~or~~ pills
- M B65D 83/06 • for dispensing powdered or granular material {{*B65D 83/04* takes precedence } ~~; spraying or atomising apparatus in general B05B~~}
- M B65D 83/08 • for dispensing thin flat articles in succession {{~~{towel dispensers intended for re-use *A47K 10/24*}~~ *dispensers for surgical scalpel blades A61B 17/3215*}}

## NOTE

*B65D 83/10* and *B65D 83/12* take precedence over *B65D 83/0805* - *B65D 83/0894*

- M **B65D 85/00** Containers, packaging elements or packages, specially adapted for particular articles or materials (*B65D 71/00*, *B65D 83/00* take precedence; hand implements; *or* travelling equipment *A45C*; cosmetic or toilet equipment *A45D*; ~~{for surgical instruments or appliances A61B 50/30}~~; *packages for surgical knives, scalpels or blades therefor A61B 17/3215*; containers specially adapted for medical or pharmaceutical purposes *A61J 1/00*; paint cans *B44D 3/12*; oil cans *F16N 3/04*; containers for carrying ~~small arms~~ *small arms F41C 33/06*; packaging of ammunition or explosive charges *F42B 39/00*; containers for record carriers, specially adapted for ~~co-operation~~ *cooperation* with the recording or reproducing apparatus *G11B 23/00*)

## NOTE

Attention is drawn to Note (4) following the title of this subclass

- U B65D 85/02      • for annular articles (for web or tape-like material wound in flat spiral form [B65D 85/671](#))
- M B65D 85/04      • • for coils of wire, rope; or hose
- U B65D 85/06      • • for tyres
- N B65D 85/07      • for compressible or flexible articles (for wearing apparel [B65D 85/18](#))
- M B65D 85/08      • • ~~for compressible or flexible~~ rod-shaped or tubular ~~articles~~ ~~{{collapsible tubes per se B65D 35/00}}~~
- M B65D 85/10      • • • for cigarettes
- M B65D 85/1009    • • • • {provided with proffering means ([B65D 85/1054](#) takes precedence)}
- M B65D 85/1018    • • • • {Container formed by a flexible material, i.e. soft-packages}
- M B65D 85/1027    • • • • • {Opening devices}
- M B65D 85/1036    • • • • {Containers formed by erecting a rigid or semi-rigid blank}
- M B65D 85/1045    • • • • • {having a cap-like lid hinged to an edge}
- M B65D 85/1054    • • • • • • {combined with an outer sleeve connected to the lid}
- M B65D 85/1063    • • • • • {so as to form two cigarette-compartments interconnected by a hinge-portion}
- M B65D 85/1072    • • • • {Bundle of cigarette packs}
- M B65D 85/1081    • • • • {Inserts or accessories added or joined to the container, e.g. coins, pens, cards, spacers ([B65D 85/1009](#) takes precedence)}
- M B65D 85/109     • • • • • {Lighting means, e.g. matches; ~~or~~ lighters}
- M B65D 85/12      • • • for cigars
- M B65D 85/14      • • • for collapsible ~~{empty}~~ tubes; ~~{i.e. pliable tubular containers adapted to be permanently or temporarily deformed to expel contents}~~
- D B65D 85/16      • for compressible or flexible articles of other shapes (for wearing apparel [B65D 85/18](#))  
<administratively transferred to [B65D 85/07](#)>
- M B65D 85/18      • for wearing apparel, ~~i.e. clothes, headgear, shoes~~ [headwear or footwear](#)
- U B65D 85/20      • for incompressible or rigid rod-shaped or tubular articles
- M B65D 85/22      • • for macaroni, ~~sphaghetti~~; [spaghetti](#) or like flour products
- M B65D 85/24      • • for needles, nails; or ~~other-like~~ [elongated](#) [elongate](#) small articles
- U B65D 85/30      • for articles particularly sensitive to damage by shock or pressure
- M B65D 85/34      • • for fruit, e.g. apples, oranges; ~~or~~ tomatoes
- M B65D 85/36      • • for ~~biscuits or other~~ bakery products, [e.g. biscuits](#)
- M B65D 85/38      • • for ~~optical or other~~ delicate [optical](#), measuring, calculating; or control apparatus
- M B65D 85/40      • • • for watches or clocks ~~or components thereof~~; [for components thereof](#)
- U B65D 85/44      • • for crockery
- M B65D 85/46      • • for bricks, tiles; or building blocks
- M B65D 85/50      • for living organisms, articles; or materials sensitive to changes of environment or atmospheric conditions, e.g. land animals, birds, fish, water plants, non-aquatic plants, flower bulbs, cut flowers; ~~or~~ foliage (devices for transporting live fish [A01K 63/02](#))
- M B65D 85/58      • for ball bearings, washers, buttons; or like spherical or disc-shaped articles (cards for buttons, collar-studs; ~~or~~ sleeve-links [A44B 7/00](#))
- M B65D 85/67      • for ~~other~~ web or tape-like material ~~{{with means for dispensing B65D 83/08 for jumbo rolls or rolls of floor covering B65D 85/66; for recording-tape cassettes G11B 23/00}}~~
- M B65D 85/68      • for machines, engines; or vehicles in assembled or dismantled form

**N** **B65D 88/00 -** **Large containers**  
**B65D 90/00**

**Project: N/A (B65G)**

**B65G**

**TRANSPORT OR STORAGE DEVICES, e.g. CONVEYORS FOR LOADING OR TIPPING; SHOP CONVEYOR SYSTEMS; PNEUMATIC TUBE CONVEYORS** ({preventing fire in special objects or places [A62C 3/00](#)}; transport or storage devices used in a particular handling or treatment of articles or materials, see the relevant subclass, e.g. in metal-working [B21D 43/00](#), [B23Q 7/00](#), [B23Q 41/02](#); vehicle, railway, sea or aircraft aspects [B60 - B64](#); in packaging [B65B](#); handling thin or filamentary materials [B65H](#); hoisting, lifting, hauling, e.g. truck loaders [B66](#); handling liquids [B67](#); {transport or storage containers for preparing or distributing road building materials [E01C](#); construction or assembling of bulk storage containers employing civil engineering techniques in site or off the site [E04H 7/00](#)}; specially adapted to underground conditions in mines [E21F 13/00](#); storing or distributing gases or liquids [F17](#); in handling radioactive materials [G21C 19/00](#))

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these ~~IPC~~ groups is classified in the following ~~CPC~~ groups:

|                            |            |   |
|----------------------------|------------|---|
| <a href="#">B65G33/28</a>  | covered by | <a href="#">B65G 33/265</a>                               |
| <a href="#">B65G 47/10</a> | covered by | <a href="#">B65G 1/1373</a>                               |
| <a href="#">B65G 47/86</a> | covered by | <a href="#">B65G 47/842</a> , <a href="#">B65G 47/847</a> |
| <a href="#">B65G 49/07</a> | covered by | <a href="#">H01L 21/677</a>                               |
| <a href="#">B65G 69/32</a> | covered by | <a href="#">B65G 69/28</a>                                |
| <a href="#">B65G 69/34</a> | covered by | <a href="#">B65G 69/28</a>                                |

**Project: N/A (B65H)**

**B65H**

**HANDLING THIN OR FILAMENTARY MATERIAL, e.g. SHEETS, WEBS, CABLES**

#### NOTES

1. This subclass does not cover methods or devices intimately associated with other operations on thin or filamentary material, e.g. sheets, webs, cables or means for performing such operations, which are classified in the relevant subclasses for these operations, e.g.:

|                            |  |
|----------------------------|--|
| <a href="#">B07C</a>       | Postal sorting, similar sorting of documents, e.g. cheques   |
| <a href="#">B08B 1/02</a>  | Cleaning travelling work, e.g. webs, by methods involving the use of tools, brushes or like members  |
| <a href="#">B21B 41/00</a> | Metal rolling involving guiding, conveying or accumulating easily-flexible work, e.g. wire, sheet metal bands, in loops or curves  |
| <a href="#">B21C 47/00</a> | , Winding-up,coiling, winding-off or temporarily accumulating metal wire, metal band or other flexible metal material, characterised by features relevant to metal processing only, other than by rolling      |
| <a href="#">B21C 49/00</a> |  |
| <a href="#">B21D 43/00</a> | Feeding, positioning or storing devices, combined with, or arranged in, or specially adapted for use in connection with, apparatus for working or processing sheet metal without essentially removing material |
| <a href="#">B23K 9/12</a>  | Means for automatic feeding of electrodes for spot or seam welding or cutting  |



|                            |  |
|----------------------------|--|
| <a href="#">B29C 31/00</a> | Handling for shaping or joining of plastics, for shaping of substances in a plastic state in general or for after-treatment of shaped products, e.g. feeding the material to be shaped       |
| <a href="#">B41B 15/32</a> | , Film-handling mechanisms in photographic composing machines  |
| <a href="#">B41B 21/32</a> |  |
| <a href="#">B41F 13/02</a> | Conveying or guiding webs through rotary printing presses or machines  |
| <a href="#">B41J 11/00</a> | to Handling of copy- or impression-transfer material in typewriters or selective printing mechanisms   |
| <a href="#">B41J 17/00</a> |  |
| <a href="#">B41K 3/44</a>  | Means for handling copy matter in stamping or numbering apparatus or devices   |
| <a href="#">B41L</a>       | Handling sheets or webs in apparatus or devices for manifolding, duplicating or printing for office or other commercial purposes, or on addressing machines or like series-printing machines |
| <a href="#">B42B</a>       | Handling relating to permanently attaching together sheets, quires, or signatures  |
| <a href="#">B42C</a>       | Handling sheets in book-binding  |
| <a href="#">B65B</a>       | Handling of sheets or webs in apparatus for, or methods of, packaging articles, not of interest apart from their application in packaging machines   |
| <a href="#">B65C</a>       | Handling of labels in labelling or tagging apparatus   |
| <a href="#">C14B 1/62</a>  | Winding or stacking hides or leather in machines or devices for manufacturing leather  |
| <a href="#">D01- D07</a>   | Spinning, weaving, braiding, lace-making, knitting, sewing, making ropes or cables   |
| <a href="#">D21F 2/00</a>  | Transferring webs from wet ends to press sections in paper-making  |
| <a href="#">F26B 13/00</a> | Handling fabrics, fibres, yarns or other material in long lengths in drying apparatus  |
| <a href="#">G03B</a>       | Film-strip handling or handling of pictures in apparatus for taking photographs or for projecting or viewing them  |
| <a href="#">G06K 13/00</a> | Conveying record carriers from one station to another  |
| <a href="#">G06M 7/00</a>  | Counting of flat articles, e.g. sheets, carried by a conveyor  |
| <a href="#">G11B 15/00</a> | to Information storage based on relative movement  |
| <a href="#">G11B 19/00</a> |  |
| <a href="#">G11B 23/00</a> |  |
| <a href="#">G11B 25/00</a> | , between record carrier and transducer,   |
| <a href="#">H01F 41/06</a> | , involving handling record carriers for recording or reproducing  |
| <a href="#">H01G 13/02</a> | Manufacturing coils for magnets, inductances, transformers, by winding   |
| <a href="#">H04N 1/00</a>  | Machines for winding capacitors  |
|                            | Sheet handling not of interest apart from its use in systems for transmission or reproduction of pictures or patterns not varying in time, e.g. facsimile transmission                       |

2. In this subclass:

- the groups relating to thin material, as defined under (i) of Note (3) below, are primarily intended to cover the handling of articles made of paper or cardboard, but also include the handling of articles made of other materials which have similar characteristics or present similar handling problems, e.g. articles made of sheet- plastics or leather;

- the groups relating to filamentary material (groups [B65H 49/00](#) onwards,) as defined in Note (3) below, cover only methods or devices of general application or interest.
3. In this subclass, the following terms or expressions are used with the meanings indicated:
- "handling" includes feeding, folding (other than in the manufacture of products), guiding, orientating, storing, unwinding, and winding;
  - "thin material" includes:
    - i. sheets, signatures, envelopes, blanks, and thin and thin piles thereof (hereinafter referred to as "articles"), and
    - ii. webs, tapes, and films, e.g. of paper, fabric, metal foil, or plastics;
  - "filamentary material" includes thread, wires, ropes, cables, and hoses;
  - "package" means a mass of filamentary material, formed by coiling, depositing, or winding, with or without a supporting core or former or an enclosing container or receptacle.
  - {"yarn" also covers similar filamentary materials.}

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these **IPC** groups is classified in the following CPC groups:

|   |            |  |
|---|------------|--|
| <a href="#">B65H 19/16</a>                              | covered by |  |
| <a href="#">B65H 35/07</a>                              | covered by | <a href="#">B65H 35/0006</a>   |
| <a href="#">B65H 77/00</a>                              | covered by | <a href="#">B65H 23/00</a> , <a href="#">B65H 59/00</a>                                  |
| <a href="#">B65H 83/00</a> , <a href="#">B65H 83/02</a> | covered by | <a href="#">B07C 1/025</a> , <a href="#">G07D 11/00</a> and s.gr                         |
| <a href="#">B65H 85/00</a>                              | covered by | <a href="#">G03B 27/62</a> , <a href="#">G03B 27/6264</a> , <a href="#">G03B 27/6257</a> |

#### B65H 63/00

**Warning or safety devices, e.g. automatic fault detectors, stop-motions (safety devices in general [F16P](#); indicating devices in general [G08B](#) )**  
**{~~Quality control of the package~~; *Quality control of the package*}**

#### Project: MP0268 (B66B)

- U B66B 9/00** Kinds or types of lifts in, or associated with, buildings or other structures (characterised by control systems [B66B 1/00](#); apparatus for raising or lowering persons on stages of theatres [A63J 5/12](#))
- M B66B 9/16** • Mobile or transportable lifts specially adapted to be shifted from one part of a building or other structure to another part or to another building or structure (~~devices for lifting or lowering bulky or heavy goods for loading or unloading purposes B66F 9/00, e.g. fork-lift trucks B66B 9/06~~)

#### Project: N/A (B66C)

#### B66C

**CRANES; LOAD-ENGAGING ELEMENTS OR DEVICES FOR CRANES, CAPSTANS, WINCHES, OR TACKLES ({specially adapted for lifting invalids [A61G 7/10](#);} rope, cable, or chain winding mechanisms, braking or detent devices therefor [B66D](#); specially adapted for nuclear reactors [G21](#))**

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these **IPC** groups is classified in the following CPC groups:

|                             |            |                             |
|-----------------------------|------------|-----------------------------|
| <a href="#">B66C 23/61</a>  | covered by | <a href="#">B66C 23/60</a>  |
| <a href="#">B66C 23/683</a> | covered by | <a href="#">B66C 23/68</a>  |
| <a href="#">B66C 23/687</a> | covered by | <a href="#">B66C 23/701</a> |
| <a href="#">B66C 23/69</a>  | covered by | <a href="#">B66C 23/701</a> |
| <a href="#">B66C 23/693</a> | covered by | <a href="#">B66C 23/705</a> |



[B66C 23/697](#)

covered by

[B66C 23/707](#)

**Project: N/A (B66D)**

**B66D**

**CAPSTANS; WINCHES; TACKLES, e.g. PULLEY BLOCKS; HOISTS (winding or unwinding ropes or cables for feeding or storage purposes [B65H](#); rope or cable winding or unwinding mechanisms for lifts [B66B](#))**

NOTE

This subclass covers:

- rope, cable or chain winding or unwinding mechanisms for moving all loads except lift cages, e.g. winches for dredges;
- braking or detent devices characterised by their application for retarding or preventing rotary movement of a winding drum or barrel

WARNING

-The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[B66D 1/395](#)

covered by

[B66D 1/36](#), [B66D 1/50](#)

**Project: N/A (B66F)**

**B66F**

**HOISTING, LIFTING, HAULING OR PUSHING, NOT OTHERWISE PROVIDED FOR, e.g. DEVICES WHICH APPLY A LIFTING OR PUSHING FORCE DIRECTLY TO THE SURFACE OF A LOAD ({invalid lifting devices [A61G 7/10](#);} mounting artificial islands on piles or like supports [E02B 17/00](#) : scaffolding combined with lifting devices [E04G 1/22](#); lifting devices for sliding forms [E04G 11/24](#); lifting of buildings [E04G 23/06](#); shores or struts [E04G 25/00](#); lifts or other hoisting devices on ladders [E06C 7/12](#); props for mining [E21D 15/00](#))**

WARNING

-The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[B66F 19/02](#)

covered by

[B66F 19/00](#)

**Project: N/A (B67B)**

**B67B**

**APPLYING CLOSURE MEMBERS TO BOTTLES JARS, OR SIMILAR CONTAINERS; OPENING CLOSED CONTAINERS (opening or closing devices attached to, or incorporated in, containers or container closures [B65D](#))**

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[B67B 7/46](#)

covered by

[B67B 7/30-B67B 7/385](#)

[B67B 7/48-B67B 7/52](#)

covered by

[B67B 7/24](#), [B67B 7/26](#),  
[B67B 7/28](#)

[B67B 7/54-B67B 7/90](#)

covered by

[B67B 7/30-B67B 7/385](#)

**Project: N/A (C01B)****C01B****NON-METALLIC ELEMENTS; COMPOUNDS THEREOF; {METALLOIDS OR COMPOUNDS THEREOF NOT COVERED BY SUBCLASS [C01C](#)}**NOTES

1. In this subclass, tradenames that are often found in scientific and patent literature have been used in order to define precisely the scope of the groups.
2. Attention is drawn to the definitions of groups of chemical elements following the title of section [C](#).

WARNINGS

1. The following IPC groups are not **used** in the CPC **system** **scheme**. **Subject** **The subject** matter **covered by** **for** these **IPC** groups is classified in the following CPC groups:

**C01B31/16** covered by [B01J 39/24](#), [B01J 41/18](#)  
[C01B 35/16](#), [C01B 35/18](#) covered by [C01B 35/00](#) + s.gr.

2. General concordance IPC4 or IPC5 to IPC6 groups is as follows:

[C01B 25/37](#) (partly) : [C01B 37/002](#)  
[C01B 25/453](#) : [C01B 37/00](#), [C01B 39/54](#)  
[C01B 33/185](#) : [C01B 37/02](#)  
[C01B 33/28](#) and subgroups : [C01B 37/00](#), [C01B 39/00](#)  
[C01B 35/1009](#) : [C01B 37/06](#), [C01B 39/12](#), [C01B 39/54](#)

**U C01B 32/00****Carbon; Compounds thereof ([C01B 21/00](#), [C01B 23/00](#) take precedence; percarbonates [C01B 15/10](#); carbon black [C09C 1/48](#))**

U C01B 32/30

- Active carbon

WARNING

Group [C01B 32/30](#) is impacted by reclassification into groups [C01B 32/312](#) and [C01B 32/318](#).

All groups listed in this Warning should be considered in order to perform a complete search.

U C01B 32/354

- • After-treatment

WARNING

Group [C01B 32/354](#) is impacted by reclassification into group [C01B 32/378](#). Groups [C01B 32/354](#) and [C01B 32/378](#) should be considered in order to perform a complete search.

C01B 32/384

- • • Granulation

NOTE

In this group, the term "granulation" also covers methods of preparation of active carbon using carbonaceous precursors per se and binders, e.g. pitch.

**Project: RP0508 (C01B)****C01B 35/00**

**Boron; Compounds thereof (monoborane, diborane, metal borohydrides or addition complexes thereof [C01B 6/00](#); perborates [C01B 15/12](#); binary compounds with nitrogen [C01B 21/06](#); {compounds of noble gases [C01B 23/0005](#)}; phosphides [C01B 25/08](#); carbides [C01B 32/956](#) [C01B 32/991](#); alloys containing boron [C22](#))**

**Project: N/A (C02F)****C02F**

**TREATMENT OF WATER, WASTE WATER, SEWAGE, OR SLUDGE** (separation in general [B01D](#); special arrangements on waterborne vessels of installations for treating water, waste water or sewage, e.g. for producing fresh water, [B63J](#); adding materials to water to prevent corrosion [C23F](#); treating radioactively-contaminated liquids [G21F 9/04](#); regeneration of reactants for recirculation into processes, see the relevant places for the processes)

NOTE

When classifying in this subclass, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned.

WARNING

The following IPC groups are not **used** in the CPC **system scheme**. **Subject** **The subject** matter **covered by for** these **IPC** groups is classified in the following CPC groups:

[C02F 9/02-C02F 9/14](#) covered by [C02F 9/00](#) and subgroup

**Project: N/A (C03B)****C03B**

**MANUFACTURE, SHAPING, OR SUPPLEMENTARY PROCESSES**

WARNING

The following IPC groups are not **used** in the CPC **system scheme**. **Subject** **The subject** matter **covered by for** these **IPC** groups is classified in the following CPC groups:

|                           |            |  |
|---------------------------|------------|--|
| <a href="#">C03B 8/00</a> | covered by | <a href="#">C03B 19/00</a> , <a href="#">C03B 37/00</a>  |
| <a href="#">C03B 8/02</a> | covered by | <a href="#">C03B 19/1065</a> , <a href="#">C03B 19/12</a> ,<br><a href="#">C03B 37/011</a> , <a href="#">C03B 37/016</a> |
| <a href="#">C03B 8/04</a> | covered by | <a href="#">C03B 19/106</a> , <a href="#">C03B 19/14</a> ,<br><a href="#">C03B 37/014</a>                                |

**Project: RP0488 (C03C)****M C03C**

**CHEMICAL COMPOSITION OF GLASSES, GLAZES, OR VITREOUS ENAMELS; SURFACE TREATMENT OF GLASS; SURFACE TREATMENT OF FIBRES OR FILAMENTS **MADE** FROM GLASS, MINERALS OR SLAGS; JOINING GLASS TO GLASS OR OTHER MATERIALS**

NOTES

1. This subclass covers compositions of polycrystalline fibres
2. This subclass does not cover the preparation of single-crystal fibres, which is covered by subclass [C30B](#)

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** **The subject** matter **covered by for** these **IPC** groups is classified in the following CPC groups:

|   |            |                            |
|---|------------|----------------------------|
| <a href="#">C03C 6/00</a>               | covered by | <a href="#">C03C 1/00</a>  |
| <a href="#">C03C 6/02-C03C 6/10</a>     | covered by |                            |
| <a href="#">C03C 10/02 - C03C 10/14</a> | covered by | <a href="#">C03C 10/00</a> |
| <a href="#">C03C 13/02</a>              | covered by | <a href="#">C03C 13/00</a> |
| <a href="#">C03C 27/12</a>              | covered by | <a href="#">B32B 17/00</a> |

|  |                         |   |
|--|-------------------------|---|
| M  | C03C 15/00 - C03C 25/00 | Surface treatment of glass; Surface treatment of fibres or filaments from glass, minerals or <del>slag</del> slags  |
| M  | C03C 25/00              | Surface treatment of fibres or filaments <del>made</del> from glass, minerals, or slags <del>{{woven fabrics D03; non-woven fabrics D04; treatment of fabrics in general or non-chemical aspects of treatment of glass fabrics D06M}}</del> |
| <p><b>NOTES</b></p> <p>1. In groups <u>C03C 25/24 - C03C 25/48</u>, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.</p> <p>2. A coating composition, i.e. a mixture of two or more constituents, is classified in the last of groups <u>C03C 25/25 - C03C 25/42</u> that provides for at least one of these constituents.</p> <p>3. When classifying in groups <u>C03C 25/24 - C03C 25/42</u>, any individual constituent, i.e. compound or ingredient of a coating composition, which is not identified by the classification according to Note (2), and which itself is determined to be novel and non-obvious, must also be classified in the last appropriate place in groups <u>C03C 25/24 - C03C 25/42</u>.</p> <p>4. When classifying in groups <u>C03C 25/24 - C03C 25/42</u>, any individual constituent of a coating composition which is not identified by the classification according to Note (2) or (3), and which is considered to represent information of interest for search, may also be classified in groups <u>C03C 25/24 - C03C 25/42</u>. This can, for example, be the case when it is considered of interest to enable searching of coating compositions using a combination of classification symbols. Such non-obligatory classification should be given as "additional information".</p> <p>5. When classifying in groups <u>C03C 25/1025 - C03C 25/1095</u>, the composition of the coatings must also be classified in one or more of groups <u>C03C 25/24 - C03C 25/54</u>, according to Notes (1) to (4).</p> <p>6. When classifying in group <u>C03C 25/48</u>, any individual coating which itself is determined to be novel and non-obvious must also be classified in groups <u>C03C 25/24 - C03C 25/42</u>, according to Notes (1) to (4).</p> |                         |   |
| M  | C03C 25/002             | • <del>{by thermal</del> Thermal treatment}   |
| M  | C03C 25/005             | • <del>{by mechanical means}</del>  |
| M  | C03C 25/007             | • <del>{Impregnation</del> by solution <del>impregnating</del> ; solutionSolution doping or molecular stuffing of porous glass}   |
| M  | C03C 25/10              | • <del>by coating</del> Coating   |
| D  | C03C 25/1005            | • <del>{with materials of composite character}</del><br><administratively transferred to <a href="#">C03C 25/465</a> >  |
| D  | C03C 25/101             | • • <del>{containing particles, fibres or flakes, e.g. in a continuous phase}</del><br><administratively transferred to <a href="#">C03C 25/47</a> >  |
| D  | C03C 25/1015            | • <del>{with rubber latex-containing coatings}</del><br><administratively transferred to <a href="#">C03C 25/27</a> >   |
| D  | C03C 25/102             | • <del>{Coating with colouring agent-containing compositions, e.g. for obtaining coloured textiles}</del><br><administratively transferred to <a href="#">C03C 25/475</a> >   |
| M  | C03C 25/1025            | • • <del>{Fibres to obtain fibres}</del> used for reinforcing cement-based products}  |
| M  | C03C 25/103             | • • <del>{with organic</del> Organic coatings}  |
| M  | C03C 25/1035            | • • <del>{with inorganic</del> Inorganic coatings}  |
| M  | C03C 25/104             | • <del>{to obtain optical fibres}</del>   |

|   |                          |   |
|---|--------------------------|---|
| F | C03C 25/1045<br>(Frozen) | <ul style="list-style-type: none"> <li>• • • {with organic coatings or claddings}</li> </ul> <p><b>WARNING</b><br/>Group <u>C03C 25/1045</u> is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups <u>C03C 25/105</u>, <u>C03C 25/106</u>, and <u>C03C 25/1065</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>  |
| E | C03C 25/105              | <ul style="list-style-type: none"> <li>• • • <del>{Organic claddings}</del></li> </ul> <p><b>WARNING</b><br/>Group <u>C03C 25/105</u> is incomplete pending reclassification of documents from group <u>C03C 25/1045</u>. Groups <u>C03C 25/1045</u> and <u>C03C 25/105</u> should be considered in order to perform a complete search.</p>   |
| F | C03C 25/1055<br>(Frozen) | <ul style="list-style-type: none"> <li>• • • • {Organic coatings}</li> </ul> <p><b>WARNING</b><br/>Group <u>C03C 25/1055</u> is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups <u>C03C 25/106</u> and <u>C03C 25/1065</u>. Groups <u>C03C 25/1055</u>, <u>C03C 25/106</u>, and <u>C03C 25/1065</u> should be considered in order to perform a complete search.</p> |
| E | C03C 25/106              | <ul style="list-style-type: none"> <li>• • • <del>→ {Single coatings}</del></li> </ul> <p><b>WARNING</b><br/>Group <u>C03C 25/106</u> is incomplete pending reclassification of documents from groups <u>C03C 25/1045</u> and <u>C03C 25/1055</u>. Groups <u>C03C 25/1045</u>, <u>C03C 25/1055</u>, and <u>C03C 25/106</u> should be considered in order to perform a complete search.</p>  |
| N | C03C 25/1061             | • • • • {Inorganic coatings}  |
| N | C03C 25/1062             | • • • • {Carbon}  |
| N | C03C 25/1063             | • • • • {Metals}  |
| E | C03C 25/1065             | <ul style="list-style-type: none"> <li>• • • <del>→ {Multiple coatings}</del></li> </ul> <p><b>WARNING</b><br/>Group <u>C03C 25/106</u> is incomplete pending reclassification of documents from groups <u>C03C 25/1045</u> and <u>C03C 25/1055</u>. Groups <u>C03C 25/1045</u>, <u>C03C 25/1055</u>, and <u>C03C 25/1065</u> should be considered in order to perform a complete search.</p>   |
| N | C03C 25/1068             | • • • • {Inorganic coatings}  |
| D | C03C 25/107              | <ul style="list-style-type: none"> <li>• • • {with inorganic coatings}</li> </ul> <p>&lt;administratively transferred to <a href="#">C03C 25/1061</a>&gt;</p>   |
| D | C03C 25/1075             | <ul style="list-style-type: none"> <li>• • • • {Carbon}</li> </ul> <p>&lt;administratively transferred to <a href="#">C03C 25/1062</a>&gt;</p>  |
| D | C03C 25/108              | <ul style="list-style-type: none"> <li>• • • • {Metals}</li> </ul> <p>&lt;administratively transferred to <a href="#">C03C 25/1063</a>&gt;</p>  |
| D | C03C 25/1085             | <ul style="list-style-type: none"> <li>• • • • {Multiple inorganic coatings}</li> </ul> <p>&lt;administratively transferred to <a href="#">C03C 25/1068</a>&gt;</p>   |
| M | C03C 25/109              | • • • • {with at least one organic coating and at least one inorganic coating}  |
| M | C03C 25/1095             | • • <del>{to obtain coated fabrics}</del>   |
| M | C03C 25/12               | • • General methods <del>for</del> <u>of</u> coating; Devices therefor  |

|   |             |  |
|---|-------------|--|
| M | C03C 25/14  | • • • Spraying, <del>e.g. pulverisation</del>  |
| E | C03C 25/143 | • • • • { <del>Pulverisation on</del> <del>onto</del> continuous fibres}   |
|   |             | <p><b>WARNING</b></p> <p>Group <u>C03C 25/143</u> is incomplete pending reclassification of documents from group <u>C03C 25/146</u>.<br/>Groups <u>C03C 25/146</u> and <u>C03C 25/143</u> should be considered in order to perform a complete search.</p>  |
| C | C03C 25/146 | • • • • { <del>Pulverisation on</del> <del>onto</del> fibres in suspension in a gaseous medium}<br>( <u>C03C 25/143</u> takes precedence)  |
|   |             | <p><b>WARNING</b></p> <p>Group <u>C03C 25/146</u> is impacted by reclassification into group <u>C03C 25/143</u>.<br/>Groups <u>C03C 25/146</u> and <u>C03C 25/143</u> should be considered in order to perform a complete search.</p>  |
| M | C03C 25/18  | • • • <del>using extrusion devices</del> <u>Extrusion</u>  |
| M | C03C 25/22  | • • • <del>Depositing</del> <u>Deposition</u> from the vapour phase  |
| M | C03C 25/223 | • • • • {by chemical vapour deposition or pyrolysis}   |
| M | C03C 25/226 | • • • • {by sputtering}  |
|   |             | <p><b>NOTE</b></p> <p>In groups C03C 25/24 – C03C 25/40, organic coating compositions also cover mixtures of organic and inorganic compounds. A coating composition which cannot be completely classified in a single one of groups C03C 25/24 – C03C 25/40 should be classified in each relevant group, in accordance with the following rules:</p> <ul style="list-style-type: none"> <li>• Compositions containing only one macromolecular constituent and one or more conventional inorganic or non-macromolecular compounds, e.g. acids, solvents, are classified according to the macromolecular constituent only.</li> <li>• Compositions containing two or more macromolecular constituents and further conventional inorganic or non-macromolecular compounds are classified according to the macromolecular constituent present in the highest proportion. If, however, the other macromolecular constituents represent invention information, classification is also made for these constituents.</li> <li>• Compositions containing macromolecular constituents present in comparable proportions are classified according to these constituents.</li> <li>• If non-macromolecular compounds in the composition also represent invention information, C03C 25/38, for specific solvents, fillers, dyes or pigments, surfactants, biocides or the like in C03C 25/24 or subgroups.</li> </ul> |
| U | C03C 25/24  | • • Coatings containing organic materials  |
| D | C03C 25/243 | • • • { <del>Oils, waxes, fats or derivatives thereof</del><br><administratively transferred to <a href="#">C03C 25/255</a> >  |
| D | C03C 25/246 | • • • { <del>Non-macromolecular compounds not covered by C03C 25/243</del><br><administratively transferred to <a href="#">C03C 25/25</a> >  |
| N | C03C 25/25  | • • • <i>Non-macromolecular compounds</i>  |
| N | C03C 25/255 | • • • <i>Oils, waxes, fats or derivatives thereof</i>  |
| M | C03C 25/26  | • • • Macromolecular compounds or prepolymers <del>{, e.g. sizing compositions}</del>  |
| N | C03C 25/27  | • • • • <i>Rubber latex</i>  |
| U | C03C 25/28  | • • • • obtained by reactions involving only carbon-to-carbon unsaturated bonds  |



|   |             |  |
|---|-------------|--|
| M | C03C 25/285 | . . . . {Acrylic resins}   |
| U | C03C 25/30  | . . . . Polyolefins  |
| M | C03C 25/305 | . . . . {Polyfluoro-olefins} Polyfluoroolefins   |
| U | C03C 25/32  | . . . . obtained otherwise than by reactions involving only carbon-to-carbon unsaturated bonds |
| M | C03C 25/321 | . . . . {Starch-or starch derivatives}; Starch derivatives                                     |
| M | C03C 25/323 | . . . . {Esters-or Polyesters, e.g. alkyd resins}  |
| M | C03C 25/325 | . . . . {Polycarbonates}   |
| M | C03C 25/326 | . . . . {Polyureas-or polyurethanes}; Polyurethanes  |
| M | C03C 25/328 | . . . . {Polyamides}   |
| U | C03C 25/42  | . . Coatings containing inorganic materials  |
| U | C03C 25/46  | . . . Metals   |
| N | C03C 25/465 | . . Coatings containing composite materials  |
| N | C03C 25/47  | . . . containing particles, fibres or flakes, e.g. in a continuous phase                       |
| N | C03C 25/475 | . . . containing colouring agents  |
| M | C03C 25/48  | . . with two or more coatings having different compositions {(C03C 25/104 takes precedence)}   |

**NOTE**

If one or more of the individual coatings are of interest, for each of these coatings classification is also made in one or more of groups C03C 25/24- C03C 25/46, in accordance with the note before group C03C 25/24.

|   |              |   |
|---|--------------|---|
| M | C03C 25/60   | . by diffusing ions or metals <i>in/into</i> the surface  |
| M | C03C 25/601  | . . {in the liquid phase, e.g. using <i>solutions or</i> molten salts-or solutions}   |
| M | C03C 25/602  | . . . {to perform ion-exchange between alkali ions (C03C 25/605 takes precedence)}  |
| M | C03C 25/603  | . . . . {under application of an electrical potential difference}   |
| M | C03C 25/605  | . . . {to introduce <i>in the glass such</i> metals or metallic ions-as Ag, e.g. <i>silver</i> or Cu}copper, <i>into the glass</i>  |
| M | C03C 25/607  | . . {in the gaseous phase}  |
| M | C03C 25/608  | . . {in the solid phase, e.g. using pastes,- or powders}  |
| M | C03C 25/62   | . by application of electric or wave energy <i>or particle radiation, or by ion implantation</i> (for drying or dehydration C03C 25/64); <i>by particle radiation or ion implantation</i> |
| M | C03C 25/6206 | . . {Electromagnetic waves}   |
| N | C03C 25/6208 | . . . Laser   |
| N | C03C 25/621  | . . . Microwaves  |
| M | C03C 25/6213 | . . . {Infra-red}Infrared   |
| M | C03C 25/622  | . . . {Visible light}   |
| M | C03C 25/6226 | . . . {Ultra-violet}Ultraviolet   |
| D | C03C 25/6233 | . . . {Laser}<br><administratively transferred to C03C 25/6208>   |
| M | C03C 25/624  | . . . {X-rays}Rays  |
| M | C03C 25/6246 | . . . {Gamma-rays}  |
| D | C03C 25/6253 | . . . {Microwaves}<br><administratively transferred to C03C 25/621>   |
| M | C03C 25/626  | . . {Particle radiation or ion implantation}  |



- M C03C 25/6266 . . . {Electrons, protons or alpha- particles}
- M C03C 25/6273 . . . {Neutrons}
- M C03C 25/628 . . . {Atoms}
- M C03C 25/6286 . . . {Ion implantation}
- M C03C 25/6293 . . {Plasma or corona discharge}
- M C03C 25/66 . Chemical treatment, e.g. leaching, acid **or** alkali treatment (dehydroxylation ~~C03C 25/46~~ **C03C 25/64**)
- M C03C 25/70 . Cleaning, e.g. for reuse (~~{C03C 25/002,}~~ **C03C 25/62** and ~~-C03C 25/66~~ take precedence)

**Project: N/A (C04B)****C04B**

**LIME, MAGNESIA; SLAG; CEMENTS; COMPOSITIONS THEREOF, e.g. MORTARS, CONCRETE OR LIKE BUILDING MATERIALS; ARTIFICIAL STONE {(roofing granules **E04D 7/005**); CERAMICS (devitrified glass-ceramics **C03C 10/00**); REFRACTORIES; TREATMENT OF NATURAL STONE**

NOTES

1. In this subclass, the following terms or expressions are used with the meanings indicated:
  - "fillers" includes pigments, aggregates and fibrous reinforcing materials;
  - "active ingredients" includes processing aids or property improvers, e.g. grinding aids used after the burning process or used in the absence of a burning process;
  - "mortars", "concrete" and "artificial stone" are to be considered as a single group of materials, and therefore, in the absence of an indication to the contrary, they include mortar, concrete and other cementitious compositions.
2. In groups **C04B 7/00** - **C04B 32/00**, in the absence of an indication to the contrary, classification is made in the last appropriate place.
3. A composition classified in groups **C04B 26/00** or **C04B 28/00** is also classified in groups **C04B 14/00** - **C04B 24/00** if a filler or active ingredient is of interest.
4. In groups **C04B 2/00** - **C04B 32/00** and **C04B 38/00** - **C04B 41/00** it is desirable to classify the individual constituents of the mixtures, or other aspects relating to the mixtures or constituents, using Combination Sets with symbols chosen from groups **C04B 2/00** - **C04B 41/00**.
5. In groups **C04B 2/00** - **C04B 32/00** and **C04B 38/00** - **C04B 41/00** it is desirable to classify the function of the individual constituents of the mixtures, or other aspects relating to the properties or uses of the mixtures or products obtained, using Combination Sets with symbols chosen from groups **C04B 2103/00** - **C04B 2111/00**.
6. Groups **C04B 20/123** and **C04B 20/126** are used for indexing purposes only of documents classified in **C04B 20/12**

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

|                               |            |   |
|-------------------------------|------------|---|
| <b>C04B 5/02</b>              | covered by | <b>B01J 2/00, C21B 3/06</b>   |
| <b>C04B 28/20, C04B 28/22</b> | covered by | <b>C04B 28/18, C04B 28/182, C04B 28/184, C04B 28/186, C04B 28/188</b> |

|   |            |   |
|---|------------|---|
| C04B 35/035   | covered by | <a href="#">C04B 35/26</a> , <a href="#">C04B 35/2608</a> ,<br><a href="#">C04B 35/2616</a> ,<br><a href="#">C04B 35/2625</a> ,<br><a href="#">C04B 35/2633</a> ,<br><a href="#">C04B 35/2641</a> ,<br><a href="#">C04B 35/265</a> , <a href="#">C04B 35/2658</a> ,<br><a href="#">C04B 35/2666</a> ,<br><a href="#">C04B 35/2675</a> ,<br><a href="#">C04B 35/2683</a> ,<br><a href="#">C04B 35/2691</a> |
| C04B 35/28-C04B 35/40                                 | covered by |   |
| C04B 35/567, C04B 35/569,<br>C04B 35/576, C04B 35/577 | covered by | <a href="#">C04B 35/565</a> , <a href="#">C04B 35/571</a> ,<br><a href="#">C04B 35/573</a> , <a href="#">C04B 35/575</a> ,<br><a href="#">C04B 35/5755</a> , <a href="#">C04B 35/806</a>  |
| C04B 35/582   | covered by | <a href="#">C04B 35/581</a> , <a href="#">C04B 35/806</a>   |
| C04B 35/5833,<br>C04B 35/5835                         | covered by | <a href="#">C04B 35/583</a> , <a href="#">C04B 35/806</a>   |
| C04B 35/586, C04B 35/587,<br>C04B 35/594, C04B 35/596 | covered by | <a href="#">C04B 35/584</a> , <a href="#">C04B 35/589</a> ,<br><a href="#">C04B 35/591</a> , <a href="#">C04B 35/593</a> ,<br><a href="#">C04B 35/5935</a> , <a href="#">C04B 35/806</a>  |
| C04B 35/599   | covered by | <a href="#">C04B 35/597</a>   |
| C04B 35/81  | covered by | <a href="#">C04B 35/78</a>  |
| C04B 35/84  | covered by | <a href="#">C04B 35/628</a> , <a href="#">C04B 35/78</a>  |

**Project: MP0242 (C04B)**

**M C04B 33/00**

**Clay-wares (monolithic refractories or refractory mortars [C04B 35/66](#);  
porous products [C04B 38/00](#))**

NOTE

{In groups [C04B 33/00](#) - [C04B 33/36](#), ~~from 01-10-2008 onwards~~, the indexing codes of groups [C04B 2235/00](#) - [C04B 2235/9646](#) are used (with the exception of [C04B 2235/349](#), [C04B 2235/6027](#), [C04B 2235/604](#) and [C04B 2235/9661](#)-) to identify aspects relating to ceramic starting mixtures and sintered ceramic products-}

**U C04B 35/00**

Shaped ceramic products characterised by their composition {(porous ceramic products [C04B 38/00](#); ceramic articles characterised by particular shape, see the relevant classes, e.g. linings for casting ladles, tundishes, cups or the like [B22D 41/02](#); ceramic substrates for microelectronic semi-conductors [H01L 23/15](#))}; Ceramics compositions (containing free metal bonded to carbides, diamond, oxides, borides, nitrides, silicides, e.g. cermets, or other metal compounds, e.g. oxynitrides or sulfides other than as macroscopic reinforcing agents [C22C](#); {shaping of ceramics [B28B](#)}); Processing powders of inorganic compounds preparatory to the manufacturing of ceramic products {(chemical preparation of powders of inorganic compounds [C01](#); infiltration of sintered ceramic preforms with molten metal [C04B 41/51](#))}

NOTES

1. In this group, in the absence of an indication to the contrary, compositions are classified according to the constituent present in the highest proportion by weight.
2. In this group, magnesium is considered as an alkaline earth metal.
3. In this group, a composite is considered as a sintered material containing more than one phase, where the secondary phases are not resulting from sintering aids
4. In this group, fine ceramics are considered as products having a polycrystalline, fine-grained microstructure, e.g. of dimensions below 100 micrometers.
5. The production of ceramic powder is classified in this group in so far as it relates to the preparation of powder with specific characteristics.
6. In groups [C04B 35/00](#) - [C04B 35/83](#), from 01-01-2005 onwards, the indexing codes of groups [C04B 2235/00](#) - [C04B 2235/9692](#) are used to identify aspects relating to ceramic starting mixtures and sintered ceramic products

WARNING

Attention is drawn to WARNINGS 3 and 4 after subclass title

- U C04B 35/01      • based on oxide ceramics
- U C04B 35/46      • • based on titanium oxides or titanates (containing also zirconium or hafnium oxides, zirconates or hafnates [C04B 35/49](#))
- U C04B 35/462     • • • based on titanates
- U C04B 35/465     • • • • based on alkaline earth metal titanates
- U C04B 35/468     • • • • • based on barium titanates
- M C04B 35/4682   • • • • • {based on BaTiO<sub>3</sub> ~~perofskite~~[perovskite](#) phase}
- M C04B 35/4686   • • • • • {based on phases other than BaTiO<sub>3</sub> ~~perofskite~~[perovskite](#) phase}

**M C04B 37/00**

Joining burned ceramic articles with other burned ceramic articles or other articles by heating (laminated products [B32B](#), [E04C](#); {soldering and welding materials [B23K 35/24](#)})

NOTE

{In groups [C04B 37/00](#) - [C04B 37/04](#), ~~from 01-10-2008 onwards~~, features relating to interlayers, additional compositional information or further processing are indexed with codes chosen from [C04B 2237/00](#) - [C04B 2237/88](#).}

WARNING

Groups [C04B 37/005](#), [C04B 37/006](#), [C04B 37/025](#) and [C04B 37/026](#) are no longer used for classification as from September 1, 2008. Aspects relating to interlayers are from that date indexed by codes chosen from [C04B 2237/02](#) - [C04B 2237/16](#)

- U C04B 2235/00 Aspects relating to ceramic starting mixtures or sintered ceramic products**
- NOTE**  
In this group, magnesium is considered as an alkaline earth metal.
- U C04B 2235/02** • Composition of constituents of the starting material or of secondary phases of the final product
- NOTE**  
Indexing codes [C04B 2235/02](#) - [C04B 2235/5481](#) are to be used only if the aspect is not trivial or not standard, e.g. if water is used as a mixing medium for a powder, whereas normally an organic mixing medium is used or if not the standard alpha-alumina is used to make an alumina ceramic but gamma-alumina in stead.
- U C04B 2235/30** • • Constituents and secondary phases not being of a fibrous nature
- NOTES**  
1. Indexing codes [C04B 2235/30](#) - [C04B 2235/549](#) are to be given to constituents or additives only if:  
a. it is not obvious from the end product as such that the constituent or additive has been used for making the end product.  
Examples:  
• in case spinel is made from a certain clay in stead of from alumina and silica, the clay is coded,  
• when calcium zirconate and titania are used to make calcium zirconium titanate, a code should be given for the calcium zirconate constituent while normally calcium oxide or calcium carbonate and zirconia are used.  
The titania constituent of the starting mixture is not coded since it is to be expected that a single metal oxide is used to make a mixed metal oxide.  
b. it is not obvious from the "invention information" symbols that this constituent has been used to make the end product, e.g. if the "invention information" symbol given indicates that a zirconia-alumina composite is prepared it is common practice that zirconia and alumina constituents have been used and thus no codes for zirconia or alumina are given. In the same way, if an allocation indicates that an oxide ceramic contains carbon, no code for the addition of carbon is given. However for an alumina composite product comprising titania, the main symbol for composites based on alumina is given together with an indexing code for titania.  
2. In groups [C04B 2235/32](#) - [C04B 2235/349](#) oxides are considered to comprise also metal salts from which they are formed by heating.
- U C04B 2235/32** • • • Metal oxides, mixed metal oxides, or oxide-forming salts thereof, e.g. carbonates, nitrates, (oxy)hydroxides, chlorides
- NOTE**  
In groups [C04B 2235/32](#) - [C04B 2235/349](#) metal salts are classified according to the oxides that are formed by heating the metal salts.
- U C04B 2235/3231** • • • • Refractory metal oxides, their mixed metal oxides, or oxide-forming salts thereof
- M C04B 2235/3244** • • • • • Zirconium oxides, zirconates, ~~gafmium~~**hafnium** oxides, hafnates, or oxide-forming salts thereof
- M C04B 2235/3251** • • • • • Niobium oxides, niobates, ~~tatalum~~**tantalum** oxides, tantalates, or oxide-forming salts thereof

**Project: N/A (C05B)****C05B****PHOSPHATIC FERTILISERS**WARNING

*The following* IPC group ~~C05B 21/00~~ *is groups are* not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by this group for these IPC groups~~ is classified in ~~one of the following~~ CPC groups ~~C05B 1/00 - C05B 19/00~~:

*C05B 21/00* covered by *C05B 1/00 - C05B 19/00*

(see internal note after the title of class [C05](#))

**Project: N/A (C05C)****C05C****NITROGENOUS FERTILISERS**WARNING

*The following* IPC group ~~C05C 13/00~~ *is groups are* not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by this group for these IPC groups~~ is classified in ~~one of the following~~ CPC groups ~~C05C 1/00 - C05C 11/00~~:

*C05C 13/00* covered by *C05C 1/00 - C05C 11/00*

(see internal note after the title of class [C05](#))

**Project: N/A (C05D)****C05D****INORGANIC FERTILISERS NOT COVERED BY SUBCLASSES [C05B](#), [C05C](#); FERTILISERS PRODUCING CARBON DIOXIDE**WARNING

*The following* IPC group ~~C05D 11/00~~ *is groups are* not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by this group for these IPC groups~~ is classified in ~~one of the following~~ CPC groups ~~C05D 1/00 - C05D 9/00~~:

*C05D 11/00* covered by *C05D 1/00 - C05D 9/00*

(see internal note after the title of class [C05](#))

**Project: N/A (C05F)****C05F****ORGANIC FERTILISERS NOT COVERED BY SUBCLASSES [C05B](#), [C05C](#), e.g. FERTILISERS FROM WASTE OR REFUSE {(breeding of earthworms [A01K 67/0332](#))}**NOTE

Processes where the composting step is the characterising feature, or apparatus therefor, are classified in group [C05F 17/00](#).

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by for~~ these *IPC* groups is classified in the following CPC groups:

*C05F 15/00* covered by *C05F 1/00 - C05F 11/00*

(see also internal note after the title of class [C05](#)):

~~C05F 15/00~~ covered by ~~C05F 1/00 - C05F 11/00~~

**Project: N/A (C05G)****C05G**

**MIXTURES OF FERTILISERS COVERED INDIVIDUALLY BY DIFFERENT SUBCLASSES OF CLASS [C05](#); MIXTURES OF ONE OR MORE FERTILISERS WITH MATERIALS NOT HAVING A SPECIFIC FERTILISING ACTIVITY, e.g. PESTICIDES, SOIL-CONDITIONERS, WETTING AGENTS (organic fertilisers containing added bacterial cultures, mycelia, or the like [C05F 11/08](#); organic fertilisers containing plant vitamins or hormones [C05F 11/10](#)); FERTILISERS CHARACTERISED BY THEIR FORM**

**NOTES**

1. This subclass covers mixtures of fertilisers with soil-conditioning or soil-stabilising materials characterised by their fertilising activity.
2. This subclass does not cover mixtures of fertilisers with soil-conditioning or soil-stabilising materials characterised by their soil-conditioning or soil-stabilising activity, which are covered by group [C09K 17/00](#).

**WARNING**

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                                       |                   |                             |
|---------------------------------------|-------------------|-----------------------------|
| <a href="#">C05G 1/02 - C05G 1/10</a> | <i>covered by</i> | <a href="#">C05</a>         |
| <a href="#">C05G 3/10</a>             | <i>covered by</i> | <a href="#">C05G 3/0088</a> |
| <a href="#">C05G 5/00</a>             | <i>covered by</i> | <a href="#">C05G 3/0005</a> |

(see internal note after the title of class [C05](#)):

|  |                       |  |
|--|-----------------------|--|
| <del><a href="#">C05G 1/02 - C05G 1/10</a></del> | <del>covered by</del> | <del><a href="#">C05</a></del>         |
| <del><a href="#">C05G 3/10</a></del>             | <del>covered by</del> | <del><a href="#">C05G 3/0088</a></del> |
| <del><a href="#">C05G 5/00</a></del>             | <del>covered by</del> | <del><a href="#">C05G 3/0005</a></del> |

**Project: N/A (C07)****C07**

**ORGANIC CHEMISTRY (such compounds as the oxides, sulfides, or oxysulfides of carbon, cyanogen, phosgene, hydrocyanic acid or salts thereof [C01](#); products obtained from layered base-exchange silicates by ion-exchange with organic compounds such as ammonium, phosphonium or sulfonium compounds or by intercalation of organic compounds [C01B 33/44](#); macromolecular compounds [C08](#); dyes [C09](#); fermentation products [C12](#); fermentation or enzyme-using processes to synthesise a desired chemical compound or composition or to separate optical isomers from a racemic mixture [C12P](#); production of organic compounds by electrolysis or electrophoresis [C25B 3/00](#), [C25B 7/00](#))**

**NOTES**

1. In this class, the following term is used with the meaning indicated:
  - "preparation" covers purification, separation, stabilisation or use of additives, unless a separate place is provided therefor.
2. {This IPC Note does not apply in CPC.}
3. In subclasses [C07C-C07K](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, and with the exception referred to below, a compound is classified in the last appropriate place. For example, 2-butyl-pyridine, which contains an acyclic chain and a heterocyclic ring, is classified only as a heterocyclic compound, in subclass [C07D](#). In general, and in the absence of an indication to the contrary, the terms "acyclic" and "aliphatic" are used to describe compounds in which there is no ring; and, if a ring were present, the compound would be taken by the "last place" rule to a later group for cycloaliphatic or aromatic compounds, if such a group exists. Where a compound or an entire group of compounds exists in tautomeric forms, it is classified as though existing in the form which is classified

last in the system, unless the other form is specifically mentioned earlier in the system.

4. Chemical compounds and their preparation are classified in the groups for the type of compound prepared. The processes of preparation are also classified in the groups for the types of reaction employed, if of interest. Examples of such places outside this class are:

[C12P](#) Fermentation or enzyme-using processes to synthesise a desired chemical compound or composition or to separate optical isomers from a racemic mixture

[C25B 3/00](#) Electrolytic production of organic compounds

[C25B 7/00](#) Electrophoretic production of compounds

5. General processes for the preparation of a class of compounds falling into more than one main group are classified in the groups for the processes employed, when such groups exist. The compounds prepared are also classified in the groups for the types of compound prepared, if of interest.

6. In this class, in the absence of an indication to the contrary, the compounds containing carboxyl or thiocarboxyl groups are classified as the relevant carboxylic or thiocarboxylic acids, unless the "last place rule" (see Note (3), above) dictates otherwise; a carboxyl group being a carbon atom having three bonds, and no more than three, to hetero atoms, other than nitrogen atoms of nitro or nitroso groups, with at least one multiple bond to the same hetero atom and a thiocarboxyl group being a carboxyl group having at least one bond to a sulfur atom, e.g. amides or nitriles of carboxylic acids, are classified with the corresponding acids {unless the "last place rule" (see Note (3), above) dictates otherwise}.

7. {Anhydrides and halides of carboxylic acids are classified as the relevant acids unless otherwise indicated.} Salts of a compound, unless specifically provided for, are classified as that compound, e.g. aniline hydrochloride is classified as containing carbon, hydrogen and nitrogen only (in [C07C 211/46](#)), sodium malonate is classified as malonic acid (in [C07C 55/08](#)), and a mercaptide is classified as the mercaptan. Metal chelates are dealt with in the same way. Similarly, metal alcoholates and metal phenates are {generally} classified in subclass [C07C](#) and not in subclass [C07F](#), the alcoholates {for instance} in groups [C07C 31/28](#) - [C07C 31/32](#) and the phenates as the corresponding phenols in group [C07C 39/235](#) or [C07C 39/44](#). Salts, adducts or complexes formed between two or more organic compounds are classified according to all compounds forming the salts, adducts or complexes.

## Project: N/A (C07B)

### C07B

**GENERAL METHODS OF ORGANIC CHEMISTRY; APPARATUS THEREFOR (preparation of carboxylic acid esters by telomerisation [C07C 67/47](#); telomerisation [C08F](#))**

#### NOTES

1. In this subclass, the functional group which is present already in some residue being introduced and is not substantially involved in a chemical reaction, is not considered as the functional group which is formed or introduced as a result of the chemical reaction.
2. In this subclass, the following term is used with the meaning indicated:
  - "separation" means separation only for the purposes of recovering organic compounds.
3. When classifying in this subclass, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned
4. In this subclass, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in



the last appropriate place according to the type of reaction employed, noting the bond or the functional group which is formed or introduced as a result of the chemical reaction.

5. {[C07B 59/00](#) and subgroups thereof are used for the classification of individual labelled compounds as well as for general methods.}

6. {[C07B 61/02](#) is used for the classification of individual free radicals as well as for general methods.}

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[C07B 60/00](#) covered by

### Project: N/A (C07C)

#### C07C

#### ACYCLIC OR CARBOCYCLIC COMPOUNDS

##### NOTES

1. In this subclass, the following terms or expressions are used with meanings indicated:

- "bridged" means the presence of at least one fusion other than ortho, peri or spiro;
- two rings are "condensed" if they share at least one ring member, i.e. "spiro" and "bridged" are considered as condensed;
- "condensed ring system" is a ring system in which all rings are condensed among themselves;
- "number of rings" in a condensed ring system equals the number of scissions necessary to convert the ring system into one acyclic chain;
- "quinones" are compounds derived from compounds containing a six-membered aromatic ring or a system comprising six-membered aromatic rings (which system may be condensed or not condensed) by replacing two or four CH groups of the six-membered aromatic rings by C=O groups, and by removing one or two carbon-to-carbon double bonds, respectively, and rearranging the remaining carbon-to-carbon double bonds to give a ring or ring system with alternating double bonds, including the carbon-to-oxygen bonds; this means that acenaphthenequinone or camphorquinone are not considered as quinones.

2. In this subclass, in the absence of an indication to the contrary, a process is classified in the last appropriate place.

3. In this subclass, in the absence of an indication to the contrary, "quaternary ammonium compounds" are classified with the corresponding "non-quaternised nitrogen compounds".

4. For the classification of compounds in groups [C07C 1/00](#) - [C07C 71/00](#) and [C07C 401/00](#) - [C07C 409/00](#) :

- a compound is classified considering the molecule as a whole (rule of the "whole molecule approach");
- a compound is considered to be saturated if it does not contain carbon atoms bound to each other by multiple bonds;
- a compound is considered to be unsaturated if it contains carbon atoms bound to each other by multiple bonds, which includes six-membered aromatic ring, unless otherwise specified or implicitly derivable from the subdivision.

5. For the classification of compounds in groups [C07C 201/00](#) - [C07C 395/00](#), i.e. after the functional group has been determined according to the "last place rule", a compound is classified according to the following principles:

- compounds are classified in accordance with the nature of the carbon atom to which the functional group is attached;

- a carbon skeleton is a carbon atom, other than a carbon atom of a carboxyl group, or a chain of carbon atoms bound to each other, a carbon skeleton is considered to be terminated by every bond to an element other than carbon or to a carbon atom of a carboxyl group;
- when the molecule contains several functional groups, only functional groups linked to the same carbon skeleton as the one first determined are considered;
- a carbon skeleton is considered to be saturated if it does not contain carbon atoms bound to each other by multiple bonds;
- a carbon skeleton is considered to be unsaturated if it contains carbon atoms bound to each other by multiple bonds, which includes a six-membered aromatic ring.

6. When classifying in this subclass, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned.

7. When a process is classified in a process group, combination sets are used to indicate the product of the process. A combination set consists of a process group, followed by and linked to the group of the product. The products are selected from the corresponding product groups.

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

|   |            |   |
|---|------------|---|
| <a href="#">C07C 27/02</a>  | covered by | <a href="#">C07C 29/00</a> , <a href="#">C07C 51/00</a>                                     |
| <a href="#">C07C 47/042</a> , <a href="#">C07C 47/045</a> ,<br><a href="#">C07C 47/048</a> , <a href="#">C07C 47/052</a> ,<br><a href="#">C07C 47/055</a> , <a href="#">C07C 47/058</a> | covered by | <a href="#">C07C 47/04</a>  |
| <a href="#">C07C 47/07</a> , <a href="#">C07C 47/09</a>   | covered by | <a href="#">C07C 47/06</a>  |
| <a href="#">C07C 53/04</a>  | covered by | <a href="#">C07C 53/02</a>  |
| <a href="#">C07C 57/045</a> , <a href="#">C07C 57/05</a> ,<br><a href="#">C07C 57/055</a> , <a href="#">C07C 57/065</a> ,<br><a href="#">C07C 57/07</a> , <a href="#">C07C 57/075</a>   | covered by | <a href="#">C07C 57/04</a>  |
| <a href="#">C07C 69/025</a> , <a href="#">C07C 69/03</a> ,<br><a href="#">C07C 69/035</a>   | covered by | <a href="#">C07C 69/003</a> - <a href="#">C07C 69/017</a><br>and <a href="#">C07C 69/02</a> |
| <a href="#">C07C 69/347</a> , <a href="#">C07C 69/353</a>   | covered by | <a href="#">C07C 69/003</a> - <a href="#">C07C 69/017</a><br>and <a href="#">C07C 69/34</a> |
| <a href="#">C07C 69/527</a>   | covered by | <a href="#">C07C 69/003</a> - <a href="#">C07C 69/017</a><br>and <a href="#">C07C 69/52</a> |
| <a href="#">C07C 69/767</a> , <a href="#">C07C 69/773</a>   | covered by | <a href="#">C07C 69/003</a> - <a href="#">C07C 69/017</a><br>and <a href="#">C07C 69/76</a> |
| <a href="#">C07C 69/83</a>  | covered by | <a href="#">C07C 69/003</a> - <a href="#">C07C 69/017</a><br>and <a href="#">C07C 69/82</a> |

## Project: N/A (C07F)

## C07F

**ACYCLIC, CARBOCYCLIC OR HETEROCYCLIC COMPOUNDS CONTAINING ELEMENTS OTHER THAN CARBON, HYDROGEN, HALOGEN, OXYGEN, NITROGEN, SULFUR, SELENIUM OR TELLURIUM (metal-containing porphyrins [C07D 487/22](#))**

NOTES

1. Attention is drawn to Note (3) [C07](#), which defines the last place priority rule applied in the range of subclasses [C07C-C07K](#) and within these subclasses.
2. Attention is drawn to Note (6) following the title of class [C07](#).
3. Attention is drawn to Note (3) after the title of section [C](#), which Note indicates to which version of the periodic table of chemical elements the IPC refers.
4. In this subclass, organic acid salts, alcoholates, phenates, chelates or mercaptides are classified as the parent compounds.
5. Compounds containing Se or Te are classified with their sulfur homologues
6. A hydrocarbon chain is considered to be terminated by a heteroatom or by a carbon atom having three bonds to heteroatoms with at the most one to halogen
7. When groups, e.g. aromatic or aliphatic groups, are mentioned without further indications, it means that the group concerned can be further substituted. Otherwise it will be indicated, e.g. [C07F 9/11](#) with hydroxyalkyl compounds without further substituents on alkyl.

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups ~~are~~ *is* classified in the following CPC groups:

[C07F 9/6593](#)

covered by

[C07F 9/65815](#)

## Project: N/A (C07H)

## C07H

**SUGARS; DERIVATIVES THEREOF; NUCLEOSIDES; NUCLEOTIDES; NUCLEIC ACIDS (derivatives of aldonic or saccharic acids [C07C](#), [C07D](#); aldonic acids, saccharic acids [C07C 59/105](#), [C07C 59/285](#); cyanohydrins [C07C 255/16](#); glycals [C07D](#); compounds of unknown constitution [C07G](#); polysaccharides, derivatives thereof [C08B](#); DNA or RNA concerning genetic engineering, vectors, e.g. plasmids, or their isolation, preparation or purification [C12N 15/00](#); sugar industry [C13](#))**

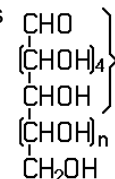
NOTES

1. This subclass covers compounds containing saccharide radicals (see the definitions in Note (3) below).
2. This subclass does not cover polysaccharides which for the purpose of this subclass are defined as having more than five saccharide radicals attached to each other by glycosidic linkages.
3. In this subclass, the following expressions are used with the meanings indicated:
  - "saccharide radical" which is derived from acyclic polyhydroxy-aldehydes or acyclic polyhydroxy-ketones, or from their cyclic tautomers, by removing hydrogen atoms or by replacing hetero bonds to oxygen by the same number of hetero bonds to halogen, nitrogen, sulfur, selenium, or tellurium, in accordance with either of the following definitions:
    - a. It
      - i. consists of an uninterrupted carbon skeleton and oxygen atoms directly attached thereto, and
      - ii. is considered to be terminated by every bond to a carbon atom of a cyclic structure and by every bond to a carbon atom having three bonds to hetero atoms, e.g. ester or nitrile radicals, and

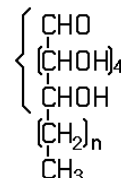
- iii. contains within the carbon skeleton an unbranched sequence of at the most six carbon atoms in which at least three carbon atoms — at least two in the case of a skeleton having only four carbon atoms — have one single bond to an oxygen atom as the only hetero bond, and

in a cyclic or acyclic sequence, at least one other carbon atom has two single bonds to oxygen atoms as the only hetero bonds, or

in an acyclic sequence, at least one other carbon atom has one double bond to an oxygen atom as the only hetero bond, the said sequence containing at the most one double bond, i.e. C=C or possibly ketalised C=O), in addition to the hetero bonds mentioned above under (A) or (B), e.g. the compounds



sequence of at the most six carbon atoms, having bonds to oxygen as defined in this Note



n being an integer, are classified in group [C07H 3/02](#);

- b. It is also a radical derived from a radical as defined in (a) above by replacing at the most four of the specified hetero bonds to oxygen by the same number of hetero bonds to halogen, nitrogen, sulfur, selenium, or tellurium;

- "heterocyclic radical" or "hetero ring" is considered to exclude saccharide radicals as defined above

4. Attention is drawn to Note (3) after class [C07](#), which defines the last place priority rule applied in the range of subclasses [C07C-C07K](#) and within these subclasses.

## Project: N/A (C07K)

### C07K

**PEPTIDES** (peptides in foodstuffs [A23](#); obtaining protein compositions for foodstuffs, working-up proteins for foodstuffs [A23J](#); preparations for medicinal purposes [A61K](#); peptides containing beta-lactam rings [C07D](#); cyclic dipeptides not having in their molecule any other peptide link than those which form their ring, e.g. piperazine-2,5-diones, [C07D](#); ergot alkaloids of the cyclic peptide type [C07D 519/02](#); macromolecular compounds having statistically distributed amino acid units in their molecules, i.e. when the preparation does not provide for a specific; but for a random sequence of the amino acid units, homopolyamides and block copolyamides derived from amino acids [C08G 69/00](#); macromolecular products derived from proteins [C08H 1/00](#); preparation of glue or gelatine [C09H](#); single cell proteins, enzymes [C12N](#); genetic engineering processes for obtaining peptides [C12N 15/00](#); compositions for measuring or testing processes involving enzymes [C12Q](#); investigation or analysis of biological material [G01N 33/00](#))

### NOTES

1. In this subclass, the following terms or expressions are used with the meanings indicated:

- "amino acids" are compounds in which at least one amino group and at least one carboxyl group are bound to the same carbon skeleton and the nitrogen atom of the amino group may form part of a ring;
- "normal peptide link" is one between an alpha-amino group of an amino acid and the carboxyl group - in position 1 - of another alpha-amino acid;
- "abnormal peptide link" is a link where at least one of the linked amino acids is not an alpha-amino acid or a link formed by at least one carboxyl or amino group being part of the side chain of an alpha-amino acid;
- "peptides" are compounds containing at least two amino acid units, which are bound through at least one normal peptide link, including oligopeptides, polypeptides and proteins, where:
  - i. "linear peptides" may comprise rings formed through S-S bridges, or through a hydroxy or a mercapto group of an hydroxy- or mercapto-amino acid and the carboxyl group of another amino acid, (e.g. peptide lactones) but do not comprise rings which are formed only through peptide links;
  - ii. "cyclic peptides" are peptides comprising at least one ring formed only through peptide links; the cyclisation may occur only through normal peptide links or through abnormal peptide links, e.g. through the 4-amino group of 2,4-diamino-butanoic acid. Thus, cyclic compounds in which at least one link in the ring is a non-peptide link are considered as "linear peptides";
  - iii. "depsipeptides" are compounds containing a sequence of at least two alpha-amino acids and at least one alpha-hydroxy carboxylic acid, which are bound through at least one normal peptide link and ester links, derived from the hydroxy carboxylic acids, where:
    - a. "linear depsipeptides" may comprise rings formed through S-S bridges, or through an hydroxy or a mercapto group of an hydroxy- or mercapto-amino acid and the carboxyl group of another amino- of hydroxy-acid but do not comprise rings formed only through peptide or ester links derived from hydroxy carboxylic acids, e.g. Gly-Ala-Gly-OCH<sub>2</sub>CO<sub>2</sub>H and Gly-OCH<sub>2</sub>CO-Ala-Gly are considered as "linear depsipeptides", but HOCH<sub>2</sub>CO-Gly-Ala-Gly does not contain an ester link, and is thus a derivative of Gly-Ala-Gly which is covered by [C07K 5/08](#);
    - b. "cyclic depsipeptides" are peptides containing at least one ring formed only through peptide or ester links - derived from hydroxy carboxylic acids -, e.g. Gly-Ala-Gly-OCH<sub>2</sub>CO.

2. Fragments of peptides or peptides modified by removal or addition of amino acids, by substitution of amino acids by others, or by combination of these modifications, are classified as the parent peptides. However, fragments of peptides having only four or less amino acids are also classified in group [C07K 5/00](#).

3. Peptides prepared by chemical processes and having an amino acid sequence derived from naturally occurring peptides are classified with the natural one.

4. Peptides prepared by recombinant DNA technology are not classified according to the host, but according to the original peptide expressed, e.g. HIV peptide expressed in E. coli is classified with HIV peptides.

5. When classifying in this subclass, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned.

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

|                            |            |                             |
|----------------------------|------------|-----------------------------|
| <a href="#">C07K 5/023</a> | covered by | <a href="#">C07K 5/0202</a> |
| <a href="#">C07K 5/027</a> | covered by | <a href="#">C07K 5/0205</a> |

|             |            |                               |
|-------------|------------|-------------------------------|
| C07K 5/03   | covered by | <a href="#">C07K 5/0207</a>   |
| C07K 5/033  | covered by | <a href="#">C07K 5/021</a>    |
| C07K 5/037  | covered by | <a href="#">C07K 5/0215</a>   |
| C07K 5/062  | covered by | <a href="#">C07K 5/06017</a>  |
| C07K 5/065  | covered by | <a href="#">C07K 5/06078</a>  |
| C07K 5/068  | covered by | <a href="#">C07K 5/06086</a>  |
| C07K 5/072  | covered by | <a href="#">C07K 5/06104</a>  |
| C07K 5/075  | covered by | <a href="#">C07K 5/0613</a>   |
| C07K 5/078  | covered by | <a href="#">C07K 5/06139</a>  |
| C07K 5/083  | covered by | <a href="#">C07K 5/0804</a>   |
| C07K 5/087  | covered by | <a href="#">C07K 5/0812</a>   |
| C07K 5/09   | covered by | <a href="#">C07K 5/0815</a>   |
| C07K 5/093  | covered by | <a href="#">C07K 5/0819</a>   |
| C07K 5/097  | covered by | <a href="#">C07K 5/0821</a>   |
| C07K 5/103  | covered by | <a href="#">C07K 5/1005</a>   |
| C07K 5/107  | covered by | <a href="#">C07K 5/1016</a>   |
| C07K 5/11   | covered by | <a href="#">C07K 5/1019</a>   |
| C07K 5/113  | covered by | <a href="#">C07K 5/1021</a>   |
| C07K 5/117  | covered by | <a href="#">C07K 5/1024</a>   |
| C07K 14/185 | covered by | <a href="#">C07K 14/1816</a>  |
| C07K 14/725 | covered by | <a href="#">C07K 14/705</a>   |
| C07K 14/73  | covered by | <a href="#">C07K 14/70514</a> |
| C07K 14/735 | covered by | <a href="#">C07K 14/70535</a> |
| C07K 14/74  | covered by | <a href="#">C07K 14/70539</a> |

## Project: N/A (C08B)

### C08B

**POLYSACCHARIDES; DERIVATIVES THEREOF** (polysaccharides containing less than six saccharide radicals attached to each other by glycosidic linkages [C07H](#); fermentation or enzyme-using processes [C12P 19/00](#); sugar industry [C13](#); production of cellulose [D21](#))

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|            |            |                              |
|------------|------------|------------------------------|
| C08B 37/02 | covered by |                              |
| C08B 37/04 | covered by |                              |
| C08B 37/06 | covered by | <a href="#">C08B 37/0045</a> |
| C08B 37/08 | covered by |                              |
| C08B 37/10 | covered by | <a href="#">C08B 37/0075</a> |
| C08B 37/12 | covered by | <a href="#">C08B 37/0039</a> |
| C08B 37/16 | covered by |                              |

## Project: N/A (C08C)

### C08C

#### **TREATMENT OR CHEMICAL MODIFICATION OF RUBBERS**

#### NOTE

This subclass includes:

- processes directed to natural rubber or to conjugated diene rubber (synthesis thereof [C08F](#))



- processes directed to rubbers in general (to a specified rubber, other than provided for by (a) above, [C08F](#) - [C08H](#))

**WARNING**

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:  
[C08C 1/16](#) covered by [C08C 1/14](#)

**Project: N/A (C08F)**

**U C08F 4/00**

**Polymerisation catalysts (catalysts in general [B01J](#))**

**NOTES**

1. Group [C08F 4/00](#) and subgroups can be incomplete according to the following classification rules:
  - if a catalyst is specifically used for only one type of polymer, it is not classified in [C08F 4/00](#);
  - in such a case, the classification symbol of [C08F 4/00](#) providing for the catalyst may be used as a symbol for a C-Set in the groups providing for the polymer, e.g. ( [C08F 12/04](#), [C08F 4/62](#) )
  - this method of classification is applied only when a note after the group providing for the polymer explicitly indicates which symbols of [C08F 4/00](#) may be used for forming the C-set.
2. When classifying in group [C08F 4/00](#), the type of catalyst can be further indexed by using indexing codes chosen from [C08F 2410/00](#), [C08F 2420/00](#) or their subgroups

**U C08F 4/42**

- Metals; Metal hydrides; Metallo-organic compounds; Use thereof as catalyst precursors

**U C08F 4/44**

- • selected from light metals, zinc, cadmium, mercury, copper, silver, gold, boron, gallium, indium, thallium, rare earths or actinides

**C08F 4/60**

- • • together with refractory metals, iron group metals, platinum group metals, manganese, rhenium {technetium} or compounds thereof

**NOTES**

1. In groups [C08F 4/60](#) - [C08F 4/64](#), the term "component" comprises the transition metal or a compound thereof, pretreated or not { (pretreating per se [C08F 4/61](#), [C08F 4/63](#) and [C08F 4/65](#) ) }
2. Group [C08F 4/60003](#) takes precedence over groups [C08F 4/602](#) - [C08F 4/619](#)

**Project: N/A (C08G)**

**C08G**

**MACROMOLECULAR COMPOUNDS OBTAINED OTHERWISE THAN BY REACTIONS ONLY INVOLVING UNSATURATED CARBON-TO-CARBON BONDS**

**NOTES**

1. In this subclass, group [C08G 18/00](#) takes precedence over the other groups. A further classification is given if the polymers are obtained by reactions forming specific linkages for which an appropriate group is provided.
2. Within each main group of this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place.
3. In groups [C08G 61/00](#) - [C08G 79/00](#), in the absence of an indication to the contrary, macromolecular compounds obtained by reactions forming two

different linkages in the main chain are classified only according to the linkage present in excess.

4. This subclass covers also compositions based on monomers which from macromolecular compounds classifiable in this subclass. In this subclass:

- if the monomers are defined, classification is made in groups [C08G 2/00](#) - [C08G 79/00](#), [C08G 83/00](#) according to the polymer to be formed;
- if the monomers are defined in a way that a composition cannot be classified within one main group of this subclass, the composition is classified in group [C08G 85/00](#);
- if the compounding ingredients are of interest per se, classification is also made in subclass [C08K](#).

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

[C08G 14/067](#), [C08G 14/073](#), covered by [C08G 14/06](#)  
[C08G 14/09](#)

[C08G 59/16](#), [C08G 59/17](#) covered by [C08G 59/14](#)

[C08G 63/49](#) covered by [C08G 63/48](#)

[C08G 65/28](#) covered by [C08G 65/26](#)

[C08G 73/04](#) covered by [C08G 73/02](#)

### Project: N/A (C08H)

#### C08H

**DERIVATIVES OF NATURAL MACROMOLECULAR COMPOUNDS**  
(polysaccharides [C08B](#); natural rubber [C08C](#); natural resins or their derivatives [C09F](#); bituminous materials [C10](#))

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

[C08H 7/00](#) covered by

### Project: N/A (C08J)

#### C08J

**WORKING-UP; GENERAL PROCESSES OF COMPOUNDING; AFTER-TREATMENT NOT COVERED BY SUBCLASSES [C08B](#), [C08C](#), [C08F](#), [C08G](#)**  
(mechanical aspects [B29](#); layered products, manufacture thereof [B32B](#); treatment of macromolecular material specially adapted to enhance its filling properties in mortars, concrete or artificial stone [C04B 16/04](#), [C04B 18/20](#), [C04B 20/00](#); treatment of textiles [D06](#))

#### NOTES

1. This subclass covers processes, not covered by subclasses [C08B](#) - [C08H](#), for treating polymers.

In this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place

2. When classifying in subclass [C08J](#), the treatment of specific polymers is indicated using indexing codes chosen from [C08J 2300/00](#) or subgroups thereof.

Example:

- Preparation of particles of polystyrene by impregnation of the particles with the blowing agent: [C08J 9/18](#) and [C08J 2325/06](#).

The use of a polymeric component in minority, e.g. masterbatch, coating, impregnating agent or thin binder is indicated using indexing codes chosen from [C08J 2400/00](#) or subgroups thereof. Examples:

- Use of PMMA as masterbatch in a polystyrene composition: [C08J 3/226](#) and [C08J 2325/06](#) and [C08J 2433/10](#)
- Bonding of polystyrene by heating: [C08J 5/121](#) and [C08J 2325/06](#)
- Coating of a polyethylene substrate with a polyurethane coating: [C08J 7/047](#) and [C08J 2323/06](#) and [C08J 2475/04](#)
- Use of ABS as an additive for foamed polyacrylamide : [C08J 9/0061](#) and [C08J 2333/26](#) and [C08J 2455/02](#)

In the following subgroups, the codes of [C08J 2300/00](#) - [C08J 2399/00](#) are used to specify:

- [C08J 3/226](#) : the polymeric material to which the masterbatch carrier is added.
- [C08J 7/047](#) : the polymeric substrate to be coated.
- [C08J 9/0061](#) : the polymeric component in majority in a multicomponents foamable blend.

3. Group [C08J 2400/00](#) was introduced on January 1st, 2012. Patent documents are continuously being reclassified. As a consequence, documents published before 01/01/2012, and to which [C08J 2400/00](#) indexing codes were allocated, are indexed in the corresponding head group. Example:

- Use of PMMA as masterbatch in a polystyrene composition: [C08J 3/226](#) and [C08J 2325/06](#) and [C08J 2433/00](#), instead of [C08J 2433/10](#).

In the following subgroups, the codes of [C08J 2400/00](#) - [C08J 2499/00](#) are used to specify:

- [C08J 3/226](#) : the polymeric carrier in a masterbatch.
- [C08J 5/12](#) : the chemical nature of the adhesive
- [C08J 7/047](#) : the chemical nature of the coating(s).
- [C08J 9/0061](#) : the polymeric component in minority in a multicomponents foamable blend.
- [C08J 9/224](#), [C08J 9/236](#), [C08J 9/36](#), [C08J 9/40](#) and [C08J 9/42](#) : the polymer used for coating, binding, or impregnating the foam. [C08J 9/26](#) : the polymer to be leached out.
- [C08J 9/33](#) and [C08J 9/35](#) : the foam fragments included in the (foamable) polymer matrix.
- in all other subgroups, when the presence of a polymeric component in minority is of relevance.

#### WARNING

The following IPC groups are not **used** in the CPC **system scheme**. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the following CPC groups:

|                           |            |  |
|---------------------------|------------|--|
| <a href="#">C08J 5/14</a> | covered by | <a href="#">B24D 3/20</a> , <a href="#">F16D 69/02</a> |
| <a href="#">C08J 5/16</a> | covered by | <a href="#">C10M</a>                                   |

**U** **C08J 2201/00**  
**U** C08J 2201/02  
C08J 2201/03

#### Foams characterised by the foaming process

- characterised by mechanical pre- or post-treatments
- • Extrusion of the foamable **bend***blend*

|          |  |   |
|----------|--|---|
| <b>N</b> | <b>C08J 2300/00 -<br/>C08J 2399/00</b> | <b><u>Characterizing the main polymer used in a working-up process</u></b>    |
| <b>D</b> | <b>C08J 2301/00 -<br/>C08J 2399/00</b> | <b><u>Characterizing the main polymer used in a working-up process</u></b>    |
| <b>N</b> | <b>C08J 2400/00 -<br/>C08J 2499/00</b> | <b><u>Characterizing additional polymers used in a working-up process</u></b> |
| <b>D</b> | <b>C08J 2401/00 -<br/>C08J 2499/00</b> | <b><u>Characterizing additional polymers used in a working-up process</u></b> |

**Project: N/A (C08K)****C08K**

**USE OF INORGANIC OR NON-MACROMOLECULAR ORGANIC SUBSTANCES AS COMPOUNDING INGREDIENTS** (pesticides, herbicides [A01N](#); pharmaceuticals, cosmetics [A61K](#); explosives [C06B](#); paints, inks, varnishes, dyes, polishes, adhesives [C09](#); lubricants [C10M](#); detergents [C11D](#); artificial filaments or fibres [D01F](#); textile treating compositions [D06](#))

**NOTES**

- The use of an ingredient for a specific polymer is classified by adding, in a C-set, to the group symbol of [C08K](#), the subdivision of [C08L 1/00](#) - [C08L 99/00](#).  
Example: Polystyrene containing a carboxylic amide is classified in ([C08K 5/20](#), [C08L 25/06](#)).
  - From April 2012, the use of an ingredient for a specific polymer is classified by adding, in a C-set, to the group symbol of [C08K](#), the subdivision of [C08L 1/00](#) - [C08L 99/00](#). Example: Polystyrene containing a carboxylic amide is classified in ([C08K 5/20](#), [C08L 25/06](#)).
  - In this subclass, in the absence of an indication to the contrary, an ingredient is classified in the last appropriate place.
  - In this subclass:
    - a mixture of ingredients is classified in the most indented group covering all the essential ingredients of the mixture, e.g.:
      - a mixture of a monohydric and a polyhydric alcohol [C08K 5/05](#)
      - a mixture of two polyhydric alcohols [C08K 5/053](#)
      - a mixture of an alcohol and an ether [C08K 5/04](#)
      - a mixture of an ether and an amine [C08K 5/00](#)
      - a mixture of an amine and a metal [C08K 13/02](#)
- { This note is applied only for mixtures with more than three essential ingredients. Mixtures with two or three ingredients are classified in the appropriate groups of [C08K](#), e.g. a mixture of Al<sub>2</sub>O<sub>3</sub>, an ether and an amine is classified in [C08K 3/22](#), [C08K 5/06](#) and [C08K 5/17](#)}
- ammonium salts are classified in the same way as metal salts
- In this subclass, organic acid salts, alcoholates, phenolates or mercaptides are classified in the groups or subgroups of the parent compounds
  - The use of an ingredient for a specific polymer is classified by adding to the group symbol of [C08K](#) and separated therefrom by a "+" sign, the subdivision of [C08L 1/00](#) - [C08L 99/00](#).  
Example: Polystyrene containing a carboxylic amide is classified in [C08K 5/20](#) + [C08L 25/06](#)
  - In this subclass are considered as compounding ingredients:
    - inert additives
    - radical crosslinking agents, e.g. peroxides, S-containing vulcanisation agents
    - coupling agents, i.e. compounds able to improve the adhesion between filler and macromolecule

Are not considered as compounding ingredients:

- chemical modifying or crosslinking agents which react via a condensation or addition mechanism (for [C08B](#) polymers [C08B](#), for diene rubbers [C08C 19/30](#), for other vinyl polymers [C08F 8/00](#), for polysiloxanes [C08L 83/00](#), for other [C08G](#) polymers [C08G](#))
- solvents or dispersion agents for making polymer solutions, emulsions or dispersions ([C08J 3/02](#))
- blowing agents ([C08J 9/04](#))

#### WARNING

The following IPC ~~group is~~ *groups are* not ~~used~~ in the CPC ~~system~~ *scheme*.  
~~Subject~~ *The subject* matter ~~covered by this group for these IPC groups~~ is  
classified in the following CPC groups:

[C08K 5/5445](#)

covered by

[C08K 5/544](#)

### Project: RP0502 (C08K)

#### M C08K 3/00

#### Use of inorganic *substances as compounding* ingredients

- |   |             |   |
|---|-------------|---|
| D | C08K 3/0008 | <ul style="list-style-type: none"> <li>• {Inorganic ingredients according to more than one of the "one dot" groups of C08K 3/02 – C08K 3/40}</li> </ul> <p>&lt;administratively transferred to <a href="#">C08K 3/01</a>&gt;</p>      |
| D | C08K 3/0016 | <ul style="list-style-type: none"> <li>• {Crosslinking or vulcanising agents, including accelerators}</li> </ul> <p>&lt;administratively transferred to <a href="#">C08K 3/011</a>&gt;</p>  |
| D | C08K 3/0025 | <ul style="list-style-type: none"> <li>• {Additives activating the degradation of the macromolecular compound}</li> </ul> <p>&lt;administratively transferred to <a href="#">C08K 3/012</a>&gt;</p>                                   |
| D | C08K 3/0033 | <ul style="list-style-type: none"> <li>• {Fillers, pigments, reinforcing additives}</li> </ul> <p>&lt;administratively transferred to <a href="#">C08K 3/013</a>&gt;</p>  |
| D | C08K 3/0041 | <ul style="list-style-type: none"> <li>• {Stabilisers against oxidation, heat, light, ozone}</li> </ul> <p>&lt;administratively transferred to <a href="#">C08K 3/014</a>&gt;</p>   |
| D | C08K 3/005  | <ul style="list-style-type: none"> <li>• {Biocides; (macromolecular substances as carriers for biocide material A01N 25/10)}</li> </ul> <p>&lt;administratively transferred to <a href="#">C08K 3/015</a>&gt;</p>                     |
| D | C08K 3/0058 | <ul style="list-style-type: none"> <li>• {Flame-proofing or flame-retarding additives}</li> </ul> <p>&lt;administratively transferred to <a href="#">C08K 3/016</a>&gt;</p>   |
| D | C08K 3/0066 | <ul style="list-style-type: none"> <li>• {Antistatics}</li> </ul> <p>&lt;administratively transferred to <a href="#">C08K 3/017</a>&gt;</p>   |
| D | C08K 3/0075 | <ul style="list-style-type: none"> <li>• {Metal-containing compounds according to more than one of the "one dot" groups of C08K 3/10 – C08K 3/40}</li> </ul> <p>&lt;administratively transferred to <a href="#">C08K 3/10</a>&gt;</p> |
| D | C08K 3/0083 | <ul style="list-style-type: none"> <li>• {Compounds containing metals of the 1st to 3rd Group of the Periodic system}</li> </ul> <p>&lt;administratively transferred to <a href="#">C08K 3/105</a>&gt;</p>                            |
| D | C08K 3/0091 | <ul style="list-style-type: none"> <li>• {Compounds containing metals of the 4th to 8th Group of the Periodic system, e.g. nickel compounds}</li> </ul> <p>&lt;administratively transferred to <a href="#">C08K 3/11</a>&gt;</p>      |
| N | C08K 3/01   | <ul style="list-style-type: none"> <li>• <i>characterized by their specific function</i></li> </ul>   |
| N | C08K 3/011  | <ul style="list-style-type: none"> <li>• <i>Crosslinking or vulcanising agents, e.g. accelerators</i></li> </ul>  |
| N | C08K 3/012  | <ul style="list-style-type: none"> <li>• <i>Additives activating the degradation of the macromolecular compounds</i></li> </ul>   |
| N | C08K 3/013  | <ul style="list-style-type: none"> <li>• <i>Fillers, pigments or reinforcing additives</i></li> </ul>   |
| N | C08K 3/014  | <ul style="list-style-type: none"> <li>• <i>Stabilisers against oxidation, heat, light or ozone</i></li> </ul>  |
| N | C08K 3/015  | <ul style="list-style-type: none"> <li>• <i>Biocides (macromolecular substances as carriers for biocide material <a href="#">A01N 25/10</a>)</i></li> </ul>   |
| N | C08K 3/016  | <ul style="list-style-type: none"> <li>• <i>Flame-proofing or flame-retarding additives</i></li> </ul>  |

- |              |   |
|--------------|---|
| N C08K 3/017 | • • Antistatic agents   |
| E C08K 3/10  | • Metal compounds   |
| N C08K 3/105 | • • Compounds containing metals of Groups 1 to 3 or Groups 11 to 13 of the Periodic system  |
| N C08K 3/11  | • • Compounds containing metals of Groups 4 to 10 or Groups 14 to 16 of the Periodic system |

**Project: N/A (C08L)****C08L**

**COMPOSITIONS OF MACROMOLECULAR COMPOUNDS** (pesticides, herbicides [A01N](#); pharmaceuticals, cosmetics [A61K](#); explosives [C06B](#); compositions based on polymerisable monomers [C08F](#), [C08G](#); paints, inks, varnishes, dyes, polishes, adhesives [C09](#); lubricants [C10M](#); detergents [C11D](#); artificial filaments or fibres [D01F](#); textile treating compositions [D06](#))

**NOTES**

1. Compositions classified in [C08K](#) according to note 3 of [C08K](#), are not classified in [C08L](#).

2. Documents classified before 09.2003: Classification is given in the form of C-Sets. The polymer in majority is given a [C08L](#) symbol, and the minor components are characterised by Indexing Codes taken from the list below. The Indexing Codes are linked. The polymer in majority is always first in the C-set. List of [C08L](#) codes: [C08L 23/00](#), [C08L 23/26](#), [C08L 25/00](#), [C08L 27/00](#), [C08L 27/04](#), [C08L 27/12](#), [C08L 29/00](#), [C08L 31/00](#), [C08L 33/00](#), [C08L 35/00](#), [C08L 37/00](#), [C08L 51/00](#), [C08L 53/00](#), [C08L 55/02](#), [C08L 61/04](#), [C08L 61/20](#), [C08L 63/00](#), [C08L 67/00](#), [C08L 67/02](#), [C08L 67/025](#), [C08L 67/03](#), [C08L 67/04](#), [C08L 67/06](#), [C08L 67/07](#), [C08L 69/00](#), [C08L 69/005](#), [C08L 71/00](#), [C08L 75/04](#), [C08L 77/00](#), [C08L 77/08](#), [C08L 77/12](#), [C08L 79/08](#), [C08L 79/085](#), [C08L 81/00](#), [C08L 83/00](#), [C08L 85/00](#), [C08L 91/06](#), [C08L 95/00](#) or [C08L 2666/00](#) - [C08L 2666/86](#). Documents from group [C08L 23/00](#) - [C08L 23/36](#), [C08L 45/00](#) - [C08L 45/02](#) and [C08L 49/00](#) have all been reclassified following Note 3 below. An additive is classified in the last appropriate place in the list as selected for each [C08L](#) group. Examples:

- a. A composition based on a polyamide and a graft polymer is classified in ( [C08L 77/00](#), [C08L 2666/24](#) ).
- b. A composition based on polyvinylchloride and containing CaCO<sub>3</sub> is classified according to note 4 of [C08K](#), i.e. in ( [C08K 3/26](#), [C08L 27/06](#) ). If this composition contains also a polyamide, then the classification will be ( [C08L 27/06](#), [C08L 77/00](#), [C08K 3/26](#) ).
- c. A composition based on a polysiloxane ( [C08L 83/04](#) ) and containing a second polysiloxane, a phenol and silica is classified in ( [C08L 83/04](#), [C08L 83/04](#), [C08L 2666/34](#), [C08L 2666/58](#) ).

3. From 01.09.2003 until April 2012: Classification is given in the form of C-Sets. The polymer in majority is given a [C08L](#) class, and the minor components are characterised by Indexing Codes taken from [C08L](#) or [C08K](#) and they are linked or unlinked. The polymer in majority is always first in the C-Set. List of [C08L](#) codes in the C-Set: [C08L 1/00](#), [C08L 81/00](#), [C08L 83/00](#), [C08L 91/06](#), [C08L 95/00](#) or [C08L 2666/02](#) - [C08L 2666/08](#), [C08L 2666/14](#) - [C08L 2666/26](#).

Examples:

- a. A blend of 60 parts polyvinylchloride ( [C08L 27/06](#) ) and 40 parts polyamide is classified in ( [C08L 27/06](#), [C08L 2666/20](#) ) and [C08L 77/00](#).
- b. A blend of 50 parts polyvinylchloride ( [C08L 27/06](#) ) and 50 parts polyamide ( [C08L 77/00](#) ) is classified in ( [C08L 27/06](#), [C08L 2666/20](#) ) and [C08L 77/00](#), as well as in ( [C08L 77/00](#), [C08L 2666/04](#) ) and [C08L 27/06](#).
- c. A composition based on polyvinylchloride and containing CaCO<sub>3</sub> is classified according to [N: Note 4 of [C08K](#), i.e. in ( [C08K 3/26](#), [C08L 27/06](#)



- ) . If this composition contains also a polyamide, then the classification will be ( [C08L 27/06](#), [C08L 2666/20](#) ) and [C08K 3/26](#).
- d. A composition based on a first polysiloxane ([C08L 83/04](#)) and containing a second polysiloxane, a phenol and silica is classified in ( [C08L 83/04](#), [C08L 83/04](#), [C08K 5/13](#), [C08K 3/36](#) ) and [C08L 2205/02](#).
4. From April 2012 onwards, after the notation [C08L](#), notations concerning the other constituents of the composition may be added, in the form of C-Sets. The further constituent is added with an indexing code. The indexing codes are chosen from [C08L 1/00](#) -[C08L 2555/86](#) or [C08K](#) and they may be linked or unlinked: - [C08L 1/00](#) - [C08L 101/10](#) are linked. - [C08L 2201/00](#) - [C08L 2555/86](#) are unlinked. The polymer in majority is always first in the C-Set. Examples:
- a. A blend of 60 parts polyvinylchloride ( [C08L 27/06](#) ) and 40 parts polyamide ( [C08L 77/00](#) ) is classified in ( [C08L 27/06](#), [C08L 77/00](#) ).
- b. A blend of 50 parts polyvinylchloride ( [C08L 27/06](#) ) and 50 parts polyamide ( [C08L 77/00](#) ) is classified in ( [C08L 27/06](#), [C08L 77/00](#) ) and ( [C08L 77/00](#), [C08L 27/06](#) ).
- c. A composition based on polyvinylchloride and containing CaCO<sub>3</sub> is classified according to [N: Note 4 of [C08K](#), i.e. in ( [C08K 3/26](#), [C08L 27/06](#) ). If this composition contains also a polyamide, then the classification will be ( [C08L 27/06](#), [C08L 77/00](#), [C08K 3/26](#) ).
- d. A composition based on a first polysiloxane ( [C08L 83/04](#) ) and containing a second polysiloxane, a phenol and silica is classified in ( [C08L 83/04](#), [C08L 83/00](#), [C08K 5/13](#), [C08K 3/36](#) ) and [C08L 2205/02](#).
- e. A composition containing a polyamide in majority, a polyester and a polyethylene is classified in ( [C08L 77/00](#), [C08L 67/00](#), [C08L 23/06](#) ) and [C08L 2205/03](#).
5. "Rubber" includes:
- natural or conjugated diene rubbers;
  - rubber in general (for a specific rubber, other than a natural rubber or a conjugated diene rubber, see the group provided for compositions of such macromolecular compounds).
6. In this subclass:
- a. compositions are classified according to the mutual proportions by weight of only the macromolecular constituents;
- b. compositions are classified according to the macromolecular constituent or constituents present in the highest proportion: if all these constituents are present in equal proportions the composition is classified according to each of these constituents.

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these **IPC** groups is classified in the following CPC groups:

|                                       |            |
|---------------------------------------|------------|
| <a href="#">C08L 61/08-C08L 61/10</a> | covered by |
| <a href="#">C08L 63/02</a>            | covered by |
| <a href="#">C08L 83/05</a>            | covered by |
| <a href="#">C08L 83/07</a>            | covered by |

## Project: N/A (C09B)

## C09B

**ORGANIC DYES OR CLOSELY-RELATED COMPOUNDS FOR PRODUCING DYES {, e.g. PIGMENTS}; MORDANTS; LAKES (fermentation or enzyme using processes to synthesise a desired chemical compound [C12P](#))**

NOTE

In this subclass, in the absence of an indication to the contrary, a compound is classified in the last appropriate place

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the following CPC groups:

|                             |            |  |
|-----------------------------|------------|--|
| <a href="#">C09B 23/01</a>  | covered by | <a href="#">C09B 23/0008</a> -<br><a href="#">C09B 23/0091</a>                                   |
| <a href="#">C09B 29/01</a>  | covered by | <a href="#">C09B 29/0003</a> -<br><a href="#">C09B 29/0022</a>                                   |
| <a href="#">C09B 29/03</a>  | covered by | <a href="#">C09B 29/0007</a>   |
| <a href="#">C09B 29/033</a> | covered by | <a href="#">C09B 29/0025</a>   |
| <a href="#">C09B 29/036</a> | covered by | <a href="#">C09B 29/0029</a>   |
| <a href="#">C09B 29/039</a> | covered by | <a href="#">C09B 29/0074</a> -<br><a href="#">C09B 29/0081</a>                                   |
| <a href="#">C09B 29/042</a> | covered by | <a href="#">C09B 29/0085</a>   |
| <a href="#">C09B 29/045</a> | covered by | <a href="#">C09B 29/0088</a>   |
| <a href="#">C09B 29/048</a> | covered by | <a href="#">C09B 29/0092</a>   |
| <a href="#">C09B 29/085</a> | covered by | <a href="#">C09B 29/0003</a> ,<br><a href="#">C09B 29/0801</a> -<br><a href="#">C09B 29/0848</a> |
| <a href="#">C09B 29/09</a>  | covered by | <a href="#">C09B 29/0025</a> ,<br><a href="#">C09B 29/0801</a> -<br><a href="#">C09B 29/0848</a> |
| <a href="#">C09B 29/15</a>  | covered by | <a href="#">C09B 29/103</a>  |
| <a href="#">C09B 29/40</a>  | covered by | <a href="#">C09B 29/3608</a> -<br><a href="#">C09B 29/3613</a>                                   |
| <a href="#">C09B 29/42</a>  | covered by | <a href="#">C09B 29/3617</a> -<br><a href="#">C09B 29/3639</a>                                   |
| <a href="#">C09B 29/44</a>  | covered by | <a href="#">C09B 29/3643</a>   |
| <a href="#">C09B 29/46</a>  | covered by | <a href="#">C09B 29/3652</a>   |
| <a href="#">C09B 29/48</a>  | covered by | <a href="#">C09B 29/3656</a>   |
| <a href="#">C09B 29/50</a>  | covered by | <a href="#">C09B 29/366</a>  |
| <a href="#">C09B 29/52</a>  | covered by | <a href="#">C09B 29/3665</a>   |
| <a href="#">C09B 33/13</a>  | covered by | <a href="#">C09B 33/12</a>   |
| <a href="#">C09B 46/00</a>  | covered by | <a href="#">C09B 27/00</a> - <a href="#">C09B 45/00</a>  |
| <a href="#">C09B 67/02</a>  | covered by | <a href="#">C09B 67/0097</a>   |
| <a href="#">C09B 67/04</a>  | covered by | <a href="#">C09B 67/0001</a>   |
| <a href="#">C09B 67/06</a>  | covered by | <a href="#">C09B 67/0003</a>   |
| <a href="#">C09B 67/08</a>  | covered by | <a href="#">C09B 67/0004</a>   |
| <a href="#">C09B 67/10</a>  | covered by | <a href="#">C09B 67/0014</a>   |
| <a href="#">C09B 67/12</a>  | covered by | <a href="#">C09B 67/0016</a>   |
| <a href="#">C09B 67/14</a>  | covered by | <a href="#">C09B 67/0017</a>   |
| <a href="#">C09B 67/16</a>  | covered by | <a href="#">C09B 67/0019</a>   |
| <a href="#">C09B 67/18</a>  | covered by | <a href="#">C09B 67/002</a>  |
| <a href="#">C09B 67/20</a>  | covered by | <a href="#">C09B 67/006</a>  |
| <a href="#">C09B 67/22</a>  | covered by | <a href="#">C09B 67/0033</a>   |
| <a href="#">C09B 67/24</a>  | covered by | <a href="#">C09B 67/0072</a>   |

|                            |            |                              |
|----------------------------|------------|------------------------------|
| <a href="#">C09B 67/26</a> | covered by | <a href="#">C09B 67/0073</a> |
| <a href="#">C09B 67/28</a> | covered by | <a href="#">C09B 67/0077</a> |
| <a href="#">C09B 67/30</a> | covered by | <a href="#">C09B 67/0078</a> |
| <a href="#">C09B 67/32</a> | covered by | <a href="#">C09B 67/0075</a> |
| <a href="#">C09B 67/34</a> | covered by | <a href="#">C09B 67/0076</a> |
| <a href="#">C09B 67/36</a> | covered by | <a href="#">C09B 67/0079</a> |
| <a href="#">C09B 67/38</a> | covered by | <a href="#">C09B 67/008</a>  |
| <a href="#">C09B 67/40</a> | covered by | <a href="#">C09B 67/0082</a> |
| <a href="#">C09B 67/42</a> | covered by | <a href="#">C09B 67/0071</a> |
| <a href="#">C09B 67/44</a> | covered by | <a href="#">C09B 67/0083</a> |
| <a href="#">C09B 67/46</a> | covered by | <a href="#">C09B 67/0084</a> |
| <a href="#">C09B 67/48</a> | covered by | <a href="#">C09B 67/0025</a> |
| <a href="#">C09B 67/50</a> | covered by | <a href="#">C09B 67/0026</a> |
| <a href="#">C09B 67/52</a> | covered by | <a href="#">C09B 67/0027</a> |
| <a href="#">C09B 67/54</a> | covered by | <a href="#">C09B 67/0096</a> |

## Project: N/A (C09C)

### C09C

**TREATMENT OF INORGANIC MATERIALS, OTHER THAN FIBROUS FILLERS, TO ENHANCE THEIR PIGMENTING OR FILLING PROPERTIES (preparation of inorganic compounds or non-metallic elements [C01](#); treatment of materials specially adapted to enhance their filling properties in mortars, concrete or artificial stone [C04B 14/00](#), [C04B 18/00](#), [C04B 20/00](#)); PREPARATION OF CARBON BLACK; {PREPARATION OF INORGANIC MATERIALS WHICH ARE NO SINGLE CHEMICAL COMPOUNDS AND WHICH ARE MAINLY USED AS PIGMENTS OR FILLERS}**

#### NOTES

1. In this subclass, in the absence of an indication to the contrary, a compound is classified in the last appropriate place
2. Treatment by polymerisation onto particle is classified in [C08F 292/00](#). Only treatment by already polymerised agents is classified in [C09C](#)
3. Whenever in groups [C09C 1/00](#) - [C09C 1/66](#) the materials consist of a particulate core bearing a coating or any other deposit, classification is done only according to the composition of the core, unless otherwise stated, e.g. [C09C 1/0015](#), [C09C 1/0078](#)
4. Preparations of those materials which are no single chemical compounds comprise those of many ceramic pigments ([C09C 1/0009](#)), consisting of solid solutions or polycrystalline structures, and those defined as composite materials ([C09C 1/0081](#))
5. Preparation and treatment steps are not always easy to distinguish from each other, e.g. preparation in the presence of treating agents (by precipitation or calcination), precise reacting conditions, affecting pigmentary effects. It is common practice to include these complex topics in [C09C 1/00](#) while avoiding redundancy
6. When classifying in this subclass, the indexing codes of subclass [C01P](#) are used to identify structural or physical aspects of solid inorganic compounds

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:  
[C09C 1/68](#) covered by [C09K 3/14](#)

## Project: N/A (C09D)

## C09D

COATING COMPOSITIONS, e.g. PAINTS, VARNISHES OR LACQUERS; FILLING PASTES; CHEMICAL PAINT OR INK REMOVERS; INKS; CORRECTING FLUIDS; WOODSTAINS; PASTES OR SOLIDS FOR COLOURING OR PRINTING; USE OF MATERIALS THEREFOR (cosmetics [A61K](#); processes for applying liquids or other fluent materials to surfaces, in general, [B05D](#); staining wood [B27K 5/02](#); glazes or vitreous enamels [C03C](#); organic macromolecular compounds [C08](#); organic dyes or closely-related compounds for producing dyes, mordants or lakes, *per se*, [C09B](#); treatment of inorganic materials other than fibrous fillers used as pigments or fillers [C09C](#); natural resins, French polish, drying-oils, driers, turpentine, *per se*, [C09F](#); polishing compositions other than French polish, ski waxes [C09G](#); preparation of glue or gelatine [C09H](#), {[C08H 1/06](#)} ; adhesives or use of materials as adhesives [C09J](#); materials for sealing or packing joints or covers [C09K 3/10](#); materials for stopping leaks [C09K 3/12](#); processes for the electrolytic or electrophoretic production of coatings [C25D](#); textile-treating compositions [D06](#); paper-making [D21](#); conductors, insulators [H01B](#))

## NOTES

- In this subclass, the following terms or expressions are used with the meanings indicated:
  - "use of materials for coating compositions" means the use of known or new polymers or products;
  - "rubber" includes:
    - natural or conjugated diene rubbers;
    - rubber in general (for a specific rubber, other than a natural rubber or a conjugated diene rubber, see the group provided for coating compositions based on such macromolecular compounds);
  - "based on" is defined by means of Note 3, below;
  - "filling pastes" means materials used to fill up the holes or cavities of a substrate in order to smooth its surface prior to coating.
- In this subclass, coating compositions containing specific macromolecular substances are classified only according to the macromolecular substance, non-macromolecular substances not being taken into account.
 

Example: a coating composition containing polyethene and amino-propyltrimethoxysilane is classified in group [C09D 123/06](#).

However, coating compositions containing combinations of organic non-macromolecular compounds having at least one polymerisable carbon-to-carbon unsaturated bond with prepolymers or polymers other than unsaturated polymers of groups [C09D 159/00](#) - [C09D 187/00](#) are classified according to the unsaturated non-macromolecular component in group [C09D 4/00](#).

Example: a coating composition containing polyethene and styrene monomer is classified in group [C09D 4/06](#).

Aspects relating to the physical nature of the coating compositions or to the effects produced, as defined in group [C09D 5/00](#), if clearly and explicitly stated, are also classified in this subclass.

Coating compositions characterised by other features, e.g. additives, are classified in group [C09D 7/00](#), unless the macromolecular constituent is specified.
- In this subclass, coating compositions comprising two or more macromolecular constituents are classified according to the macromolecular constituent or constituents present in the highest proportion, i.e. the constituent on which the composition is based. If the composition is based on two or more constituents, present in equal proportions, the composition is classified according to each of these constituents.
 

Examples:

A coating composition containing 80 parts of polyethene and 20 parts of polyvinylchloride is classified in group [C09D 123/06](#);

A coating composition containing 40 parts of polyethene and 40 parts of polyvinylchloride is classified in groups [C09D 123/06](#) and [C09D 127/06](#).

4. Documents classified up until 04.2012: after the notation of group [C09D 4/06](#), and separated therefrom by a + sign, notations concerning the macromolecular compound may be added. The notations are selected from the main groups [C08F 251/00](#) - [C08F 291/00](#) and from the subgroups of [C08F 290/00](#) - [C08F 290/048](#) and [C08F 290/08](#) - [C08F 290/128](#).

Example: a paint based on a mixture of methylmethacrylate monomer and a polymer of vinylchloride is classified in [C09D 4/06](#) + [C08F 259/04](#).

5. From April 2012 onwards, after the notation [C09D 4/00](#), classification concerning the monomer may be added, in the form of C-sets. The notation is selected from [C08F 210/00](#) - [C08F 246/00](#), [C08G 77/00](#) - [C08G 77/04](#) or [C08G 77/20](#) - [C08G 77/30](#). Ex.: A paint based on a mixture of methylmethacrylate monomer and a polymer of vinylchloride is classified ( [C09D 4/06](#), [C08F 259/04](#) ).

6. Documents classified up until 09-2003: Classification is given in the form of C-Sets. The polymer in majority is given a [C09D 101/00](#) - [C09D 201/10](#) symbol, and the minor components are characterised by Indexing Codes taken from the list below. The Indexing Codes are linked. The polymer in majority is always first in the C-set. List of [C08L](#) codes: [C08L 23/00](#), [C08L 23/26](#), [C08L 25/00](#), [C08L 27/00](#), [C08L 27/04](#), [C08L 27/12](#), [C08L 29/00](#), [C08L 31/00](#), [C08L 33/00](#), [C08L 35/00](#), [C08L 37/00](#), [C08L 51/00](#), [C08L 53/00](#), [C08L 55/02](#), [C08L 61/04](#), [C08L 61/20](#), [C08L 63/00](#), [C08L 67/00](#), [C08L 67/02](#), [C08L 67/025](#), [C08L 67/03](#), [C08L 67/04](#), [C08L 67/06](#), [C08L 67/07](#), [C08L 69/00](#), [C08L 69/005](#), [C08L 71/00](#), [C08L 75/04](#), [C08L 77/00](#), [C08L 77/08](#), [C08L 77/12](#), [C08L 79/08](#), [C08L 79/085](#), [C08L 81/00](#), [C08L 83/00](#), [C08L 85/00](#), [C08L 91/06](#), [C08L 95/00](#) or [C08L 2666/00](#) - [C08L 2666/86](#). Documents from group [C09D 123/00](#) - [C09D 123/36](#), [C09D 145/00](#) - [C09D 145/02](#) and [C09D 149/00](#) have all been reclassified following Note 3 below. An additive is classified in the last appropriate place in the list as selected for each [C09D](#) group.

Examples:

- A coating composition based on a polyamide and a graft polymer is classified in ([C09D 177/00](#), [C08L 2666/24](#)).
- A coating composition based on polyvinylchloride and containing CaCO<sub>3</sub> is classified according to note 4 of [C08K](#), i.e. in [C08K 3/26](#) and [C09D 127/06](#). If this coating composition contains also a polyamide, then the classification will be ([C09D 127/06](#), [C08L 77/00](#), [C08K 3/26](#)).
- A coating composition based on a polysiloxane ([C09D 183/04](#)) and containing a second polysiloxane, a phenol and silica is classified in ([C09D 183/04](#), [C08L 83/04](#), [C08L 2666/34](#), [C08L 2666/54](#)).

7. From 01.09.2003 until April 2012: Classification is given in the form of C-Sets. The polymer in majority is given a [C09D](#) symbol, and the minor components are characterised by Indexing Codes taken from [C08L](#) or [C08K](#) and they are linked or unlinked. The polymer in majority is always first in the C-set. List of indexing codes in the C-Sets: [C08L 1/00](#), [C08L 81/00](#), [C08L 83/00](#), [C08L 91/06](#), [C08L 95/00](#) or [C08L 2666/02](#) - [C08L 2666/08](#), [C08L 2666/14](#) - [C08L 2666/26](#).

Examples:

- A coating of 60 parts polyvinylchloride ([C09D 127/06](#)) and 40 parts polyamide is classified in ([C09D 127/06](#), [C08L 2666/20](#)), [C08L 77/00](#).
- A coating of 50 parts polyvinylchloride ([C09D 127/06](#)) and 50 parts polyamide ([C09D 177/00](#)) is classified in ([C09D 127/06](#), [C08L 2666/20](#)), and [C08L 77/00](#), as well as ([C09D 177/00](#), [C08L 2666/04](#)) and [C08L 27/06](#).
- A coating composition based on polyvinylchloride and containing CaCO<sub>3</sub> is classified according to [N: Note 4 of [C08K](#), i.e. in [C08K 3/26](#), [C09D 127/06](#). If this composition contains also a polyamide, then the classification will be ([C09D 127/06](#), [C08L 2666/20](#)) and [C08K 3/26](#).

- d. A composition based on a first polysiloxane ([C09D 183/04](#)) and containing a second polysiloxane, a phenol and silica is classified in ([C09D 183/04](#), [C08L 83/00](#), [C08K 5/13](#), [C08K 3/36](#)) and [C08L 2205/02](#).
8. From April 2012 onwards, after the notation of groups [C09D 101/00](#) - [C09D 201/00](#), notations concerning the other constituents of the coating composition may be added, in the form of C-Sets. The further constituent is added with an indexing code. The indexing codes are chosen from [C08L 1/00](#) - [C08L 2555/86](#) or [C08K](#) and they may be linked or unlinked: - [C08L 1/00](#) - [C08L 101/10](#) are linked. - [C08L 2201/00](#) - [C08L 2555/86](#) are unlinked. The polymer in majority is always first in the C-set. Examples:
- A coating composition containing polyethylene and amino-propyltrimethoxysilane is classified in groups [C09D 123/06](#) and [C08K 5/544](#) (unlinked).
  - A coating composition containing 80 parts of polyethene and 20 parts of polyvinylchloride is classified in ([C09D 123/06](#), [C08L 27/06](#)).
  - A coating composition containing 40 parts of polyethene and 40 parts of polyvinylchloride is classified in ([C09D 123/06](#), [C08L 27/06](#)) and ([C09D 127/06](#), [C08L 23/06](#)).
  - A coating composition containing 90% of polysiloxane ([C09D 183/04](#)) further containing 10% of polyester ([C08L 67/00](#)) and an alcohol is classified in ([C09D 183/04](#), [C08L 67/00](#), [C08K 5/05](#)).

#### WARNING

The following IPC groups are not **used** in the CPC **system scheme**. **Subject The subject** matter **covered by for** these **IPC** groups is classified in the following CPC groups:

|   |            |   |
|---|------------|---|
| <a href="#">C09D 4/02</a>                                 | covered by | <a href="#">C09D 4/00</a> , <a href="#">C08F 220/00</a>   |
| <a href="#">C09D 4/04</a>                                 | covered by | <a href="#">C09D 4/00</a> , <a href="#">C08F 222/00</a>   |
| <a href="#">C09D 5/23</a>                                 | covered by | <a href="#">H01F 41/16</a>                                |
| <a href="#">C09D 5/25</a>                                 | covered by | <a href="#">H01B 3/308</a>                                |
| <a href="#">C09D 5/33</a>                                 | covered by | <a href="#">C09D 5/004</a>                                |
| <a href="#">C09D 5/46</a>                                 | covered by | <a href="#">C09D 5/03</a>                                 |
| <a href="#">C09D 161/08</a> , <a href="#">C09D 161/10</a> | covered by | <a href="#">C09D 161/06</a>                               |
| <a href="#">C09D 163/02</a>                               | covered by | <a href="#">C09D 163/00</a>                               |
| <a href="#">C09D 171/08</a>                               | covered by | <a href="#">C09D 171/02</a>                               |
| <a href="#">C09D 171/10</a>                               | covered by | <a href="#">C09D 171/12</a>                               |
| <a href="#">C09D 183/05</a>                               | covered by | <a href="#">C09D 183/04</a>                               |
| <a href="#">C09D 183/07</a>                               | covered by | <a href="#">C09D 183/04</a> , <a href="#">C09D 183/06</a> |

#### Project: RP0491 (C09D)

|          |                  |   |
|----------|------------------|---|
| <b>U</b> | <b>C09D 5/00</b> | <b>Coating compositions, e.g. paints, varnishes or lacquers, characterised by their physical nature or the effects produced; Filling pastes {(magnetisable or magnetic paints <a href="#">H01F 1/00</a>; electrically insulating paints <a href="#">H01B 3/00</a>; paints for electrophoretic applications <a href="#">C25D 13/00</a>)}</b> |
| U        | C09D 5/02        | • Emulsion paints {including aerosols}  |
| U        | C09D 5/024       | • {characterised by the additives}  |
|          | C09D 5/027       | • • {Dispersing agents (anti-settling agents <a href="#">C09D 7/02</a> <a href="#">C09D 7/45</a> )}   |
| U        | C09D 5/03        | • Powdery paints  |
| U        | C09D 5/033       | • {characterised by the additives}  |
|          | C09D 5/036       | • • {Stabilisers (organic stabilisers for paints <a href="#">C09D 7/1241</a> <a href="#">C09D 7/48</a> )}   |
| <b>M</b> | <b>C09D 7/00</b> | <b>Features of coating compositions, not provided for in group <a href="#">C09D 5/00</a> (driers <a href="#">C09F 9/00</a>); <b>Processes for incorporating ingredients in coating compositions</b></b>   |



|   |             |  |
|---|-------------|--|
| D | C09D 7/001  | • {Diluents or solvents for paints}<br><administratively transferred to <a href="#">C09D 7/20</a> >  |
| D | C09D 7/002  | • {Use of compounds as thickening agents}<br><administratively transferred to <a href="#">C09D 7/43</a> >  |
| D | C09D 7/004  | • • {Two or more thickening agents}<br><administratively transferred to <a href="#">C09D 7/44</a> >  |
| D | C09D 7/005  | • {Use of compounds as gloss-reducing agents}<br><administratively transferred to <a href="#">C09D 7/42</a> >  |
| D | C09D 7/007  | • {Use of organic pigments or dyes (inorganic pigments C09D 7/1216)}<br><administratively transferred to <a href="#">C09D 7/41</a> >   |
| D | C09D 7/008  | • {Paint detackifiers or coagulants, e.g. for the treatment of oversprays in paint spraying installations (chemical paint removers C09D 9/00)}<br><administratively transferred to <a href="#">C09D 7/71</a> > |
| D | C09D 7/02   | • Use of compounds as anti-settling agents<br><administratively transferred to <a href="#">C09D 7/45</a> >   |
| D | C09D 7/04   | • Use of compounds as anti-skinning agents<br><administratively transferred to <a href="#">C09D 7/46</a> >   |
| D | C09D 7/06   | • Use of compounds as levelling agents<br><administratively transferred to <a href="#">C09D 7/47</a> >   |
| D | C09D 7/12   | • Other additives<br><administratively transferred to <a href="#">C09D 7/40</a> >  |
| D | C09D 7/1208 | • • {non-macromolecular}<br><administratively transferred to <a href="#">C09D 7/60</a> >   |
| D | C09D 7/1216 | • • • {inorganic (C09D 7/1291 takes precedence)}<br><administratively transferred to <a href="#">C09D 7/61</a> >   |
| D | C09D 7/1225 | • • • • {modified by treatment with other compounds}<br><administratively transferred to <a href="#">C09D 7/62</a> >   |
| D | C09D 7/1233 | • • • {organic}<br><administratively transferred to <a href="#">C09D 7/63</a> >  |
| D | C09D 7/1241 | • • • • {Stabilisers against degradation by oxygen, light or heat}<br><administratively transferred to <a href="#">C09D 7/48</a> >   |
| D | C09D 7/125  | • • {macromolecular (C09D 7/1291 takes precedence)}<br><administratively transferred to <a href="#">C09D 7/65</a> >  |
| D | C09D 7/1258 | • • {characterised by particle size (not used)}<br><administratively transferred to <a href="#">C09D 7/66</a> >  |
| D | C09D 7/1266 | • • • {characterised by a particle size lower than 100 nm}<br><administratively transferred to <a href="#">C09D 7/67</a> >   |
| D | C09D 7/1275 | • • • {characterised by a particle size of 100-1000 nm}<br><administratively transferred to <a href="#">C09D 7/68</a> >  |
| D | C09D 7/1283 | • • • {characterised by a particle size higher than 1000 nm}<br><administratively transferred to <a href="#">C09D 7/69</a> >   |
| D | C09D 7/1291 | • • {characterised by shape, e.g. fibres, flakes, microspheres}<br><administratively transferred to <a href="#">C09D 7/70</a> >  |
| D | C09D 7/14   | • Special processes for incorporating ingredients<br><administratively transferred to <a href="#">C09D 7/80</a> >  |
| N | C09D 7/20   | • <i>Diluents or solvents</i>  |
| N | C09D 7/40   | • <i>Additives</i>   |

- N C09D 7/41
- Organic pigments; Organic dyes
- WARNING  
Group [C09D 7/41](#) is incomplete pending reclassification of documents from groups [C09D 7/60](#), [C09D 7/61](#), [C09D 7/62](#), [C09D 7/63](#), [C09D 7/65](#) and [C09D 7/70](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N C09D 7/42
- Gloss-reducing agents
- WARNING  
Group [C09D 7/42](#) is incomplete pending reclassification of documents from groups [C09D 7/60](#), [C09D 7/61](#), [C09D 7/62](#), [C09D 7/63](#), [C09D 7/65](#) and [C09D 7/70](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N C09D 7/43
- Thickening agents
- WARNING  
Group [C09D 7/43](#) is incomplete pending reclassification of documents from groups [C09D 7/60](#), [C09D 7/61](#), [C09D 7/62](#), [C09D 7/63](#), [C09D 7/65](#) and [C09D 7/70](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N C09D 7/44
- Combinations of two or more thickening agents
- WARNING  
Group [C09D 7/44](#) is incomplete pending reclassification of documents from groups [C09D 7/60](#), [C09D 7/61](#), [C09D 7/62](#), [C09D 7/63](#), [C09D 7/65](#) and [C09D 7/70](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N C09D 7/45
- Anti-settling agents
- WARNING  
Group [C09D 7/45](#) is incomplete pending reclassification of documents from groups [C09D 7/60](#), [C09D 7/61](#), [C09D 7/62](#), [C09D 7/63](#), [C09D 7/65](#) and [C09D 7/70](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N C09D 7/46
- Anti-skinning agents
- WARNING  
Group [C09D 7/46](#) is incomplete pending reclassification of documents from groups [C09D 7/60](#), [C09D 7/61](#), [C09D 7/62](#), [C09D 7/63](#), [C09D 7/65](#) and [C09D 7/70](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N C09D 7/47
- Levelling agents
- WARNING  
Group [C09D 7/47](#) is incomplete pending reclassification of documents from groups [C09D 7/60](#), [C09D 7/61](#), [C09D 7/62](#), [C09D 7/63](#), [C09D 7/65](#) and [C09D 7/70](#).  
All groups listed in this Warning should be considered in order to perform a complete search.

- N C09D 7/48
- • Stabilisers against degradation by oxygen, light or heat
- WARNING  
Group [C09D 7/48](#) is incomplete pending reclassification of documents from groups [C09D 7/60](#), [C09D 7/61](#), [C09D 7/62](#), [C09D 7/63](#), [C09D 7/65](#) and [C09D 7/70](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- Q C09D 7/60
- • non-macromolecular ([C09D 7/41](#)-[C09D 7/48](#) take precedence)
- WARNING  
Group [C09D 7/60](#) is impacted by reclassification into groups [C09D 7/41](#), [C09D 7/42](#), [C09D 7/43](#), [C09D 7/44](#), [C09D 7/45](#), [C09D 7/46](#), [C09D 7/47](#), and [C09D 7/48](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- Q C09D 7/61
- • • inorganic
- WARNING  
Group [C09D 7/61](#) is incomplete pending reclassification of documents from group [C09D 7/70](#). Group [C09D 7/61](#) is also impacted by reclassification into groups [C09D 7/41](#), [C09D 7/42](#), [C09D 7/43](#), [C09D 7/44](#), [C09D 7/45](#), [C09D 7/46](#), [C09D 7/47](#), and [C09D 7/48](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- Q C09D 7/62
- • • modified by treatment with other compounds
- WARNING  
Group [C09D 7/62](#) is incomplete pending reclassification of documents from group [C09D 7/70](#). Group [C09D 7/62](#) is also impacted by reclassification into groups [C09D 7/41](#), [C09D 7/42](#), [C09D 7/43](#), [C09D 7/44](#), [C09D 7/45](#), [C09D 7/46](#), [C09D 7/47](#), and [C09D 7/48](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- Q C09D 7/63
- • • organic
- WARNING  
Group [C09D 7/63](#) is impacted by reclassification into groups [C09D 7/41](#), [C09D 7/42](#), [C09D 7/43](#), [C09D 7/44](#), [C09D 7/45](#), [C09D 7/46](#), [C09D 7/47](#), and [C09D 7/48](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- Q C09D 7/65
- • macromolecular ([C09D 7/41](#)-[C09D 7/48](#) take precedence)
- WARNING  
Group [C09D 7/65](#) is incomplete pending reclassification of documents from group [C09D 7/70](#). Group [C09D 7/65](#) is also impacted by reclassification into groups [C09D 7/41](#), [C09D 7/42](#), [C09D 7/43](#), [C09D 7/44](#), [C09D 7/45](#), [C09D 7/46](#), [C09D 7/47](#), and [C09D 7/48](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N C09D 7/66
- • {characterised by particle size}
- N C09D 7/67
- • • {Particle size smaller than 100 nm}
- N C09D 7/68
- • • {Particle size between 100-1000 nm}
- N C09D 7/69
- • • {Particle size larger than 1000 nm}

Q C09D 7/70

- {characterised by shape, e.g. fibres, flakes or microspheres}

WARNING

Group [C09D 7/70](#) is impacted by reclassification into groups [C09D 7/41](#), [C09D 7/42](#), [C09D 7/43](#), [C09D 7/44](#), [C09D 7/45](#), [C09D 7/46](#), [C09D 7/47](#), [C09D 7/48](#), [C09D 7/61](#), [C09D 7/62](#) and [C09D 7/65](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N C09D 7/71

- {Paint detackifiers or coagulants, e.g. for the treatment of oversprays in paint spraying installations (chemical paint removers [C09D 9/00](#))}

N C09D 7/80

- Processes for incorporating ingredients

**Project: N/A (C09J)**

C09J

**ADHESIVES; NON-MECHANICAL ASPECTS OF ADHESIVE PROCESSES IN GENERAL; ADHESIVE PROCESSES NOT PROVIDED FOR ELSEWHERE; USE OF MATERIALS AS ADHESIVES** (surgical adhesives [A61L 24/00](#); processes for applying liquids or other fluent materials to surfaces in general [B05D](#); adhesives on the basis of non specified organic macromolecular compounds used as bonding agents in layered products [B32B](#); organic labelling fabrics or comparable materials or articles with deformable surface using adhesives and thermo-activatable adhesives respectively [B65C 5/02](#), [B65C 5/04](#); organic macromolecular compounds [C08](#); production of multi-layer textile fabrics [D06M 17/00](#); preparation of glue or gelatine [C09H](#); adhesive labels, tag tickets or similar identification of indication means [G09F 3/10](#))

NOTES

1. In this subclass, the following terms or expressions are used with the meanings indicated:

- "use of materials as adhesives" means the use of known or new polymers or products;
- "rubber" includes:
  - a. natural or conjugated diene rubbers;
  - b. rubber in general (for a specific rubber, other than a natural rubber or a conjugated diene rubber, see the group provided for adhesives based on such macromolecular compounds);
- "based on" is defined by means of Note 3, below.

2. In this subclass, adhesives containing specific macromolecular substances are classified only according to the macromolecular substance, non-macromolecular substances not being taken into account.

Example: an adhesive containing polyethene and amino-propyltrimethoxysilane is classified in group [C09J 123/06](#).

However, adhesives containing combinations of organic non-macromolecular compounds having at least one polymerisable carbon-to-carbon unsaturated bond with prepolymers or polymers other than unsaturated polymers of groups [C09J 159/00](#) - [C09J 187/00](#) are classified according to the unsaturated non-macromolecular component in group [C09J 4/00](#).

Example: an adhesive containing polyethene and styrene monomer is classified in group [C09J 4/06](#).

Aspects relating to the physical nature of the adhesives or to the effects produced, as defined in group [C09J 9/00](#), if clearly and explicitly stated, are also classified in this subclass. Adhesives characterised by other features, e.g. additives, are classified in group [C09J 11/00](#), unless the macromolecular constituent is specified.

3. In this subclass, adhesives comprising two or more macromolecular constituents are classified according to the macromolecular constituent or

constituents present in the highest proportion, i.e. the constituent on which the adhesive is based. If the adhesive is based on two or more constituents, present in equal proportions, the adhesive is classified according to each of these constituents.

Examples: An adhesive containing 80 parts of polyethylene and 20 parts of polyvinylchloride is classified in group [C09J 123/06](#); An adhesive containing 40 parts of polyethylene and 40 parts of polyvinylchloride is classified in groups [C09J 123/06](#) and [C09J 127/06](#).

4. An adhesive composition containing polyethylene and amino-propyltrimethoxysilane is classified in groups [C09J 123/06](#) and [C08K 5/544](#)
5. Documents classified up until 09-2003: Classification is given in the form of C-Sets. The polymer in majority is given a [C09J 101/00](#) - [C09J 201/10](#) symbol, and the minor components are characterised by Indexing Codes taken from the list below. The Indexing Codes are linked. The polymer in majority is always first in the C-set.

List of [C08L](#) codes: [C08L 23/00](#), [C08L 23/26](#), [C08L 25/00](#), [C08L 27/00](#), [C08L 27/04](#), [C08L 27/12](#), [C08L 29/00](#), [C08L 31/00](#), [C08L 33/00](#), [C08L 35/00](#), [C08L 37/00](#), [C08L 51/00](#), [C08L 53/00](#), [C08L 55/02](#), [C08L 61/04](#), [C08L 61/20](#), [C08L 63/00](#), [C08L 67/00](#), [C08L 67/02](#), [C08L 67/025](#), [C08L 67/03](#), [C08L 67/04](#), [C08L 67/06](#), [C08L 67/07](#), [C08L 69/00](#), [C08L 69/005](#), [C08L 71/00](#), [C08L 75/04](#), [C08L 77/00](#), [C08L 77/08](#), [C08L 77/12](#), [C08L 79/08](#), [C08L 79/085](#), [C08L 81/00](#), [C08L 83/00](#), [C08L 85/00](#), [C08L 91/06](#), [C08L 95/00](#) or [C08L 2666/00](#) - [C08L 2666/86](#). An additive is classified in the last appropriate place in the list as selected for each [C09J](#) group. Examples:

- a. An adhesive composition based on a polyamide and a graft polymer is classified in ([C09J 177/00](#), [C08L 2666/24](#)).
- b. An adhesive composition based on polyvinylchloride and containing CaCO<sub>3</sub> is classified according to note 4 of [C08K](#), i.e. in [C08K 3/26](#) and [C09J 127/06](#). If this adhesive composition contains also a polyamide, then the classification will be ([C09J 127/06](#), [C08L 77/00](#), [C08K 3/26](#)).
- c. An adhesive composition based on a polysiloxane ([C09J 183/04](#)) and containing a second polysiloxane, a phenol and silica is classified in ([C09J 183/04](#), [C08L 83/04](#), [C08L 2666/34](#), [C08L 2666/54](#)

6. From April 2012, after the notation [C09J 4/00](#), classification concerning the monomer may be added, in the form of C-sets. The notation is selected from [C08F 210/00](#) - [C08F 246/00](#), [C08G 77/00](#) - [C08G 77/04](#) or [C08G 77/20](#) - [C08G 77/30](#).

Ex. 1: An adhesive based on methylmethacrylate monomer is classified in ([C09J 4/00](#), [C08F 220/00](#)).

Ex. 2: An adhesive based on a dialkoxysilane monomer compound is classified in ([C09J 4/00](#), [C08G 77/04](#)).

7. From 01.09.2003 until April 2012: Classification is given in the form of C-Sets. The polymer in majority is given a [C08L](#) class, and the minor components are characterised by Indexing Codes taken from [C08L](#) or [C08K](#) and they are linked or unlinked. The polymer in majority is always first in the C-set. List of indexing codes in the C-Sets: [C08L 1/00](#), [C08L 81/00](#), [C08L 83/00](#), [C08L 91/06](#), [C08L 95/00](#) or [C08L 2666/02](#) - [C08L 2666/08](#), [C08L 2666/14](#) - [C08L 2666/26](#).

Examples:

- a. An adhesive blend of 60 parts polyvinylchloride ([C09J 127/06](#)) and 40 parts polyamide is classified in ([C09J 127/06](#), [C08L 2666/20](#)), [C08L 77/00](#).
- b. An adhesive blend of 50 parts polyvinylchloride ([C09J 127/06](#)) and 50 parts polyamide ([C09J 177/00](#)) is classified in ([C09J 127/06](#), [C08L 2666/20](#)), ([C09J 177/00](#), [C08L 2666/04](#)), [C08L 77/00](#) and [C08L 27/06](#).
- c. An adhesive composition based on polyvinylchloride and containing CaCO<sub>3</sub> is classified according to [N: Note 4 of [C08K](#), i.e. in [C08K 3/26](#), [C09J 127/06](#). If this composition contains also a polyamide, then the classification will be ([C09J 127/06](#), [C08L 2666/20](#)) and [C08K 3/26](#).

d. A composition based on a first polysiloxane ([C09J 183/04](#)) and containing a second polysiloxane, a phenol and silica is classified in ([C09J 183/04](#), [C08L 83/00](#), [C08K 5/13](#), [C08K 3/36](#)) and [C08L 2205/02](#).

8. From April 2012 onwards, after the notation of groups [C09J 101/00](#) - [C09J 201/00](#), notations concerning the other constituents of the adhesive composition may be added, in the form of C-sets. The further constituent is added with an indexing code. The indexing codes are chosen from [C08L 1/00](#) - [C08L 2555/86](#) or [C08K](#) and they may be linked or unlinked: - [C08L 1/00](#) - [C08L 101/16](#) are linked. - [C08L 2201/00](#) - [C08L 2555/86](#) are unlinked. The polymer in majority is always first in the C-set.

Examples:

- a. An adhesive composition containing polyethylene and amino-propyltrimethoxysilane is classified in groups [C09J 123/06](#) and [C08K 5/544](#) (unlinked).
- b. An adhesive containing 80 parts of polyethene and 20 parts of polyvinylchloride is classified in group ([C09J 123/06](#), [C08L 27/06](#)).
- c. An adhesive containing 40 parts of polyethene and 40 parts of polyvinylchloride is classified in groups ([C09J 123/06](#), [C08L 27/06](#)) and ([C09J 127/06](#), [C08L 23/06](#)).
- d. An adhesive containing 90% of polysiloxane ([C09J 183/04](#)) further containing of polyester ([C08L 67/00](#)) and an alcohol is classified in ([C09J 183/04](#), [C08L 67/00](#), [C08K 5/05](#)).

#### WARNING

The following IPC ~~group is groups are~~ not ~~used~~ in the CPC ~~system: Subject scheme. The subject~~ matter ~~covered by for~~ these ~~IPC~~ groups is classified in the following CPC ~~group groups~~:

|                             |            |                             |
|-----------------------------|------------|-----------------------------|
| <a href="#">C09J 4/02</a>   | covered by |                             |
| <a href="#">C09J 4/04</a>   | covered by |                             |
| <a href="#">C09J 161/08</a> | covered by |                             |
| <a href="#">C09J 163/02</a> | covered by | <a href="#">C09J 163/00</a> |
| <a href="#">C09J 183/05</a> | covered by |                             |
| <a href="#">C09J 183/07</a> | covered by |                             |

## Project: RP0505 (C09J)

### C C09J 7/00

#### Adhesives in the form of films or foils

#### NOTE

~~In this group, the indexing codes of subclass M09J are used~~

*In this main group, multi-aspect classification is applied, so that subject matter characterised by aspects covered by more than one of its subgroups should be classified in each of those groups.*

#### WARNING

*Group C09J 7/00 is impacted by reclassification into group C09J 7/10. Groups C09J 7/00 and C09J 7/10 should be considered in order to perform a complete search.*

- |   |             |  |
|---|-------------|--|
| D | C09J 7/02   | <ul style="list-style-type: none"> <li>• <del>on-carriers</del></li> <li>&lt;administratively transferred to <a href="#">C09J 7/20</a>&gt;</li> </ul>  |
| D | C09J 7/0203 | <ul style="list-style-type: none"> <li>• <del>{essentially based on heat-curable or heat-activatable adhesive}</del></li> <li>&lt;administratively transferred to <a href="#">C09J 7/35</a>&gt;</li> </ul> |
| D | C09J 7/0207 | <ul style="list-style-type: none"> <li>• <del>{characterised by pressure-sensitive adhesive}</del></li> <li>&lt;administratively transferred to <a href="#">C09J 7/38</a>&gt;</li> </ul>                   |



- D C09J 7/021      . . . {based on macromolecular compounds obtained by reactions involving only carbon-to-carbon unsaturated bonds}  
                         <administratively transferred to [C09J 7/381](#)>
- D C09J 7/0214    . . . . {Natural or synthetic rubber}  
                         <administratively transferred to [C09J 7/383](#)>
- D C09J 7/0217    . . . . {Acrylic polymers}  
                         <administratively transferred to [C09J 7/385](#)>
- D C09J 7/0221    . . . . {Block-copolymers}  
                         <administratively transferred to [C09J 7/387](#)>
- D C09J 7/0225    . . {characterised by release features}  
                         <administratively transferred to [C09J 7/40](#)>
- D C09J 7/0228    . . . {characterised by the release coating composition}  
                         <administratively transferred to [C09J 7/401](#)>
- D C09J 7/0232    . . . {characterised by the structure of the release liner}  
                         <administratively transferred to [C09J 7/403](#)>
- D C09J 7/0235    . . . {characterised by the substrate of the release liner}  
                         <administratively transferred to [C09J 7/405](#)>
- D C09J 7/0239    . . {on carriers other than paper or textile fabrics}  
                         <administratively transferred to [C09J 7/22](#) and [C09J 7/30](#)>
- D C09J 7/0242    . . . {essentially based on heat-curable or heat-activatable adhesive}  
                         <administratively transferred to [C09J 7/22](#) and [C09J 7/35](#)>
- D C09J 7/0246    . . . {characterised by pressure-sensitive adhesive}  
                         <administratively transferred to [C09J 7/22](#) and [C09J 7/38](#)>
- D C09J 7/025     . . . {characterised by the release coating composition or properties}  
                         <administratively transferred to [C09J 7/201](#) and [C09J 7/22](#)>
- D C09J 7/0253    . . . . {characterised by the structure}  
                         <administratively transferred to [C09J 7/203](#) and [C09J 7/22](#)>
- D C09J 7/0257    . . . {characterised by the priming intermediate layer composition}  
                         <administratively transferred to [C09J 7/50](#)>
- D C09J 7/026     . . . {characterised by the carrier}  
                         <administratively transferred to [C09J 7/22](#)>
- D C09J 7/0264    . . . . {Plastic, including metallised plastic}  
                         <administratively transferred to [C09J 7/22](#)>
- D C09J 7/0267    . . . . . {based on macromolecular compounds obtained by reactions involving only carbon-to-carbon unsaturated bonds}  
                         <administratively transferred to [C09J 7/24](#)>
- D C09J 7/0271    . . . . . {Polyolefin, including rubber}  
                         <administratively transferred to [C09J 7/241](#)>
- D C09J 7/0275    . . . . . {Ethylene or propylene polymers}  
                         <administratively transferred to [C09J 7/243](#)>
- D C09J 7/0278    . . . . . {Vinyl resins, e.g. PVC}  
                         <administratively transferred to [C09J 7/245](#)>
- D C09J 7/0282    . . . . . {based on macromolecular compounds obtained otherwise than by reactions involving only carbon-to-carbon unsaturated bonds}  
                         <administratively transferred to [C09J 7/25](#)>
- D C09J 7/0285    . . . . . {Polyester}  
                         <administratively transferred to [C09J 7/255](#)>
- D C09J 7/0289    . . . . . {Porous or cellular plastic}  
                         <administratively transferred to [C09J 7/26](#)>
- D C09J 7/0292    . . . . {Metal sheet}  
                         <administratively transferred to [C09J 7/28](#)>

- D C09J 7/0296 . . . {Laminates}  
<administratively transferred to [C09J 7/29](#)>
- D C09J 7/04 . . on paper or textile fabric (adhesive bandages, dressings or adsorbent pads, {e.g. plasters}, A61F 13/02)  
<administratively transferred to [C09J 7/21](#)>
- D C09J 7/041 . . {characterised by the adhesive composition}  
<administratively transferred to [C09J 7/21](#) and [C09J 7/30](#)>
- D C09J 7/042 . . . {Water-activatable adhesive, e.g. gummed paper}  
<administratively transferred to [C09J 7/21](#) and [C09J 7/32](#)>
- D C09J 7/043 . . . {Heat-curable or heat-activatable adhesive}  
<administratively transferred to [C09J 7/21](#) and [C09J 7/35](#)>
- D C09J 7/045 . . . {Pressure-sensitive adhesive}  
<administratively transferred to [C09J 7/21](#) and [C09J 7/38](#)>
- D C09J 7/046 . . {characterised by the release coating composition}  
<administratively transferred to [C09J 7/21](#) and [C09J 7/201](#)>
- D C09J 7/047 . . . {characterised by the structure}  
<administratively transferred to [C09J 7/21](#) and [C09J 7/203](#)>
- D C09J 7/048 . . {characterised by the backing impregnating composition}  
<administratively transferred to [C09J 7/21](#) and [C09J 7/205](#)>
- N C09J 7/10 . without carriers  
WARNING  
Group [C09J 7/10](#) is incomplete pending reclassification of documents from group [C09J 7/00](#).  
Groups [C09J 7/00](#) and [C09J 7/10](#) should be considered in order to perform a complete search.
- N C09J 7/20 . characterised by their carriers
- N C09J 7/201 . . {characterised by the release coating composition on the carrier layer}
- N C09J 7/203 . . {characterised by the structure of the release feature on the carrier layer}
- N C09J 7/205 . . {characterised by the backing impregnating composition}
- N C09J 7/21 . . Paper; Textile fabrics
- N C09J 7/22 . . Plastics; Metallised plastics  
WARNING  
Group [C09J 7/22](#) is incomplete pending reclassification of documents from groups [C09J 7/28](#) and [C09J 7/29](#).  
Groups [C09J 7/28](#), [C09J 7/29](#), and [C09J 7/22](#) should be considered in order to perform a complete search.
- N C09J 7/24 . . . based on macromolecular compounds obtained by reactions involving only carbon-to-carbon unsaturated bonds
- N C09J 7/241 . . . . {Polyolefin, e.g. rubber}
- N C09J 7/243 . . . . {Ethylene or propylene polymers}
- N C09J 7/245 . . . . {Vinyl resins, e.g. polyvinyl chloride [PVC]}
- N C09J 7/25 . . . based on macromolecular compounds obtained otherwise than by reactions involving only carbon-to-carbon unsaturated bonds
- N C09J 7/255 . . . . {Polyesters}
- N C09J 7/26 . . . Porous or cellular plastics
- Q C09J 7/28 . . Metal sheet (metallised plastics [C09J 7/22](#))  
WARNING  
Group [C09J 7/28](#) is impacted by reclassification into group [C09J 7/22](#).

Groups [C09J 7/28](#) and [C09J 7/22](#) should be considered in order to perform a complete search.

Q C09J 7/29

- • Laminated material (metallised plastics [C09J 7/22](#))

WARNING

Group [C09J 7/29](#) is impacted by reclassification into group [C09J 7/22](#). Groups [C09J 7/29](#) and [C09J 7/22](#) should be considered in order to perform a complete search.

N C09J 7/30

- characterised by the adhesive composition

N C09J 7/32

- • Water-activated {adhesive}, e.g. for gummed paper

N C09J 7/35

- • Heat-activated

N C09J 7/38

- • Pressure-sensitive adhesives [PSA]

N C09J 7/381

- • • {based on macromolecular compounds obtained by reactions involving only carbon-to-carbon unsaturated bonds}

N C09J 7/383

- • • • {Natural or synthetic rubber}

N C09J 7/385

- • • • {Acrylic polymers}

N C09J 7/387

- • • • {Block-copolymers}

N C09J 7/40

- characterised by release liners

N C09J 7/401

- • {characterised by the release coating composition}

N C09J 7/403

- • {characterised by the structure of the release feature}

N C09J 7/405

- • {characterised by the substrate of the release liner}

N C09J 7/50

- characterised by a primer layer between the carrier and the adhesive

**Project: N/A (C09K)**

**C09K**

**MATERIALS FOR MISCELLANEOUS APPLICATIONS, NOT PROVIDED FOR ELSEWHERE**

NOTES

1. This subclass covers also the use of specified materials in general or their use for the applications not specially provided for elsewhere.
2. In this subclass, the following term is used with the meaning indicated:
  - "materials" includes compositions.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter **covered by** for these **IPC** groups is classified in the following CPC groups:

[C09K 11/78-C09K 11/86](#) covered by

**Project: N/A (C10G)****C10G**

**CRACKING HYDROCARBON OILS; PRODUCTION OF LIQUID HYDROCARBON MIXTURES, e.g. BY DESTRUCTIVE HYDROGENATION, OLIGOMERISATION, POLYMERISATION (cracking to hydrogen or synthesis gas [C01B](#); cracking or pyrolysis of hydrocarbon gases to individual hydrocarbons or mixtures thereof of definite or specific constitution [C07C](#); cracking to cokes [C10B](#)); RECOVERY OF HYDROCARBON OILS FROM OIL-SHALE, OIL-SAND, OR GASES; REFINING MIXTURES MAINLY CONSISTING OF HYDROCARBONS; REFORMING OF NAPHTHA; MINERAL WAXES (inhibiting corrosion or incrustation in general [C23F](#))**

**NOTES**

- In this subclass,
  - groups [C10G 9/00](#) - [C10G 49/00](#) are limited to one-step processes;
  - combined or multi-step processes are covered by groups [C10G 51/00](#) - [C10G 69/00](#);
  - refining or recovery of mineral waxes is covered by group [C10G 73/00](#)
- In this subclass, the following terms or expressions are used with the meanings indicated:
  - "in the presence of hydrogen" or "in the absence of hydrogen" mean treatments in which hydrogen, in free form or as hydrogen generating compounds, is added, or not added, respectively;
  - "hydrotreatment" is used for conversion processes as defined in group [C10G 45/00](#) or group [C10G 47/00](#);
  - "hydrocarbon oils" covers mixtures of hydrocarbons such as tar oils or mineral oils.
- In this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place.

**WARNING**

The following IPC groups are not **used** in the CPC **system scheme**. **Subject The subject** matter **covered by for** these **IPC** groups is classified in the following CPC groups:

[C10G 73/23](#)

covered by

[C10G 73/06](#)**Project: MP0164 (C10M)**

|          |                     |  |
|----------|---------------------|--|
| <b>U</b> | <b>C10M 2219/00</b> | <b>Organic <u>non-macromolecular</u> compounds containing sulfur, selenium or tellurium as ingredients in lubricant compositions</b>   |
| U        | C10M 2219/02        | • Sulfur-containing compounds obtained by sulfurisation with sulfur or sulfur-containing compounds   |
| M        | C10M 2219/022       | • • of hydrocarbons, e.g. <b>sulfurised</b> olefines <b>and polyolefins</b> ( <b>polyolefins</b> <a href="#">C10M 2221/041</a> )   |
| <b>U</b> | <b>C10M 2221/00</b> | <b>Organic <u>macromolecular</u> compounds containing sulfur, selenium or tellurium as ingredients in lubricant compositions</b>   |
| M        | C10M 2221/02        | • Macromolecular compounds obtained by reactions of monomers involving only carbon-to-carbon unsaturated bonds (sulfurised polyolefins <a href="#">C10M 2219/022</a> <a href="#">C10M 2221/041</a> ) |
| U        | C10M 2221/04        | • Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds  |
| M        | C10M 2221/041       | • • involving sulfurisation of macromolecular compounds, <b>e.g. polyolefins</b>   |

**Project: N/A (C11D)****C11D**

**DETERGENT COMPOSITIONS** (preparations specially adapted for washing the hair [A61Q 5/02](#), [A61K 8/00](#); methods or apparatus for disinfection or sterilisation [A61L](#); special washing compositions for cleaning semi-permeable membranes [B01D 65/06](#)); **USE OF SINGLE SUBSTANCES AS DETERGENTS; SOAP OR SOAP-MAKING; RESIN SOAPS; RECOVERY OF GLYCEROL**

NOTE

Documents classified in groups [C11D 1/37](#), [C11D 1/645](#) - [C11D 1/655](#), [C11D 1/825](#) - [C11D 1/86](#), [C11D 1/94](#) - [C11D 1/945](#) and [C11D 10/00](#) - [C11D 10/047](#), are indexed using codes chosen from [C11D 1/00](#) - [C11D 1/92](#) to provide information on the individual ingredients on the compositions

WARNING

-The following IPC groups are not **used** in the CPC **system scheme**. **Subject-The subject** matter **covered-by-for** these **IPC** groups is classified in the following CPC groups:

|                            |                                 |   |
|----------------------------|---------------------------------|---|
| <a href="#">C11D 1/68</a>  | covered by                      | <a href="#">C11D 3/2003</a>                             |
| <a href="#">C11D 1/70</a>  | covered by                      | <a href="#">C11D 3/2003</a>                             |
| <a href="#">C11D 3/44</a>  | covered by                      | <a href="#">C11D 3/43</a>                               |
| <a href="#">C11D 3/46</a>  | covered by                      | <a href="#">C11D 3/2079</a> , <a href="#">C11D 9/48</a> |
| <a href="#">C11D 3/60</a>  | covered by                      | <a href="#">C11D 3/00</a>                               |
| <a href="#">C11D 7/18</a>  | covered by                      | <a href="#">C11D 3/39</a>                               |
| <a href="#">C11D 7/38</a>  | covered by                      | <a href="#">C11D 3/39</a>                               |
| <a href="#">C11D 7/42</a>  | covered by                      | <a href="#">C11D 3/386</a>                              |
| <a href="#">C11D 7/52</a>  | covered by                      | <a href="#">C11D 7/50</a>                               |
| <a href="#">C11D 7/54</a>  | covered by                      | <a href="#">C11D 3/395</a>                              |
| <a href="#">C11D 7/56</a>  | covered by                      | <a href="#">C11D 3/395</a>                              |
| <a href="#">C11D 7/60</a>  | covered by                      | <a href="#">C11D 7/00</a>                               |
| <a href="#">C11D 9/20</a>  | covered by partly<br>covered by | <a href="#">C11D 9/444</a>                              |
| <a href="#">C11D 9/50</a>  | covered by                      | <a href="#">C11D 3/48</a>                               |
| <a href="#">C11D 9/60</a>  | covered by                      | <a href="#">C11D 9/00</a>                               |
| <a href="#">C11D 10/02</a> | covered by                      | <a href="#">C11D 3/00</a>                               |
| <a href="#">C11D 10/06</a> | covered by                      | <a href="#">C11D 9/00</a>                               |

**Project: N/A (C12G)****C12G**

**WINE; OTHER ALCOHOLIC BEVERAGES; PREPARATION THEREOF (beer [C12C](#))**

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject-The subject** matter **covered-by-for** these **IPC** groups is classified in the following CPC groups:

|                                       |            |
|---------------------------------------|------------|
| <a href="#">C12G 1/022-C12G 1/036</a> | covered by |
| <a href="#">C12G 1/067</a>            | covered by |
| <a href="#">C12G 1/073</a>            | covered by |
| <a href="#">C12G 1/09</a>             | covered by |
| <a href="#">C12G 1/10</a>             | covered by |
| <a href="#">C12G 1/12</a>             | covered by |
| <a href="#">C12G 3/07</a>             | covered by |

C12G 3/14

covered by

Project: N/A (C12H)

C12H

**PASTEURISATION; STERILISATION; PRESERVATION; PURIFICATION; CLARIFICATION; AGEING**

NOTE

When classifying in this subclass, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned.

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                                       |            |
|---------------------------------------|------------|
| <a href="#">C12H 1/044-C12H 1/048</a> | covered by |
| <a href="#">C12H 1/052-C12H 1/056</a> | covered by |
| <a href="#">C12H 1/065</a>            | covered by |
| <a href="#">C12H 1/07-C12H 1/075</a>  | covered by |
| <a href="#">C12H 1/15</a>             | covered by |
| <a href="#">C12H 3/00-C12H 3/04</a>   | covered by |

Project: N/A (C12N)

C12N

**MICROORGANISMS OR ENZYMES; COMPOSITIONS THEREOF (biocides, pest repellants or attractants, or plant growth regulators, containing microorganisms, viruses, microbial fungi, enzymes, fermentates or substances produced by or extracted from microorganisms or animal material [A01N 63/00](#); food compositions [A21](#), [A23](#); medicinal preparations [A61K](#); chemical aspects of, or use of materials for, bandages, dressings, absorbent pads or surgical articles [A61L](#); fertilisers [C05](#)); PROPAGATING, PRESERVING OR MAINTAINING MICROORGANISMS (preservation of living parts of humans or animals [A01N 1/02](#)); MUTATION OR GENETIC ENGINEERING; CULTURE MEDIA (microbiological testing media [C12Q](#))**

NOTES

1. Documents relating to the use of vectors or hosts for the preparation of specific peptides, e.g. enzymes, are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes.
2. Attention is drawn to Notes (1) to (3) following the title of Class [C12](#).
3. When classifying in this group, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned.

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|  |            |  |
|--|------------|--|
| <a href="#">C12N 1/11</a>              | covered by | <a href="#">C12N 15/79</a>   |
| <a href="#">C12N 1/13</a>              | covered by | <a href="#">C12N 15/79</a>   |
| <a href="#">C12N 1/15</a>              | covered by | <a href="#">C12N 15/80</a>   |
| <a href="#">C12N 1/19</a>              | covered by | <a href="#">C12N 15/81</a>   |
| <a href="#">C12N 1/21</a>              | covered by | <a href="#">C12N 15/74</a>   |
| <a href="#">C12N 5/02</a>              | covered by | <a href="#">C12N 5/00</a> , <a href="#">C12N 5/04</a> - <a href="#">C12N 5/166</a> |
| <a href="#">C12N 5/07 - C12N 5/095</a> | covered by | <a href="#">C12N 5/06</a> and subgroups  |
| <a href="#">C12N 5/18 - C12N 5/28</a>  | covered by | <a href="#">C12N 5/16</a> and subgroups  |



|                     |            |   |
|---------------------|------------|---|
| C12N 5/18           | covered by | <a href="#">C12N 5/16</a>                                 |
| C12N 5/20           | covered by | <a href="#">C12N 5/163</a>                                |
| C12N 5/22           | covered by | <a href="#">C12N 5/16</a>                                 |
| C12N 5/24           | covered by | <a href="#">C12N 5/163</a>                                |
| C12N 5/26           | covered by | <a href="#">C12N 5/166</a>                                |
| C12N 5/28           | covered by | <a href="#">C12N 5/166</a>                                |
| C12N 7/01           | covered by | <a href="#">C12N 7/00</a>                                 |
| C12N 9/02-C12N 9/08 | covered by |   |
| C12N 9/26           | covered by | <a href="#">C12N 9/2408</a>                               |
| C12N 9/28-C12N 9/30 | covered by |   |
| C12N 9/32           | covered by |   |
| C12N 9/34           | covered by |   |
| C12N 9/36           | covered by |   |
| C12N 9/38           | covered by | <a href="#">C12N 9/2468</a>                               |
| C12N 9/40           | covered by |   |
| C12N 9/42           | covered by | <a href="#">C12N 9/2434</a>                               |
| C12N 9/44           | covered by | <a href="#">C12N 9/2451</a>                               |
| C12N 9/46           | covered by |   |
| C12N 9/56           | covered by |   |
| C12N 9/66           | covered by |   |
| C12N 9/68           | covered by |   |
| C12N 9/70           | covered by | <a href="#">C07K 14/3153</a>                              |
| C12N 9/72           | covered by |   |
| C12N 9/74           | covered by |   |
| C12N 9/76           | covered by |   |
| C12N 15/05          | covered by | <a href="#">C12N 5/14</a>                                 |
| C12N 15/06          | covered by | <a href="#">C12N 5/16</a>                                 |
| C12N 15/07          | covered by | <a href="#">C12N 5/16</a>                                 |
| C12N 15/08          | covered by | <a href="#">C12N 5/166</a>                                |
| C12N 15/12          | covered by | <a href="#">C07K 14/435</a>                               |
| C12N 15/13          | covered by | <a href="#">C07K 16/00</a>                                |
| C12N 15/14          | covered by | <a href="#">C07K 14/765</a>                               |
| C12N 15/15          | covered by | <a href="#">C07K 14/81</a>                                |
| C12N 15/16          | covered by | <a href="#">C07K 14/575</a>                               |
| C12N 15/17          | covered by | <a href="#">C07K 14/62</a>                                |
| C12N 15/18          | covered by | <a href="#">C07K 14/61</a>                                |
| C12N 15/19          | covered by | <a href="#">C07K 14/52</a>                                |
| C12N 15/20          | covered by | <a href="#">C07K 14/555</a>                               |
| C12N 15/21          | covered by | <a href="#">C07K 14/56</a>                                |
| C12N 15/22          | covered by | <a href="#">C07K 14/565</a>                               |
| C12N 15/23          | covered by | <a href="#">C07K 14/57</a>                                |
| C12N 15/24          | covered by | <a href="#">C07K 14/54</a>                                |
| C12N 15/25          | covered by | <a href="#">C07K 14/545</a>                               |
| C12N 15/26          | covered by | <a href="#">C07K 14/55</a>                                |
| C12N 15/27          | covered by | <a href="#">C07K 14/53</a>                                |
| C12N 15/28          | covered by | <a href="#">C07K 14/525</a>                               |
| C12N 15/29          | covered by | <a href="#">C07K 14/415</a>                               |
| C12N 15/30          | covered by | <a href="#">C07K 14/44</a>                                |
| C12N 15/31          | covered by | <a href="#">C07K 14/195</a> , <a href="#">C07K 14/005</a> |
| C12N 15/32          | covered by | <a href="#">C07K 14/325</a>                               |
| C12N 15/33          | covered by | <a href="#">C07K 14/005</a>                               |

|            |            |   |
|------------|------------|---|
| C12N 15/34 | covered by | <a href="#">C07K 14/01</a>  |
| C12N 15/35 | covered by | <a href="#">C07K 14/015</a>   |
| C12N 15/36 | covered by | <a href="#">C07K 14/02</a>  |
| C12N 15/37 | covered by | <a href="#">C07K 14/025</a>   |
| C12N 15/38 | covered by | <a href="#">C07K 14/03</a>  |
| C12N 15/39 | covered by | <a href="#">C07K 14/065</a>   |
| C12N 15/40 | covered by | <a href="#">C07K 14/08</a>  |
| C12N 15/41 | covered by | <a href="#">C07K 14/085</a>   |
| C12N 15/42 | covered by | <a href="#">C07K 14/09</a>  |
| C12N 15/43 | covered by | <a href="#">C07K 14/105</a>   |
| C12N 15/44 | covered by | <a href="#">C07K 14/11</a>  |
| C12N 15/45 | covered by | <a href="#">C07K 14/115</a>   |
| C12N 15/46 | covered by | <a href="#">C07K 14/14</a>  |
| C12N 15/47 | covered by | <a href="#">C07K 14/145</a>   |
| C12N 15/48 | covered by | <a href="#">C07K 14/15</a>  |
| C12N 15/49 | covered by | <a href="#">C07K 14/155</a>   |
| C12N 15/50 | covered by | <a href="#">C07K 14/165</a>   |
| C12N 15/51 | covered by | <a href="#">C07K 14/02</a> , <a href="#">C07K 14/10</a> ,<br><a href="#">C07K 14/18</a> |
| C12N 15/53 | covered by | <b>C12N9/02</b>   |
| C12N 15/54 | covered by | <a href="#">C12N 9/10</a>   |
| C12N 15/55 | covered by | <a href="#">C12N 9/14</a>   |
| C12N 15/56 | covered by | <a href="#">C12N 9/24</a>   |
| C12N 15/57 | covered by | <a href="#">C12N 9/48</a>   |
| C12N 15/58 | covered by | <a href="#">C12N 9/6456</a>   |
| C12N 15/59 | covered by | <a href="#">C12N 9/6483</a>   |
| C12N 15/60 | covered by | <a href="#">C12N 9/88</a>   |
| C12N 15/61 | covered by | <a href="#">C12N 9/90</a>   |
| C12N 15/83 | covered by | <a href="#">C12N 15/82</a>  |
| C12N 15/84 | covered by | <a href="#">C12N 15/82</a>  |

## Project: MP0161 (C12N)

- U C12N 15/00** **Mutation or genetic engineering; DNA or RNA concerning genetic engineering, vectors, e.g. plasmids, or their isolation, preparation or purification; Use of hosts therefor (mutants or genetically engineered microorganisms, per se [C12N 1/00](#), [C12N 5/00](#), [C12N 7/00](#); new plants per se [A01H](#); plant reproduction by tissue culture techniques [A01H 4/00](#); new animals per se [A01K 67/00](#); use of medicinal preparations containing genetic material which is inserted into cells of the living body to treat genetic diseases, gene therapy [A61K 48/00](#))**
- U C12N 15/09     • Recombinant DNA-technology
- U C12N 15/63     • • Introduction of foreign genetic material using vectors; Vectors; Use of hosts therefor; Regulation of expression
- U C12N 15/79     • • • Vectors or expression systems specially adapted for eukaryotic hosts
- NOTE
- This group covers the use of eukaryotes as hosts.
- U C12N 15/85     • • • • for animal cells

- M C12N 15/8509 . . . . {for producing genetically modified animals, e.g. transgenic}

NOTE

~~The purpose~~ *Additional aspects* of the modified ~~animal is indicated~~  
~~using animals are classified in~~ the ~~codes under groups~~ *A01K 2207/00 -*  
*A01K 2267/00*

- U C12N 15/87 . . Introduction of foreign genetic material using processes not otherwise provided for, e.g. co-transformation
- U C12N 15/90 . . . Stable introduction of foreign DNA into chromosome
- U C12N 15/902 . . . . {using homologous recombination}
- M C12N 15/905 . . . . {in *geasts**yeast*}

**Project: N/A (C12P)****C12P**

**FERMENTATION OR ENZYME-USING PROCESSES TO SYNTHESISE A DESIRED CHEMICAL COMPOUND OR COMPOSITION OR TO SEPARATE OPTICAL ISOMERS FROM A RACEMIC MIXTURE** {(brewing of beer [C12C](#); producing vinegar [C12J](#); producing specific peptides or proteins [C07K](#); producing enzymes [C12N 9/00](#); DNA or RNA concerning genetic engineering, vectors, e.g. plasmids, or their isolation, preparation or purification [C12N 15/00](#); measuring or testing processes involving enzymes or microorganisms [C12Q](#); measuring or testing processes involving nucleic acid amplification reactions [C12Q 1/6844](#); fermentation processes to form a food composition, [A21](#) or [A23](#); compounds in general, see the relevant compound class, e.g. [C01](#), [C07](#))}

NOTES

1. This subclass covers the production of compounds or compositions by biochemical transformation of matter performed by using enzymes or microorganisms, wherein microorganisms are defined as any single-celled organisms, including bacteria, fungi, yeast or microalgae, or plant or mammalian cells in the form of cell cultures.
2. In this subclass, documents are primarily classified according to the compounds produced. In addition, if appropriate, classification according to the method or biocatalyst used to produce the compound is made.
3. Classification in groups [C12P 19/14](#) - [C12P 19/24](#), [C12P 39/00](#), [C12P 41/00](#) - [C12P 41/009](#) should only be made together with the corresponding product groups

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject-~~*The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

- |                              |            |                            |
|------------------------------|------------|----------------------------|
| - <a href="#">C12P 21/04</a> | covered by | <a href="#">C07K 7/50</a>  |
| - <a href="#">C12P 21/08</a> | covered by | <a href="#">C07K 16/00</a> |

**Project: N/A (C12Q)**

- C12Q 2533/00** {Reactions characterised by the enzymatic reaction principle used}
- C12Q 2535/00** {Reactions characterised by the assay type for determining the identity of a nucleotide base}
- C12Q 2537/00** {Reactions characterised by the reaction format or use of a specific feature}
- C12Q 2539/00** {Reactions characterised by analysis of gene expression or genome comparison}

|              |   |
|--------------|---|
| C12Q 2541/00 | {Reactions characterised by directed evolution}   |
| C12Q 2543/00 | {Reactions characterised by the reaction site, e.g. cell or chromosome}                   |
| C12Q 2545/00 | {Reactions characterised by their quantitative nature}                                    |
| C12Q 2547/00 | {Reactions characterised by the features used to prevent contamination}                   |
| C12Q 2549/00 | {Reactions characterised by the features used to influence the efficiency or specificity} |

## Project: N/A (C12R)

C12R

## PROCESSES USING MICROORGANISMS

NOTE

The basis for the bacteria terminology is "Bergey's Manual of Determinative Bacteriology", Eighth Edition, 1975.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

C12R 1/92-C12R 1/94 covered by

## Project: N/A (C13B)

C13B

**PRODUCTION OF SUCROSE; APPARATUS SPECIALLY ADAPTED THEREFOR (chemically synthesised sugars or sugar derivatives [C07H](#); fermentation or enzyme-using processes for preparing compounds containing saccharide radicals [C12P 19/00](#))**

NOTE

In this subclass, the following terms or expressions are used with the meanings indicated :

- "sugar" is used in its non-scientific meaning and refers to sucrose, also called "table sugar" or saccharose, a white crystalline disaccharide;
- "sugar juices" are solutions of sugar, essentially comprising sucrose, which are derived from different plants, e.g. beet, cane or maple;
- "syrops" are highly concentrated sugar juices.

## Project: N/A (C22B)

C22B

**PRODUCTION AND REFINING OF METALS (electrolytic [C25](#)); PRETREATMENT OF RAW MATERIALS**

NOTE

In this subclass, groups for obtaining metals include obtaining the metals by non-metallurgical processes, and obtaining metal compounds by metallurgical processes, {as far as specifically indicated in the relevant groups} . Thus, for example, group [C22B 11/00](#) covers the production of silver by reduction of ammoniacal silver oxide in solution, and group [C22B 17/00](#) includes the production of cadmium oxide by a metallurgical process. Furthermore, although compounds of arsenic and antimony are classified in [C01G](#), production of the elements themselves is included in [C22B](#), as well as the production of their compounds by metallurgical processes.

WARNING

The following IPC groups are not **used** in the CPC **system** *scheme*. **Subject** *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

|                       |            |                             |
|-----------------------|------------|-----------------------------|
| C22B 3/26 - C22B 3/40 | covered by | <a href="#">C22B 3/0005</a> |
| C22B 9/187            | covered by |                             |
| C22B 9/193            | covered by |                             |
| C22B 9/21             | covered by |                             |
| C22B 15/02-C22B 15/14 | covered by |                             |

Project: N/A (C22C)

C22C

ALLOYS (flints [C06C 15/00](#); treatment of alloys [C21D](#), [C22F](#))

NOTES

1. In this subclass, the following terms or expressions are used with the meanings indicated:

- "alloys" includes also:
  - a. metallic composite materials containing a substantial proportion of fibres or other somewhat larger particles;
  - b. ceramic compositions containing free metal bonded to carbides, diamond, oxides, borides, nitrides or silicides, e.g. cermets, or other metal compounds, e.g. oxynitrides or sulfides, other than as macroscopic reinforcing agents;
- "based on" requires at least 50% by weight of the specified constituent or of the specified group of constituents.

2. In the absence of an indication to the contrary, in groups [C22C 5/00](#) - [C22C 32/00](#) an alloy is classified in the last appropriate place.

3. In this subclass it is desirable to classify the individual aspects of combinations of processes or materials for powder metallurgy using Combination Sets with symbols chosen from groups [C22C 1/00](#) - [C22C 43/00](#) or from groups [B22F 1/00](#) - [B22F 9/00](#).

4. In this subclass the special database "ALLOYS" is used. This system includes patent documents classified in groups [C22C 1/04](#) and [C22C 5/00](#) - [C22C 49/14](#) and provides information on the composition of the alloys, their uses and characteristics.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

|   |            |
|---|------------|
| <a href="#">C22C 101/00-C22C 101/22</a> | covered by |
| <a href="#">C22C 111/00-C22C 111/02</a> | covered by |
| <a href="#">C22C 121/00-C22C 121/02</a> | covered by |

## Project: MP0386 (C23C)

|   |            |  |   |            |   |                            |            |   |
|---|------------|--|---|------------|---|----------------------------|------------|---|
| M   | C23C       | COATING METALLIC MATERIAL; COATING MATERIAL WITH METALLIC MATERIAL; SURFACE TREATMENT OF METALLIC MATERIAL BY DIFFUSION INTO THE SURFACE, BY CHEMICAL CONVERSION OR SUBSTITUTION; COATING BY VACUUM EVAPORATION, BY SPUTTERING, BY ION IMPLANTATION OR BY CHEMICAL VAPOUR DEPOSITION, IN GENERAL ( <del>applying liquids or other fluent materials to surfaces in general B05</del> ; making metal-coated products by extrusion <a href="#">B21C 23/22</a> ; covering with metal by connecting pre-existing layers to articles, <del>see the relevant places, e.g. <a href="#">B21D 39/00</a>, <a href="#">B23K</a></del> ; <del>working of metal by the action of a high concentration of electric current on a workpiece using an electrode B23H</del> ; metallising of glass <a href="#">C03C</a> ; metallising mortars, concrete, artificial stone, ceramics or natural stone <a href="#">C04B 41/00</a> ; <del>paints varnishes, laquers C09D</del> ; enamelling of, or applying a vitreous layer to, metals <a href="#">C23D</a> ; <del>inhibiting corrosion of metallic material or incrustation in general C23F</del> ; <del>treating metal surfaces or coating of metals by electrolysis or electrophoresis C25D</del> ; single-crystal film growth <a href="#">C30B</a> ; <del>manufacture of semiconductor devices H01L</del> ; <del>by metallising textiles D06M 11/83</del> ; <del>manufacture of printed circuits H05K</del> ; <del>decorating textiles by locally metallising D06Q 1/04</del> ) |   |            |   |                            |            |   |
|   |            | <u>NOTE</u><br>In this subclass, an operation is considered as pre-treatment or after-treatment when it is specially adapted for, but quite distinct from, the coating process concerned and constitutes an independent operation. If an operation results in the formation of a permanent sub- or upper layer, it is not considered as pre-treatment or after-treatment and is classified as a multi-coating process.   |   |            |   |                            |            |   |
|   |            | <u>WARNING</u><br>The following IPC groups are not <del>used</del> in the CPC scheme. <del>Subject</del> <i>The subject</i> matter <del>covered by</del> <i>for</i> these <i>IPC</i> groups is classified in the following CPC groups:<br><table><tr><td><a href="#">C23C 14/36</a> - <a href="#">C23C 14/44</a></td><td>covered by</td><td><a href="#">C23C 14/34</a> and subgroups.</td></tr><tr><td><a href="#">C23C 18/28</a></td><td>covered by</td><td><a href="#">C23C 18/2006</a> - <a href="#">C23C 18/2093</a></td></tr></table>   | <a href="#">C23C 14/36</a> - <a href="#">C23C 14/44</a> | covered by | <a href="#">C23C 14/34</a> and subgroups. | <a href="#">C23C 18/28</a> | covered by | <a href="#">C23C 18/2006</a> - <a href="#">C23C 18/2093</a> |
| <a href="#">C23C 14/36</a> - <a href="#">C23C 14/44</a> | covered by | <a href="#">C23C 14/34</a> and subgroups.  |   |            |   |                            |            |   |
| <a href="#">C23C 18/28</a>                              | covered by | <a href="#">C23C 18/2006</a> - <a href="#">C23C 18/2093</a>  |   |            |   |                            |            |   |
| U   | C23C 2/00  | Hot-dipping or immersion processes for applying the coating material in the molten state without affecting the shape; Apparatus therefor   |   |            |   |                            |            |   |
| M   | C23C 2/14  | <ul style="list-style-type: none"><li>Removing excess of molten coatings; Controlling or regulating the coating thickness (<del>controlling or regulating thickness in general G05D 5/02</del>)</li></ul>  |   |            |   |                            |            |   |
| U   | C23C 8/00  | Solid state diffusion of only non-metal elements into metallic material surfaces (diffusion of silicon <a href="#">C23C 10/00</a> ); Chemical surface treatment of metallic material by reaction of the surface with a reactive gas, leaving reaction products of surface material in the coating, e.g. conversion coatings, passivation of metals ( <a href="#">C23C 14/00</a> takes precedence)  |   |            |   |                            |            |   |
| U   | C23C 8/06  | <ul style="list-style-type: none"><li>using gases (<a href="#">C23C 8/36</a> takes precedence)</li></ul>   |   |            |   |                            |            |   |
| M   | C23C 8/36  | <ul style="list-style-type: none"><li>using ionised gases, e.g. ionitriding (<del>discharge tubes with provision for introducing objects or material to be exposed to the discharge H01J 37/00</del>)</li></ul>  |   |            |   |                            |            |   |
| M   | C23C 14/00 | Coating by vacuum evaporation, by sputtering or by ion implantation of the coating forming material ( <del>discharge tubes with provision for introducing objects or material to be exposed to the discharge H01J 37/00</del> )  |   |            |   |                            |            |   |
| U   | C23C 14/22 | <ul style="list-style-type: none"><li>characterised by the process of coating</li></ul>  |   |            |   |                            |            |   |
| M   | C23C 14/54 | <ul style="list-style-type: none"><li>Controlling or regulating the coating process (<del>controlling or regulating in general G05</del>)</li></ul>  |   |            |   |                            |            |   |



- U C23C 16/00** Chemical coating by decomposition of gaseous compounds, without leaving reaction products of surface material in the coating, i.e. chemical vapour deposition [CVD] processes (reactive sputtering or vacuum evaporation [C23C 14/00](#))
- U C23C 16/44** • characterised by the method of coating ([C23C 16/04](#) takes precedence)
- M C23C 16/52** • • Controlling or regulating the coating process ~~{{[C23C 16/45557](#), [C23C 16/279](#) take precedence-}; controlling or regulating in general G05}}~~
- M C23C 18/00** Chemical coating by decomposition of either liquid compounds or solutions of the coating forming compounds, without leaving reaction products of surface material in the coating ~~(chemical surface reaction [C23C 8/00](#), [C23C 22/00](#))~~; Contact plating
- NOTE  
This group covers also suspensions containing reactive liquids and non-reactive solid particles.
- M C23C 20/00** Chemical coating by decomposition of either solid compounds or suspensions of the coating forming compounds, without leaving reaction products of surface material in the coating ~~(chemical surface reaction [C23C 8/00](#), [C23C 22/00](#))~~
- NOTE  
This group covers also suspensions containing non-reactive liquids and reactive solid particles.
- M C23C 22/00** Chemical surface treatment of metallic material by reaction of the surface with a reactive liquid, leaving reaction products of surface material in the coating, e.g. conversion coatings, passivation of metals ~~(wash primers [G09D 5/12](#))~~
- NOTES
1. This group covers also suspensions containing reactive liquids and non-reactive solid particles.
  2. In groups [C23C 22/02](#) - [C23C 22/86](#), in the absence of an indication to the contrary, classification is made in the last appropriate place.
  3. Rejuvenating of the bath is classified in the appropriate place for the specific bath composition.
- U C23C 22/73** • characterised by the process
- M C23C 22/77** • • Controlling or regulating of the coating process ~~(controlling or regulating in general G05)~~
- M C23C 24/00** Coating starting from inorganic powder (spraying of the coating material in molten state [C23C 4/00](#); solid state diffusion [C23C 8/00](#) - [C23C 12/00](#); ~~manufacture of composite layers, workpieces or articles by sintering metallic powder [B22F 7/00](#); friction welding [B23K 20/12](#))~~
- U C23C 26/00** Coating not provided for in groups [C23C 2/00](#) - [C23C 24/00](#)
- M C23C 26/02** • applying molten material to the substrate ~~(applying melts to surfaces, in general B05)~~

**Project: N/A (C23F)****C23F**

**NON-MECHANICAL REMOVAL OF METALLIC MATERIAL FROM SURFACE** (working metal by laser beams [B23K 26/00](#); desurfacing by applying flames [B23K 7/00](#); working of metal by electro-erosion [B23H](#); producing decorative effects by removing surface material, e.g. by engraving, by etching, [B44C 1/22](#); electrolytic etching or polishing [C25F](#)); **INHIBITING CORROSION OF METALLIC MATERIAL OR INCRUSTATION IN GENERAL; MULTI-STEP PROCESSES FOR SURFACE TREATMENT OF METALLIC MATERIAL INVOLVING AT LEAST ONE PROCESS PROVIDED FOR IN CLASS [C23](#) AND AT LEAST ONE PROCESS COVERED BY SUBCLASS [C21D](#) OR [C22F](#) OR CLASS [C25](#)**

**NOTES**

1. protective layers or coating compositions or methods of applying them; these are classified in the appropriate places, e.g. [B05](#), [B44](#), [C09D](#), [C23C](#).
2. mechanical devices or constructional features of particular articles for inhibiting incrustation; these are classified in the appropriate places, e.g. in pipes or pipe fittings [F16L 58/00](#).
3. articles characterised by being made of materials selected for their properties of resistance to corrosion or incrustation; these are classified in the appropriate places, e.g. turbine blades [F01D 5/28](#).

**WARNING**

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these **IPC** groups is classified in the following CPC groups:

[C23F 1/24](#)

covered by

**Project: N/A (C25B)****C25B**

**ELECTROLYTIC OR ELECTROPHORETIC PROCESSES FOR THE PRODUCTION OF COMPOUNDS OR NON-METALS; APPARATUS THEREFOR** (anodic or cathodic protection [C23F 13/00](#); single-crystal growth [C30B](#))

**NOTES**

1. In this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place.
2. Compounds of particular interest are also classified in the relevant classes, e.g. [C01](#), [C07](#).

**WARNING**

The following IPC groups are not **used** in the CPC **system** *scheme*. **Subject** *The subject matter covered by for* these **IPC** groups is classified in the following CPC groups:

[C25B 11/06](#)

covered by

[B01J](#), [C25B 11/0442](#)

[C25B 11/08](#)

covered by

[B01J](#), [C25B 11/0442](#)

[C25B 11/10](#)

covered by

[C25B 11/0442](#)

**Project: N/A (C25D)****C25D**

**PROCESSES FOR THE ELECTROLYTIC OR ELECTROPHORETIC PRODUCTION OF COATINGS; ELECTROFORMING (decorating textiles by metallising [D06Q 1/04](#); manufacturing printed circuits by metal deposition [H05K 3/18](#)); APPARATUS THEREFOR**

WARNING

The following IPC groups are not **used** in the CPC **system** **scheme**. **Subject** **The** **subject** matter **covered by** **for** these **IPC** groups is classified in the following CPC groups:-

|                            |            |   |
|----------------------------|------------|---|
| <a href="#">C25D 2/00</a>  | covered by |   |
| <a href="#">C25D 5/24</a>  | covered by | <a href="#">C25D 5/34</a>                             |
| <a href="#">C25D 5/26</a>  | covered by | <a href="#">C25D 5/36</a>                             |
| <a href="#">C25D 5/28</a>  | covered by | <a href="#">C25D 5/38</a>                             |
| <a href="#">C25D 5/30</a>  | covered by | <a href="#">C25D 5/42</a> , <a href="#">C25D 5/44</a> |
| <a href="#">C25D 5/32</a>  | covered by | <a href="#">C25D 5/46</a>                             |
| <a href="#">C25D 13/06</a> | covered by | <a href="#">C09D 5/44</a>                             |
| <a href="#">C25D 13/08</a> | covered by | <a href="#">C09D 5/4476</a>                           |
| <a href="#">C25D 13/10</a> | covered by | <a href="#">C09D 5/448</a>                            |
| <a href="#">C25D 19/00</a> | covered by | <a href="#">C25D 17/00</a>                            |

**Project: N/A (C30B)****C30B**

**SINGLE-CRYSTAL-GROWTH (by using ultra-high pressure, e.g. for the formation of diamonds [B01J 3/06](#)); UNIDIRECTIONAL SOLIDIFICATION OF EUTECTIC MATERIAL OR UNIDIRECTIONAL DEMIXING OF EUTECTOID MATERIAL; REFINING BY ZONE-MELTING OF MATERIAL (zone-refining of metals or alloys [C22B](#)); PRODUCTION OF A HOMOGENEOUS POLYCRYSTALLINE MATERIAL WITH DEFINED STRUCTURE (casting of metals, casting of other substances by the same processes or devices [B22D](#); working of plastics [B29](#); modifying the physical structure of metals or alloys [C21D](#), [C22F](#)); SINGLE CRYSTALS OR HOMOGENEOUS POLYCRYSTALLINE MATERIAL WITH DEFINED STRUCTURE; AFTER-TREATMENT OF SINGLE CRYSTALS OR A HOMOGENEOUS POLYCRYSTALLINE MATERIAL WITH DEFINED STRUCTURE (for producing semiconductor devices or parts thereof [H01L](#)); APPARATUS THEREFOR**

NOTES

1. In this subclass, the following expressions are used with the meaning indicated:

- "single-crystal" includes also twin crystals and a predominantly single crystal product;
- "homogeneous polycrystalline material" means a material with crystal particles, all of which have the same chemical composition;
- "defined structure" means the structure of a material with grains which are oriented in a preferential way or have larger dimensions than normally obtained.

2. In this subclass:

- the preparation of single crystals or a homogeneous polycrystalline material with defined structure of particular materials or shapes is classified in the group for the process as well as in group [C30B 29/00](#);

- an apparatus specially adapted for a specific process is classified in the appropriate group for the process. Apparatus to be used in more than one kind of process is classified in group [C30B 35/00](#).
3. After the notation of [C30B](#) and separated therefrom by a + sign, notations concerning the particular composition or shape of the material may be added. These notations are selected from [C30B 29/00](#).  
Example: A crystal-growth process by zone-melting directly related to  $\text{Al}_2\text{O}_3$  crystal material is classified in [C30B 13/00](#) + [C30B 29/20](#)

#### WARNING

The following IPC groups are not **used** in the CPC **system scheme**. **Subject** *The subject matter covered by for* these **IPC** groups is classified in the following CPC groups:

[C30B 29/64](#), [C30B 29/66](#) covered by [C30B 29/60](#)

### Project: RP0329 (C40B)

M C40B

#### COMBINATORIAL CHEMISTRY; LIBRARIES, e.g. CHEMICAL LIBRARIES, IN SILICO LIBRARIES

##### NOTES

1. In this subclass, the first place priority rule is applied, i.e. at each hierarchical level, classification is made in the first appropriate place.
2. When classifying in this subclass, subject matter of interest is also classified in other appropriate places:
  - library members are also classified in the appropriate places elsewhere in the IPC, (e.g. in section [C](#)) according to established procedure relating to "Markush"-type formulae (see paragraph 101 of the Guide);
  - methods or apparatus covered by this subclass are also classified for their biological, chemical, physical or other features in the appropriate places in the IPC, if such features are of interest, e.g.

|   |  |
|---|--|
| <a href="#">A01N</a>  | Biocides   |
| <a href="#">A61K</a>  | Preparations for medical, dental or toilet purposes  |
| <del>A61P</del> <a href="#">A61P</a>                            | <del>Therapeutic</del> <i>Specific therapeutic</i> activity of <i>chemical</i> compounds <i>or medicinal preparations</i>  |
| <a href="#">B01D</a>  | Separation   |
| <a href="#">B01J</a>  | Chemical or physical processes, e.g. catalysis; Apparatus therefor   |
| <a href="#">B01L</a>  | Chemical or physical laboratory apparatus  |
| <a href="#">B29</a>   | Shaped plastics  |
| <a href="#">C01</a> , <a href="#">C07</a> , <a href="#">C08</a> | Inorganic, organic or organic macromolecular compounds; Methods of preparation or separation thereof   |
| <a href="#">C12</a>   | Biochemistry. microbiology, enzymology including microorganisms or enzymes, preparing them, using them to synthesis compounds or compositions; Measuring or testing processes involving microorganisms or enzymes; Mutation or genetic engineering |
| <a href="#">C22</a>   | Metal alloys   |
| <a href="#">G01N</a>  | Chemical or physical analysis  |
| <a href="#">G01R</a> , <a href="#">G01T</a>                     | Physical measurements methods; Apparatus thereof   |
| <a href="#">G03F</a>  | Photomechanical methods  |
| <a href="#">G06F</a>  | Electrical digital data processing   |
| <a href="#">G06K</a>  | Data processing  |
| <a href="#">G06T</a>  | Image data processing  |

[G09F](#)

Displaying; Advertising

3. {[C12N 15/1034](#)-[C12N 15/1093](#) always take precedence over [C40B](#)}

**Project: N/A (D01D)**

**D01D**

**MECHANICAL METHODS OR APPARATUS IN THE MANUFACTURE OF ARTIFICIAL FILAMENTS, THREADS, FIBRES, BRISTLES OR RIBBONS**

NOTES

1. Attention is drawn to the note following the title of Class [D01](#).
2. Apparatus specially adapted for the manufacture of carbon filaments are classified in group [D01F 9/12](#)

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:  
[D01D 5/10](#) covered by [D01D 5/08](#) and subgroups

**Project: N/A (D01H)**

**U D01H 3/00**

**Spinning or twisting machines in which the product is wound-up intermittently, e.g. mules**

U D01H 3/02  
D01H 3/26

- Details (drafting arrangements [D01H 5/00](#); twisting arrangements [D01H 7/00](#))
- • Driving or stopping arrangements not otherwise provided for; Locking motions (safety devices [D01H 13/14](#) ){~~Control of machines~~; *Control of machines*}

**U D01H 7/00**

**Spinning or twisting arrangements (for open-end spinning [D01H 4/00](#))**

U D01H 7/02  
U D01H 7/52  
D01H 7/60

- for imparting permanent twist
- • Ring-and-traveller arrangements
- • • Rings or travellers; Manufacture thereof not otherwise provided for (hand tools for applying travellers to rings [D01H 17/02](#) ){~~Cleaning means for rings~~; *Cleaning means for rings*}

**Project: N/A (D03C)**

**D03C**

**SHEDDING MECHANISMS; PATTERN CARDS OR CHAINS; PUNCHING OF CARDS; DESIGNING PATTERNS**

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:  
[D03C 9/04](#) covered by [D03C 9/028](#)

**Project: RP0505 (D04D)**

**D04D 9/00**

**Ribbons, tapes, welts, bands, beadings, or other decorative or ornamental strips, not otherwise provided for (made by laminating [B32B](#); binders for packaging purposes [B65D](#); adhesive tape ~~C09J 7/02~~ *C09J 7/20*; made by weaving [D03](#); made by braiding [D04C](#))**

**Project: N/A (D06L)****D06L**

**DRY-CLEANING, WASHING OR BLEACHING FIBRES, FILAMENTS, THREADS, YARNS, FABRICS, FEATHERS OR MADE-UP FIBROUS GOODS; BLEACHING LEATHER OR FURS**

NOTES

1. In this subclass, the term “bleaching” also covers “optical bleaching”.
2. This subclass does not cover treatment of textiles by purely mechanical means, which is covered by subclasses [D06B](#), [D06C](#) or [D06F](#).

**Project: N/A (D06N)****D06N**

**WALL, FLOOR OR LIKE COVERING MATERIALS, e.g. LINOLEUM, OILCLOTH, ARTIFICIAL LEATHER, ROOFING FELT, CONSISTING OF A FIBROUS WEB COATED WITH A LAYER OF MACROMOLECULAR MATERIAL; FLEXIBLE SHEET MATERIAL NOT OTHERWISE PROVIDED FOR (laminates in general [B32B](#); coated webs which retain the character of paper or cardboard [D21](#))**

NOTE

Layered products classified in this subclass are also classified in subclass [B32B](#).

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject-***The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

|                           |            |   |
|---------------------------|------------|---|
| <a href="#">D06N 7/02</a> | covered by | <a href="#">D06M</a> , <a href="#">D06N</a> |
| <a href="#">D06N 7/04</a> | covered by | <a href="#">D06M</a> , <a href="#">D06N</a> |
| <a href="#">D06N 7/06</a> | covered by | <a href="#">D06M</a> , <a href="#">D06N</a> |

**U D06N 7/00**

**Flexible sheet materials not otherwise provided for, e.g. textile threads, filaments, yarns or tow, glued on macromolecular material {, e.g. fibrous top layer with resin backing, plastic naps or dots on fabrics}**

U D06N 7/0005

- {Floor covering on textile basis comprising a fibrous substrate being coated with at least one layer of a polymer on the top surface}

D06N 7/0028

- {characterised by colour effects, e.g. *craquelècraquelé*, reducing gloss (terrazzo by sintering [D06N 7/0057](#))}

**Project: N/A (D06P)****D06P**

**DYEING OR PRINTING TEXTILES; DYEING LEATHER, FURS, OR SOLID MACROMOLECULAR SUBSTANCES IN ANY FORM (for mechanical matters [D06B](#), [D06C](#); surface treatment of fibres or filaments from glass, minerals or slags [C03C 25/00](#))**

WARNING

The following IPC groups are not **used** in the CPC **system***scheme*. **Subject-***The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

|                                       |            |                                      |
|---------------------------------------|------------|--------------------------------------|
| <a href="#">D06P 3/84</a>             | covered by | <a href="#">D06P 3/82</a>            |
| <a href="#">D06P 3/85</a>             | covered by | <a href="#">D06P 3/82</a>            |
| <a href="#">D06P 3/852</a>            | covered by | <a href="#">D06P 3/82</a>            |
| <a href="#">D06P 3/86</a>             | covered by | <a href="#">D06P 3/82</a>            |
| <a href="#">D06P 3/87</a>             | covered by | <a href="#">D06P 3/82</a>            |
| <a href="#">D06P 3/872</a>            | covered by | <a href="#">D06P 3/82</a>            |
| <a href="#">D06P 3/874</a>            | covered by | <a href="#">D06P 3/82</a>            |
| <a href="#">D06P 5/24 - D06P 5/28</a> | covered by | <a href="#">D06P 5/003</a> and s.gr. |



**Project: N/A (D21H)****D21H**

**PULP COMPOSITIONS; PREPARATION THEREOF NOT COVERED BY SUBCLASSES [D21C](#) OR [D21D](#); IMPREGNATING OR COATING OF PAPER; TREATMENT OF FINISHED PAPER NOT COVERED BY CLASS [B31](#) OR SUBCLASS [D21G](#); PAPER NOT OTHERWISE PROVIDED FOR**

NOTES

1. This subclass covers also pulp compositions for the preparation of ~~fireboard~~[fibreboard](#) or other fibrous articles by wet processes.
2. In this subclass, the following terms are used with the meaning indicated:
  - "pulp" means a dispersion, { e.g. an aqueous ~~sus-pension~~[suspension](#), } comprising paper-making fibres and optional additives, which is to be processed, and covers the term "stock"; it also means dry paper-making fibres which are to be made into paper by either wet or dry processes;
  - "paper" means paper, cardboard or wet-laid non-woven fabrics.
3. In groups [D21H 11/00](#) - [D21H 15/00](#), in the absence of an indication to the contrary, classification is made in the last appropriate place.
4. Attention is drawn to the use of Combination Sets as specified in the Notes after groups [D21H 17/00](#), [D21H 17/69](#), [D21H 17/71](#), [D21H 19/00](#), [D21H 21/00](#), [D21H 21/14](#), [D21H 23/00](#), [D21H 23/22](#), [D21H 25/00](#) and [D21H 27/00](#).

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~[The subject](#) matter ~~covered by~~[for](#) these [IPC](#) groups is classified in the following CPC groups:

[D21H 27/12](#)

covered by

**Project: RP0505 (D21H)****U D21H 5/00**

**{Special paper or cardboard not otherwise provided for (duplicating or recording paper [B41M](#))}**

D21H 5/0075

- {Anti-friction, anti-abrasive or release paper (processes for obtaining an anti-friction or anti-adhesive surface [B05D 5/08](#); adhesive materials on paper characterised by the release coating composition ~~G09J 7/04~~[C09J 7/21](#))}

D21H 5/0082

- {Wall papers (printed wallpapers [B41M 3/18](#); pregummed wall paper ~~G09J 7/04~~[C09J 7/21](#))}

**U D21H 27/00**

**Special paper not otherwise provided for, e.g. made by multi-step processes**

NOTES

1. This group provides for the classification of paper with special properties or applications which are only partially or not at all provided for elsewhere in the classification. Whenever possible, however, these papers are classified according to the criteria used in the other groups of this subclass.
2. In this group, it is desirable to classify the individual constituents using Combination Sets with symbols chosen from groups [D21H 11/00](#) - [D21H 25/00](#).

U D21H 27/18

- Paper- or board-based structures for surface covering

D21H 27/20

- Flexible structures being applied by the user, e.g. wallpaper (printed wallpapers [B41M 3/18](#); paperhanging [B44C 7/00](#); pregummed wallpaper ~~G09J 7/04~~[C09J 7/21](#))

**Project: N/A (D21J)****D21J 3/00**

**Manufacture of articles by pressing wet fibre pulp, or papier-~~mâché~~[mâché](#), between moulds**

**D21J 5/00** Manufacture of hollow articles by transferring sheets, produced from fibres suspensions or papier-~~mâché~~~~mâché~~ by suction on wire-net moulds, to couch-moulds

**D21J 7/00** Manufacture of hollow articles from fibre suspensions or papier-~~mâché~~~~mâché~~ by deposition of fibres in or on a wire-net mould

## Project: N/A (E01C)

**U E01C 13/00** Pavings or foundations specially adapted for playgrounds or sports grounds; {Drainage, irrigation or heating of sports grounds}{general layout [A63C 19/00](#)}

**U E01C 13/06** • Pavings made in situ, (e.g. for sand grounds, clay courts [E01C 13/003](#), ([E01C 13/08](#), [E01C 13/10](#) take precedence)

**E01C 13/065** • • {at least one ~~in situ~~-~~situ~~ layer consisting of or including bitumen, rubber or plastics}

## Project: N/A (E01D)

**E01D** CONSTRUCTION OF BRIDGES, {ELEVATED ROADWAYS} OR VIADUCTS; ASSEMBLY OF BRIDGES (bridges extending between terminal buildings and aircraft for embarking or disembarking passengers [B64F 1/305](#); {tracks for special kinds of railways [E01B 25/00](#); culverts [E01F 5/005](#)})

### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~-~~The subject~~ matter ~~covered by~~-~~for~~ these ~~IPC~~ groups is classified in the following CPC groups:

[E01D 24/00](#) covered by

## Project: N/A (E01F)

**E01F** ADDITIONAL WORK, SUCH AS EQUIPPING ROADS OR THE CONSTRUCTION OF PLATFORMS, HELICOPTER LANDING STAGES, SIGNS, SNOW FENCES, OR THE LIKE

### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~-~~The subject~~ matter ~~covered by~~-~~for~~ these ~~IPC~~ groups is classified in the following ~~CPC~~ groups:

[E01F 15/10](#) covered by [E01F 15/02](#)

**U E01F 15/00** Safety arrangements for slowing, redirecting or stopping errant vehicles, e.g. guard posts or bollards; Arrangements for reducing damage to roadside structures due to vehicular impact (arrangements for fastening signs or signals to safety barriers or the like [E01F 9/669](#); for forcibly arresting vehicles [E01F 13/00](#))

**U E01F 15/02** • Continuous barriers extending along roads or between traffic lanes (crossable-lane separators [E01F 9/588](#))

**U E01F 15/06** • • essentially made of cables, nettings or the like ([E01F 15/10](#), [E01F 15/12](#) take precedence; protection against falling rocks [E01F 7/04](#); arresting gear for aircraft [B64F 1/02](#))

**E01F 15/065** • • • {the barrier members being made of essentially non-metallic materials, e.g. ~~naturel~~~~natural~~ or synthetic fibres or webbing}

**Project: N/A (E02D)****E02D**

**FOUNDATIONS; EXCAVATIONS; EMBANKMENTS (specially adapted for hydraulic engineering [E02B](#)); UNDERGROUND OR UNDERWATER STRUCTURES {(tunnels, tunnelling, mining [E21](#))}**

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[E02D 29/09](#)

covered by

[E02D 29/06](#)**E02D 2450/00****{Gaskets}****Project: N/A (E02F)****E02F**

**DREDGING; SOIL-SHIFTING (winning peat [E21C 49/00](#))**

NOTE

This subclass covers :

- primarily equipment for excavating or loosening earth or for moving loose earth;
- equipment for working similarly on other materials and similar equipment for loading or unloading materials

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[E02F 3/39](#)

covered by

[E02F 3/286](#), [E02F 3/306](#),  
[E02F 3/3402](#)[E02F 3/85](#)

covered by

[E02F 3/841](#), [E02F 3/842](#),  
[E02F 3/844](#), [E02F 3/845](#),  
[E02F 3/847](#)**Project: RP0494 (E03B)****U E03B 7/00**

**Water main or service pipe systems (pipes or tubes in general [F16L](#))**

E03B 7/09

- Component parts or accessories (tools for cleaning pipes [B08B 9/02](#); devices for preventing contamination of drinking water pipes for domestic use [E03C 1/10](#); devices for preventing damage in case of bursts of pipes [F16L](#); heating *or cooling* of pipes ~~in general or pipe systems~~ [F16L 53/00](#))

**Project: N/A (E03D)****U E03D 1/00**

**Water flushing devices with cisterns {; Setting up a range of flushing devices or water-closets; Combinations of several flushing devices}**

E03D 1/30

- Valves for high or low level cisterns; *Their arrangement (inlet valves, valves in general [F16K](#) )*; ~~Their arrangement (inlet valves, valves in general [F16K](#) )~~ {Flushing mechanisms in the cistern, optionally with provisions for a pre-or a post- flushing and for cutting off the flushing mechanism in case of leakage (flushing valves [E03D 1/142](#), [E03D 1/186](#), [E03D 1/266](#), [E03D 1/286](#))}

E03D 9/00 Sanitary or other accessories for lavatories (hand tools for cleaning the ~~toilets~~*toilet* bowl [A47K 11/10](#); seats or covers for closets [A47K 13/00](#); body supports, other than seats for closets [A47K 17/02](#); devices for preventing contamination of drinking-water pipes [E03C 1/10](#) )~~{Devices for cleaning or disinfecting the toilet room or the toilet bowl; Devices for cleaning or disinfecting the toilet room or the toilet bowl}~~; Devices for eliminating smells (cleaning, disinfecting or deodorising the seat [A47K 13/30](#))

U E03D 11/00 Other component parts of water-closets (pipe-joints or couplings in general [F16L](#) ), e.g. noise-reducing means in the flushing system (noise-reducing means in combination with flushing valves [E03D 9/14](#)), flushing pipes mounted in the bowl, seals for the bowl outlet, devices preventing overflow of the bowl contents; devices forming a water seal in the bowl after flushing, devices eliminating obstructions in the bowl outlet or preventing backflow of water and excrements from the waterpipe}

E03D 11/02 • Water-closet bowls (auxiliary chambers with connections to flushing water for bowl-cleaning utensils [E03D 9/06](#); modified for using upwardly-directed sprays [E03D 9/08](#); seats or covers [A47K 13/00](#) )~~{Bowls with a double odour seal optionally with provisions for a good siphonic action; Bowls with a double odour seal optionally with provisions for a good siphonic action}~~; siphons as part of the bowl (parts or details of bowls [E03D 11/13](#))

E03D 13/00 ~~Urinals (without flushing devices [A47K 11/00](#) )~~; ~~Urinals (without flushing devices [A47K 11/00](#) )~~~~{Means for connecting the urinal to the flushing pipe and the wastepipe; Splashing shields for urinals}~~

## Project: N/A (E04B)

E04B GENERAL BUILDING CONSTRUCTIONS; WALLS, e.g. PARTITIONS; ROOFS; FLOORS; CEILINGS; INSULATION OR OTHER PROTECTION OF BUILDINGS (border constructions of opening in walls, floors or ceilings [E06B 1/00](#); {electromagnetic shielding [H05K 9/0001](#)})

### NOTE

In this subclass, the following term is used with the meaning indicated:

- "ceiling" includes all the finishing material concealing the underside of the load-carrying ceiling structure or roof structure.

### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                            |            |                           |
|----------------------------|------------|---------------------------|
| <a href="#">E04B 1/682</a> | covered by | <a href="#">E04B 1/68</a> |
| <a href="#">E04B 1/684</a> | covered by | <a href="#">E04B 1/68</a> |
| <a href="#">E04B 1/686</a> | covered by | <a href="#">E04B 1/68</a> |

U E04B 1/00 Constructions in general; Structures which are not restricted either to walls, e.g. partitions, or floors or ceilings or roofs (scaffolds, shutterings [E04G](#); structures specially adapted for buildings for special purposes, general layout of buildings, e.g. modular co-ordination, [E04H](#); the particular parts of buildings, *see the relevant groups for those parts*)

U E04B 1/32 • Arched structures; Vaulted structures; Folded structures ({[E04B 1/34378](#) takes precedence; } vaulted roofs [E04B 7/08](#))

E04B 2001/3217 • {~~Auxilliary~~*Auxiliary* supporting devices used during erection of the arched structures}

U E04B 2001/3258 • {comprised entirely of a single self-supporting panel}

E04B 2001/3264 • • {hardened ~~in~~*in situ*-situ}

- U E04B 1/35
- Extraordinary methods of construction, e.g. lift-slab, jack-block ([E04B 1/34](#) takes precedence; falsework, shuttering for shaping walls, floors, ceilings or roofs *in situ* [E04G 11/04](#); conveying or assembling of building materials [E04G 21/00](#); working measures on existing buildings [E04G 23/00](#))
- E04B 1/3505
- {characterised by the *in situ*-*situ* moulding of large parts of a structure ([E04B 1/3511](#), [E04B 1/3516](#), [E04B 1/3522](#), [E04B 1/3533](#), [E04B 1/3544](#), [E04B 1/355](#) take precedence)}
- U E04B 2/00
- Walls, e.g. partitions, for buildings; Wall construction with regard to insulation; Connections specially adapted to walls (connections for building structures in general [E04B 1/38](#); insulation for buildings in general [E04B 1/62](#); building elements of relatively thin form for parts of buildings [E04C 2/00](#))**
- U E04B 2/74
- Removable non-load-bearing partitions; Partitions with a free upper edge (framed panels [E04C 2/38](#) ){modular coordination}
- U E04B 2/7407
- {assembled using frames with infill panels or coverings only; made-up of panels and a support structure incorporating posts ([E04B 2/78](#) and [E04B 2/80](#) take precedence)}
- U E04B 2/7416
- {with free upper edge, e.g. for use as office space dividers}
- E04B 2002/7418
- {Accessories supported on the free upper edge, e.g. *auxilliary**auxiliary* panels, noise abatement devices}

**Project: N/A (E04D)****E04D****ROOF COVERINGS; SKY-LIGHTS; GUTTERS; ROOF-WORKING TOOLS (coverings of outer walls by plaster or other porous material [E04F 13/00](#))**NOTE

In this subclass, the following expression is used with the meaning indicated:

- "roof coverings" includes any similar kind of watertight covering against rain, snow, hail, or the like, for other parts of buildings

WARNING

The following IPC groups are not *used* in the CPC scheme. *Subject* *The subject* matter *covered by* *for* these *IPC* groups is classified in the following CPC groups:

|                             |            |  |
|-----------------------------|------------|--|
| <a href="#">E04D 3/3645</a> | covered by | <a href="#">E04D 3/363</a>                             |
| <a href="#">E04D 3/367</a>  | covered by | <a href="#">E04D 3/364</a>                             |
| <a href="#">E04D 13/18</a>  | covered by | <a href="#">F24J 2/00</a> , <a href="#">H02S 20/23</a> |

**Project: N/A (E04F)****E04F****FINISHING WORK ON BUILDINGS, e.g. STAIRS, FLOORS (windows, doors [E06B](#))**WARNING

The following IPC groups are not *used* in the CPC scheme. *Subject* *The subject* matter *covered by* *for* these *IPC* groups is classified in the following CPC groups:

|                            |            |                            |
|----------------------------|------------|----------------------------|
| <a href="#">E04F 11/09</a> | covered by | <a href="#">E04F 11/02</a> |
| <a href="#">E04F 11/17</a> | covered by | <a href="#">E04F 11/16</a> |

- U E04F 11/00
- Stairways, ramps, or like structures (mounting or marking-off stairways [E04F 21/26](#); of temporary {use during building} construction [E04G 27/00](#); means for facilitating access to swimming pools [E04H 4/144](#); {means for facilitating access to swimming pools [E04H 4/144](#); appliances for aiding patients or disabled persons to walk [A61H 3/00](#)}); Balustrades; Handrails (ladders permanently attached to fixed structures [E06C 9/00](#))**

- U E04F 11/02      • Stairways; Layouts thereof
- U E04F 2011/0203      • • {Miscellaneous features of stairways not otherwise provided for}
- U E04F 2011/0205      • • • {Stairways characterised by the use of specific materials for the supporting structure of the treads}
- U E04F 2011/021      • • • • {mainly of stone or stone like materials, e.g. concrete; mainly of glass}
- U E04F 2011/0212      • • • • • {mainly of concrete}
- E04F 2011/0214      • • • • • • {cast ~~in in situ~~-situ}

**Project: N/A (E04G)****E04G**

**SCAFFOLDING; FORMS; SHUTTERING; BUILDING IMPLEMENTS OR OTHER BUILDING AIDS, OR THEIR USE; HANDLING BUILDING MATERIALS ON THE SITE; REPAIRING, BREAKING-UP OR OTHER WORK ON EXISTING BUILDINGS**

NOTE

In this subclass the word "scaffolding" includes other supports for like purposes

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

**E04G 23/03** covered by

- U **E04G 1/00**      **Scaffolds primarily resting on the ground**
- E04G 1/14      • Comprising essentially pre-assembled two-dimensional frame-like elements, e.g. of rods in L- or H-shape, with or without bracing (**E04G 1/15** takes precedence)
- U **E04G 21/00**      **Preparing, conveying, or working-up building materials or building elements in situ; Other devices or measures for constructional work (conveying in general **B65G**; lifting devices **B66**; working stone-like materials **B28D**; measuring instruments **G01**)**
- U E04G 21/14      • Conveying or assembling building elements (roofing **E04D**; finishing work **E04F**)
- U E04G 21/16      • • Tools or apparatus (devices for erecting fences **E04H 17/26**)
- E04G 21/165      • • • {specially adapted for ~~in in situ~~-situ prefabricated building elements to be tilted up in position}

**Project: N/A (E04H)****E04H**

**BUILDINGS OR LIKE STRUCTURES FOR PARTICULAR PURPOSES; SWIMMING OR SPLASH BATHS OR POOLS; MASTS; FENCING; TENTS OR CANOPIES, IN GENERAL (foundations **E02D**)**

NOTES

1. This subclass deals primarily with the layout of buildings as a whole, but includes details which are peculiar to types of buildings or buildings for special purposes, specified in the groups. The word "buildings" does not exclude engineering structures and other constructions

2. This subclass provides for canopies in general and for canopies similar in construction to tents. For canopies having special application, see the relevant



class, e.g. bed canopies [A47C 29/00](#); protecting chairs against the weather [A47C 7/66](#); sunshades or awnings for buildings [E04F 10/00](#)

3. In this subclass, the term "tent" means a tent or canopy having a supporting means, e.g. frame and a flexible cover

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the following CPC groups:

|                           |            |   |
|---------------------------|------------|---|
| <a href="#">E04H 4/02</a> | covered by | <a href="#">E04H 4/0018</a> , <a href="#">E04H 4/0075</a> |
| <a href="#">E04H 4/04</a> | covered by | <a href="#">E04H 4/0018</a> , <a href="#">E04H 4/0075</a> |

## Project: N/A (E05B)

### E05B

### LOCKS; ACCESSORIES THEREFOR; HANDCUFFS

#### NOTES

1. Operating or controlling of locks for vehicle wings are classified in groups [E05B 77/00-E05B 81/00](#).
2. Knobs, handles or press buttons for locks of vehicle wings are classified in [E05B 79/00-E05B 85/00](#).
3. {In this subclass, it is desirable to add the indexing code(s) of [E05Y](#).}

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the following CPC groups:

|                                       |            |
|---------------------------------------|------------|
| <a href="#">E05B 1/02-E05B 9/06</a>   | covered by |
| <a href="#">E05B 13/02-E05B 13/08</a> | covered by |
| <a href="#">E05B 15/12</a>            | covered by |
| <a href="#">E05B 17/02</a>            | covered by |
| <a href="#">E05B 19/02</a>            | covered by |
| <a href="#">E05B 19/06-E05B 19/08</a> | covered by |
| <a href="#">E05B 19/10-E05B 19/12</a> | covered by |
| <a href="#">E05B 19/16</a>            | covered by |
| <a href="#">E05B 21/02-E05B 21/04</a> | covered by |
| <a href="#">E05B 25/00-E05B 25/10</a> | covered by |
| <a href="#">E05B 27/04-E05B 27/06</a> | covered by |
| <a href="#">E05B 29/02-E05B 29/14</a> | covered by |
| <a href="#">E05B 35/04</a>            | covered by |
| <a href="#">E05B 37/06</a>            | covered by |
| <a href="#">E05B 37/18</a>            | covered by |
| <a href="#">E05B 37/22</a>            | covered by |
| <a href="#">E05B 45/14</a>            | covered by |
| <a href="#">E05B 47/04</a>            | covered by |
| <a href="#">E05B 47/08</a>            | covered by |
| <a href="#">E05B 49/02-E05B 49/04</a> | covered by |
| <a href="#">E05B 55/02</a>            | covered by |
| <a href="#">E05B 55/04</a>            | covered by |
| <a href="#">E05B 55/08</a>            | covered by |
| <a href="#">E05B 55/10</a>            | covered by |
| <a href="#">E05B 55/14-E05B 55/16</a> | covered by |
| <a href="#">E05B 59/02-E05B 59/06</a> | covered by |
| <a href="#">E05B 65/04</a>            | covered by |
| <a href="#">E05B 67/12</a>            | covered by |

|            |            |
|------------|------------|
| E05B 67/16 | covered by |
| E05B 67/20 | covered by |
| E05B 67/30 | covered by |
| E05B 67/34 | covered by |
| E05B 71/02 | covered by |

## Project: N/A (E05C)

### E05C

**BOLTS OR FASTENING DEVICES FOR WINGS, SPECIALLY FOR DOORS OR WINDOWS** (latching means for sideboard or tailgate structures for vehicles [B62D](#), {[B62D 33/02](#)}; fastening devices for constructional or engineering elements [E04](#), [F16B](#); locks, fastening devices structurally or operatively combined or having significant cooperation with locks [E05B](#); means for operating or controlling wing fasteners in conjunction with mechanisms for moving the wing [E05F](#))

#### NOTES

1. In this subclass only the movement essential for securing the wing is considered, e.g. a sliding bolt which is rotated on its axis to prevent its withdrawal is classified as having only a sliding movement
2. Attention is drawn to the definition following the title of class [E05](#)
3. {In this subclass, it is desirable to add the indexing code(s) of [E05Y](#).}

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

|            |            |
|------------|------------|
| E05C 3/32  | covered by |
| E05C 17/06 | covered by |
| E05C 17/10 | covered by |
| E05C 21/02 | covered by |

## Project: N/A (E05D)

### E05D

**HINGES OR OTHER SUSPENSION DEVICES FOR DOORS, WINDOWS OR WINGS** ({foldable tables [A47B 3/00](#); hinged panels [A47B 5/00](#); foldable chairs [A47C 4/00](#); making hinges [B21D 53/40](#), [B21K 13/02](#); making holes for taking-up fittings [B27F 5/12](#); for vehicle tailboards [B60P 1/26](#); for refuse receptacles [B65F 1/1646](#)}; pivotal connections in general [F16C 11/00](#)}; mounting of stove or range doors [F24C 15/023](#); for folding flat displays of portable computers [G06F 1/1616](#)})

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

|             |            |  |
|-------------|------------|--|
| E05D 5/16   | covered by | <a href="#">E05D 5/14</a>  |
| E05D 7/081  | covered by | <a href="#">E05D 7/08</a>  |
| E05D 7/083  | covered by | <a href="#">E05D 7/082</a>   |
| E05D 15/04  | covered by | <a href="#">E05D 15/02</a> , <a href="#">E05D 15/28</a> ,<br><a href="#">E05D 15/403</a> |
| E05D 15/522 | covered by | <a href="#">E05D 15/52</a>   |
| E05D 15/523 | covered by | <a href="#">E05D 15/52</a>   |
| E05D 15/524 | covered by | <a href="#">E05D 15/52</a>   |

**Project: N/A (E06B)****E06B**

**FIXED OR MOVABLE CLOSURES FOR OPENINGS IN BUILDINGS, VEHICLES, FENCES OR LIKE ENCLOSURES IN GENERAL, e.g. DOORS, WINDOWS, BLINDS, GATES (shades or blinds for greenhouses [A01G 9/22](#); curtains [A47H](#); lids for car boots or bonnets [B62D 25/10](#); skylights [E04B 7/18](#); sunshades, awnings [E04F 10/00](#))**

**NOTES**

1. This subclass does not cover combinations of wings or frames with operating, mounting, latching or locking means of the type found in class [E05](#), which are covered by the relevant subclasses of class [E05](#), except such as are covered by groups [E06B 7/086](#), [E06B 9/00](#), or [E06B 11/02](#) of this subclass.
2. In this subclass, the following terms or expressions are used with the meanings indicated:
  - "wing" means a swingable, slidable or otherwise movable member such as a door or window, for closing an opening;
  - "wing frame" means the peripheral edge or edges which define the outer border of the wing.
3. For vehicle door or window arrangements, attention is drawn to Note (1) following the title of subclass [B60J](#).

**WARNING**

The following IPC groups are not **used** in the CPC scheme. **Subject-*The subject*** matter **covered by for** these **IPC** groups is classified in the following CPC groups:  
[E06B 11/06](#) covered by [E05B 65/0007](#)

**U E06B 3/00**

**Window sashes, door leaves, or like elements for closing {wall or like} openings; Layout of fixed or moving closures, e.g. windows {in wall or like openings}; Features of rigidly-mounted outer frames relating to the mounting of wing frames ([E06B 5/00](#) takes precedence; shutters or the like [E06B 9/00](#); glass panes [C03](#))**

**U E06B 3/32**

- Arrangements of wings characterised by the manner of movement; Arrangements of movable wings in openings; Features of wings or frames relating solely to the manner of movement of the wing {(fittings or supporting means, separable from the frame, for guiding or controlling the movement of wings, arrangements of wings characterised by particular forms of such means [E05D](#))}

**U E06B 3/50**

- • with more than one kind of movement ([E06B 3/48](#) takes precedence) {([E06B 3/92](#) takes precedence)}

**E06B 3/5036**

- • • {Louvre type windows, e.g. windows made of movable strips of **glasglass**}

**Project: N/A (E21B)****E21B**

**EARTH DRILLING, e.g. DEEP DRILLING (mining, quarrying [E21C](#); making shafts, driving galleries or tunnels [E21D](#)); OBTAINING OIL, GAS, WATER, SOLUBLE OR MELTABLE MATERIALS OR A SLURRY OF MINERALS FROM WELLS**

**WARNING**

The following IPC groups are not **used** in the CPC scheme. **Subject-*The subject*** matter **covered by for** these **IPC** groups is classified in the following CPC groups:

|   |            |                             |
|---|------------|-----------------------------|
| <a href="#">E21B 1/12</a> - <a href="#">E21B 1/38</a> | covered by | <a href="#">E21B 1/00</a>   |
| <a href="#">E21B 7/08</a>                             | covered by | <a href="#">E21B 7/06</a>   |
| <a href="#">E21B 11/04</a>                            | covered by | <a href="#">E21B 27/00</a>  |
| <a href="#">E21B 23/12</a>                            | covered by | <a href="#">E21B 23/002</a> |
| <a href="#">E21B 31/08</a>                            | covered by | <a href="#">E21B 27/00</a>  |

|                           |            |                           |
|---------------------------|------------|---------------------------|
| E21B 43/22                | covered by | <a href="#">C09K 8/58</a> |
| E21B 43/27                | covered by |                           |
| E21B 47/001-E21B 47/009   | covered by |                           |
| E21B 47/013-E21B 47/017   | covered by |                           |
| E21B 47/0224-E21B 47/0236 | covered by |                           |
| E21B 47/047-E21B 47/053   | covered by |                           |
| E21B 47/07                | covered by |                           |
| E21B 47/085               | covered by |                           |
| E21B 47/092-E21B 47/098   | covered by |                           |
| E21B 47/103-E21B 47/117   | covered by |                           |
| E21B 47/125-E21B 47/135   | covered by |                           |
| E21B 47/20-E21B 47/24     | covered by |                           |
| E21B 47/26                | covered by |                           |

## Project: N/A (E21C)

### E21C

### MINING OR QUARRYING

#### NOTES

1. This subclass covers methods or apparatus specific to mining or quarrying
2. This subclass does not cover, even though they may be disclosed only for mining or quarrying, drill bits, bore reamers, core taking devices, drilling pipes or rods, handling, racking or connecting arrangements for drilling pipes or rods, counterboring or enlarging drilled holes, flame drilling, or other drilling apparatus, which are covered by subclass [E21B](#)

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the following CPC groups:

|                   |            |  |
|-------------------|------------|--|
| E21B 3/02         | covered by | <a href="#">E21B 3/02</a>                                    |
| E21B 3/035        | covered by | <a href="#">E21B 3/035</a>                                   |
| E21B 3/025        | covered by | <a href="#">E21B 3/025</a>                                   |
| E21B 3/03         | covered by | <a href="#">E21B 3/03</a>                                    |
| E21B 6/00         | covered by | <a href="#">E21B 6/00</a>                                    |
| <b>E21C3/08</b>   | covered by | <a href="#">B25D 9/06</a> , <b><a href="#">B25D15/00</a></b> |
| <b>E21C3/10</b>   | covered by | <b><a href="#">B25D15/02</a></b>                             |
| <b>E21C3/12</b>   | covered by | <a href="#">B25D 11/00</a>                                   |
| <b>E21C3/14</b>   | covered by | <a href="#">B25D 11/00</a>                                   |
| <b>E21C3/20</b>   | covered by | <a href="#">B25D 9/12</a>                                    |
| <b>E21C3/22</b>   | covered by | <a href="#">B25D 9/125</a>                                   |
| <b>B25D11/005</b> | covered by | <a href="#">B25D 9/265</a>                                   |
| <b>E21C3/34</b>   | covered by | <a href="#">B25D 17/08</a>                                   |
| E21B 19/081       | covered by | <a href="#">E21B 19/081</a>                                  |
| E21B 19/083       | covered by | <a href="#">E21B 19/083</a>                                  |
| E21B 19/084       | covered by | <a href="#">E21B 19/084</a>                                  |
| E21B 19/089       | covered by | <a href="#">E21B 19/089</a>                                  |
| E21B 44/08        | covered by | <a href="#">E21B 44/08</a>                                   |
| E21B 44/00        | covered by | <a href="#">E21B 44/00</a>                                   |
| E21B 21/14        | covered by | <a href="#">E21B 21/14</a>                                   |
| E21B 7/02         | covered by | <a href="#">E21B 7/02</a>                                    |
| E21C 37/24        | covered by | <a href="#">B25D</a>   |
| E21C 37/26        | covered by | <a href="#">B25D</a>   |
| E21C 41/18        | covered by | <a href="#">E21C 41/16</a>                                   |

|            |            |   |
|------------|------------|---|
| E21C 41/20 | covered by | <a href="#">E21C 41/16</a>                              |
| E21C 41/22 | covered by | <a href="#">E21C 41/16</a>                              |
| E21C 41/24 | covered by | <a href="#">E21C 41/16</a>                              |
| E21C 41/28 | covered by | <a href="#">E21C 41/26</a>                              |
| E21C 41/30 | covered by | <a href="#">E21C 41/26</a>                              |
| E21C 45/02 | covered by | <a href="#">E21C 25/60</a> , <a href="#">E21C 45/00</a> |
| E21C 45/04 | covered by | <a href="#">E21C 25/60</a> , <a href="#">E21C 45/00</a> |
| E21C 45/06 | covered by | <a href="#">E21C 25/60</a> , <a href="#">E21C 45/00</a> |
| E21C 45/08 | covered by | <a href="#">E21C 25/60</a> , <a href="#">E21C 45/00</a> |
| E21C 50/00 | covered by | <a href="#">E02F 3/88</a>                               |
| E21C 50/02 | covered by | <a href="#">E02F 3/88</a>                               |

## Project: N/A (E21D)

### E21D

**SHAFTS; TUNNELS; GALLERIES; LARGE UNDERGROUND CHAMBERS** (soil-conditioning or soil-stabilising materials [C09K 17/00](#); drilling or cutting machines for mining or quarrying [E21C](#); safety devices, transport, rescue, ventilation or drainage [E21F](#))

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter **covered by** ~~for~~ these **IPC** groups is classified in the following CPC groups:

|             |            |   |
|-------------|------------|---|
| E21D 13/02  | covered by | <a href="#">E21D 13/00</a>                                |
| E21D 13/04  | covered by | <a href="#">E21D 13/00</a>                                |
| E21D 15/582 | covered by | <a href="#">E21D 15/58</a>                                |
| E21D 15/59  | covered by | <a href="#">E21D 15/44</a> , <a href="#">E21D 15/58</a>   |
| E21D 17/022 | covered by | <a href="#">E21D 17/02</a>                                |
| E21D 17/05  | covered by | <a href="#">E21D 17/0206</a> , <a href="#">E21D 17/04</a> |
| E21D 17/054 | covered by | <a href="#">E21D 17/04</a>                                |
| E21D 19/06  | covered by | <a href="#">E21D 19/02</a> , <a href="#">E21D 19/04</a>   |

## Project: N/A (F01B)

### F01B

**MACHINES OR ENGINES, IN GENERAL OR OF POSITIVE-DISPLACEMENT TYPE**, e.g. STEAM ENGINES (~~of rotary-piston or oscillating-piston type~~ **F01C**; ~~of rotary-piston or oscillating-piston type~~ **F01C**; of non-positive-displacement type **F01D**; internal-combustion aspects of reciprocating-piston engines [F02B 57/00](#), [F02B 59/00](#); crankshafts, crossheads, connecting-rods [F16C](#); flywheels [F16F](#); gearings for interconverting rotary motion and reciprocating motion in general [F16H](#); pistons, piston rods, cylinders, for engines in general [F16J](#))

#### NOTES

1. This subclass **covers**, with the exception of the matter provided for in subclasses [F01C](#) - [F01P](#) :

- engines for elastic fluids, e.g. steam engines;
- engines for liquids and elastic fluids;
- machines for elastic fluids;
- machines for liquids and elastic fluids.

2. Attention is drawn to the note preceding class [F01](#), especially as regards the definitions of "steam" and "special vapour".

- U F01B 1/00** Reciprocating-piston machines or engines characterised by number or relative disposition of cylinders or by being built-up from separate cylinder-crankcase elements ([F01B 3/00](#), [F01B 5/00](#) take precedence)
- U F01B 1/06 · with cylinders in star or fan arrangement
- U F01B 1/0641 · {Details, component parts specially adapted for such machines}
- F01B 1/0672 · · {Draining of the ~~machinehousing~~[machine housing](#); arrangements dealing with leakage fluid}
- U F01B 2250/00** Accessories of steam engines; Arrangements or control devices of piston pumps, compressors without crank shafts or condensers for so far as they influence the functioning of the engines
- F01B 2250/009 · ~~Condensor~~[Condenser](#) pumps for steam engines

**Project: N/A (F01D)**

F01D

**NON-POSITIVE DISPLACEMENT MACHINES OR ENGINES, e.g. STEAM TURBINES (machines or engines for liquids [F03](#); non-positive displacement pumps [F04D](#))**

NOTES

1. This subclass covers:

- non-positive-displacement engines for elastic fluids, e.g. steam turbines;
- non-positive-displacement engines for liquids and elastic fluids;
- non-positive-displacement machines for elastic fluids;
- non-positive-displacement machines for liquids and elastic fluids.

2. Attention is drawn to the Notes preceding class [F01](#), especially as regards the definitions of "reaction type", e.g. with airfoil-like blades, and "impulse type", e.g. bucket turbines.

WARNING

The following IPC groups are not ~~used~~ in the CPC [system](#)~~scheme~~. ~~Subject~~[The subject](#) matter ~~covered by~~[for](#) these [IPC](#) groups is classified in the following CPC groups:

[F01D 5/32](#)

covered by

[F01D 5/30](#)**Project: N/A (F01L)**

F01L

**CYCLICALLY OPERATING VALVES FOR MACHINES OR ENGINES (valves in general [F16K](#))**

NOTES

1. Groups [F01L 1/00](#) - [F01L 13/00](#) cover only valve-gear or valve arrangements without provision for variable fluid distribution.

2. Valve gear or valve arrangements specially adapted for steam engines are covered by groups [F01L 15/00](#) - [F01L 35/00](#).

3. Valve-gear arrangements specially adapted for machines or engines with variable working-fluid distribution are covered by groups [F01L 15/00](#) - [F01L 35/00](#).

4. Attention is drawn to the notes preceding class [F01](#), especially Note (3).

5. As regards the above-mentioned Note (3), attention is drawn to [F01B 3/10](#), [F01B 15/06](#), [F01C 21/18](#), [F02B 53/06](#), [F03C 1/08](#), [F04B 1/18](#), [F04B 7/00](#), [F04B 39/08](#), [F04B 39/10](#), and [F04C 15/06](#), [F04C 29/12](#).

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~[The subject](#) matter ~~covered by~~[for](#) these [IPC](#) groups is classified in the following CPC groups:



F01L 31/20 covered by  
F01L 31/22 covered by  
F01L 31/24 covered by

**U F01L 2760/00** **Control of valve gear to facilitate reversing, starting, braking of four stroke engines**  
F01L 2760/008 • for reversing and restarting two ~~stroke~~stroke engines

**Project: N/A (F02B)**

**F02B 2275/00** **{Other engines, components or details, not provided for in other groups of this subclass}**

**Project: N/A (F02M)**

**F02M** **SUPPLYING COMBUSTION ENGINES IN GENERAL, WITH COMBUSTIBLE MIXTURES OR CONSTITUENTS THEREOF (charging such engines F02B)**

NOTES

1. Attention is drawn to the notes preceding class F01.
2. In this subclass the following terms are used with the meanings indicated:
  - "Carburettors" means essentially apparatus for mixing fuel with air, the fuel being brought into mixing contact with the air by lowering the air pressure, e.g. in a venturi;
  - "Fuel injection apparatus" means apparatus for introducing fuel into a space, e.g. engine cylinder, by pressurising the fuel, e.g. by a pump acting behind the fuel, and thus embraces the so-called "solid fuel injection" in which liquid fuel is introduced without any admixture of gas;
  - "Low-pressure fuel injection" means fuel injection in which the fuel-air mixture containing fuel thus injected will be substantially compressed in the compression stroke of the engine;
  - "Pumping element" means a single piston-cylinder unit in a reciprocating-piston fuel-injection pump or the equivalent unit in any other type of fuel-injection pump.

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~The subject matter ~~covered by~~for these ~~IPC~~ groups is classified in the following CPC groups:

F02M 7/23 covered by F02M 7/103  
F02M 51/08 covered by F02M 51/06

**U F02M 35/00** **Combustion-air cleaners, air intakes, intake silencers, or induction systems specially adapted for, or arranged on, internal-combustion engines (air cleaners in general B01D)**

**U F02M 35/10** • Air intakes; Induction systems (using kinetic or wave energy of charge in induction systems for improving quantity of charge {F02B 27/00})

**U F02M 35/10091** • • {characterised by details of intake ducts: shapes; connections; arrangements (ducts within or on the plenum chamber F02M 35/10039)}

F02M 35/10118 • • • {with variable cross-sections of intake ducts along their length; Venturis; ~~Diffusers~~Diffusers}

**U F02M 2200/00** **Details of fuel-injection apparatus, not otherwise provided for**

**U F02M 2200/90** • Selection of particular materials

**U F02M 2200/9053** • • Metals

F02M 2200/9061

- • • Special treatments for modifying the ~~properites~~*properties* of metals used for fuel injection apparatus, e.g. modifying mechanical or electromagnetic properties

**Project: N/A (F03C)**

F03C

**POSITIVE-DISPLACEMENT ENGINES DRIVEN BY LIQUIDS (positive-displacement engines for liquids and elastic fluids [F01](#); positive-displacement machines for liquids [F04](#); fluid-pressure actuators [F15B](#); fluid gearing [F16H](#))**

NOTE

Attention is drawn to the notes preceding class [F01](#), especially as regards the meanings of "positive displacement", "rotary-piston machines", "oscillating-piston machines", "rotary-piston", "co-operating members", "movement of co-operating members", "teeth or tooth-equivalents", and "internal axis".

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~*The subject* matter ~~covered by for~~ these *IPC* groups is classified in the following CPC groups:

|                            |            |   |
|----------------------------|------------|---|
| <a href="#">F03C 1/253</a> | covered by | <a href="#">F03C</a>  |
| <a href="#">F03C 1/28</a>  | covered by | <a href="#">F03C 1/0406</a> , <a href="#">F03C 1/0605</a>                               |
| <a href="#">F03C 1/30</a>  | covered by | <a href="#">F03C 1/0409</a> , <a href="#">F03C 1/0631</a> , <a href="#">F03C 1/0668</a> |
| <a href="#">F03C 1/32</a>  | covered by | <a href="#">F03C 1/0415</a> , <a href="#">F03C 1/0626</a> , <a href="#">F03C 1/0652</a> |
| <a href="#">F03C 1/34</a>  | covered by | <a href="#">F03C 1/0435</a> , <a href="#">F03C 1/0615</a> , <a href="#">F03C 1/0655</a> |
| <a href="#">F03C 1/36</a>  | covered by | <a href="#">F03C 1/0435</a> , <a href="#">F03C 1/0615</a> , <a href="#">F03C 1/0655</a> |
| <a href="#">F03C 1/38</a>  | covered by | <a href="#">F03C 1/0435</a> , <a href="#">F03C 1/0615</a> , <a href="#">F03C 1/0655</a> |
| <a href="#">F03C 1/40</a>  | covered by | <a href="#">F03C 1/0447</a> , <a href="#">F03C 1/0678</a>                               |

**Project: N/A (F03G)**

F03G

**SPRING, WEIGHT, INERTIA OR LIKE MOTORS; MECHANICAL-POWER PRODUCING DEVICES OR MECHANISMS, NOT OTHERWISE PROVIDED FOR OR USING ENERGY SOURCES NOT OTHERWISE PROVIDED FOR (arrangements in connection with power supply in vehicles from force of nature [B60K 16/00](#); electric propulsion with power supply in vehicles from force of nature [B60L 8/00](#))**

NOTE

In this subclass, the following term is used with the meaning indicated:

- "motors" means mechanisms for producing mechanical power from potential energy of solid bodies.

WARNING

The following IPC groups are not ~~used~~ in the CPC ~~system~~*scheme*. ~~Subject~~*The subject* matter ~~covered by for~~ these *IPC* groups is classified in the following CPC groups:

|                           |            |                           |
|---------------------------|------------|---------------------------|
| <a href="#">F03G 4/00</a> | covered by | <a href="#">F03G 7/04</a> |
| <a href="#">F03G 4/02</a> | covered by | <a href="#">F03G 7/04</a> |
| <a href="#">F03G 4/04</a> | covered by | <a href="#">F03G 7/04</a> |
| <a href="#">F03G 4/06</a> | covered by | <a href="#">F03G 7/04</a> |

**Project: N/A (F04B)****F04B**

**POSITIVE DISPLACEMENT MACHINES FOR LIQUIDS; PUMPS** (machines for liquids, or pumps, of rotary piston or oscillating piston type [F04C](#); non-positive displacement pumps [F04D](#); pumping of fluid by direct contact of another fluid or by using inertia of fluid to be pumped [F04F](#); crankshafts, crossheads, connecting-rods [F16C](#); flywheels [F16F](#); gearings for interconverting rotary motion and reciprocating motion in general [F16H](#); pistons, piston-rods, cylinders, in general [F16J](#))

NOTES

1. In this subclass, the following term is used with the meaning indicated:
  - "piston" also covers a plunger.
2. Attention is drawn to the notes preceding class [F01](#), especially as regards the definitions of "machines", "pumps", and "positive-displacement".

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:  
[F04B 35/02](#) covered by [F04B 9/08](#)

- |                       |   |
|-----------------------|---|
| <b>U F04B 15/00</b>   | <b>Pumps adapted to handle specific fluids, e.g. by selection of specific materials for pumps or pump parts</b>   |
| U F04B 15/06          | • for liquids near their boiling point, e.g. under subnormal pressure   |
| U F04B 15/08          | • • the liquids having low boiling points   |
| F04B 2015/081         | • • • { <del>Liquified</del> <i>Liquefied</i> gases}  |
| <b>U F04B 37/00</b>   | <b>Pumps having pertinent characteristics not provided for in, or of interest apart from, groups <a href="#">F04B 25/00</a> - <a href="#">F04B 35/00</a></b>                      |
| U F04B 37/06          | • for evacuating by thermal means   |
| U F04B 37/08          | • • by condensing or freezing, e.g. cryogenic pumps (cold traps <a href="#">B01D 8/00</a> )   |
| F04B 37/085           | • • • {Regeneration of <del>cyro</del> <i>cryo</i> -pumps}  |
| <b>U F04B 43/00</b>   | <b>Machines, pumps, or pumping installations having flexible working members (pumps or pumping installations specially adapted for elastic fluids <a href="#">F04B 45/00</a>)</b> |
| U F04B 43/08          | • having tubular flexible members ( <a href="#">F04B 43/12</a> takes precedence)  |
| F04B 43/084           | • • {the tubular member being deformed by stretching <del>ou-distersion</del> <i>or distortion</i> }  |
| <b>U F04B 2203/00</b> | <b>Motor parameters</b>   |
| U F04B 2203/02        | • of rotating electric motors   |
| F04B 2203/0204        | • • <del>Frequence</del> <i>Frequency</i> of the electric current   |
| U F04B 2203/04        | • of linear electric motors   |
| F04B 2203/0404        | • • <del>Frequence</del> <i>Frequency</i> of the electric current   |

**Project: N/A (F05B)**

- |                       |  |
|-----------------------|--|
| <b>U F05B 2260/00</b> | <b>Function</b>                                      |
| F05B 2260/04          | • <del>Modeling</del> <i>Modelling</i> or simulation |

**Project: N/A (F15B)**

- |                     |  |
|---------------------|--|
| <b>U F15B 21/00</b> | <b>Common features; Fluid-pressure systems, or details thereof, not covered by any preceding group</b> |
|---------------------|--|

- U F15B 21/04
- Special measures taken in connection with the properties of the fluid, e.g. for venting, compensating for changes of viscosity, cooling, filtering, preventing churning
- F15B 21/048
- {Compressed air preparation units, e.g. comprising air driers or ~~condensers~~~~condensers~~, filters, oilers or lubricators, pressure regulators (for steam traps [F16T](#); for mist lubrication [F16N 7/32](#); for air conditioning [F24F](#))}

**Project: N/A (F16B)****F16B****DEVICES FOR FASTENING OR SECURING CONSTRUCTIONAL ELEMENTS OR MACHINE PARTS TOGETHER, e.g. NAILS, BOLTS, CIRCLIPS, CLAMPS, CLIPS, WEDGES, JOINTS OR JOINTING**NOTES

1. Attention is drawn to:

- the Note following group [E04B 1/38](#);
- the following places:

|                                |   |
|--------------------------------|---|
| <a href="#">A44B</a>           | Buckles, slide fasteners  |
| <a href="#">A47G 3/00</a>      | Ornamental heads for nails, screws, or the like   |
| <a href="#">B42F 3/00</a>      | Means, not using staples, for attaching sheets temporarily together   |
| { <a href="#">C14B 17/08</a> } | {Fastening devices, e.g. clips for leather-stretching used in apparatus or machines for manufacturing or treating skins, hides, leathers or furs} |
| <a href="#">E01B 9/10</a>      | Screws or bolts for railway sleepers  |
| <a href="#">E01B 11/00</a>     | Rail joints   |
| <a href="#">E04</a>            | Connections for building  |
| <a href="#">E04D 13/08</a>     | Clamping means for down pipes for roof drainage   |
| <a href="#">E04G 5/04</a>      | Fastening scaffolds against buildings   |
| <a href="#">E04G 7/00</a>      | Scaffolding couplings   |
| <a href="#">E05C</a>           | Bolts for fasteners for wings, specially for doors or windows   |
| <a href="#">F16C 29/10</a>     | Locking bearings for parts moving only linearly   |
| <a href="#">F16G 17/00</a>     | Hooks as integral parts of chains   |
| <a href="#">F16L</a>           | Pipe joints   |
| <a href="#">F16L 3/00</a>      | Supports for pipes, cables or protective tubing, e.g. hangers, holders, clamps, cleats, clips, brackets   |
| <a href="#">F16L 33/02</a>     | Clips for connecting hoses to rigid members   |
| <a href="#">H01F 7/00</a>      | Magnetic holding devices  |
| <a href="#">H02N 13/00</a>     | Electrostatic holding devices.  |

2. Groups [F16B 2/00](#) - [F16B 47/00](#) take precedence over group [F16B 1/00](#).

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                            |            |  |
|----------------------------|------------|--|
| <a href="#">F16B 7/08</a>  | covered by | <a href="#">F16B 5/12</a> , <a href="#">F16B 7/04</a> ,<br><a href="#">F16L 3/00</a> |
| <a href="#">F16B 7/12</a>  | covered by | <a href="#">F16B 7/105</a>   |
| <a href="#">F16B 7/16</a>  | covered by | <a href="#">F16B 7/14</a>  |
| <a href="#">F16B 13/10</a> | covered by | <a href="#">F16B 13/08</a>   |
| <a href="#">F16B 13/13</a> | covered by | <a href="#">F16B 13/002</a> , <a href="#">F16B 13/12</a>                             |
| <a href="#">F16B 21/14</a> | covered by | <a href="#">F16B 21/12</a> , <a href="#">F16B 21/125</a>                             |
| <a href="#">F16B 25/02</a> | covered by | <a href="#">F16B 25/00</a>   |
| <a href="#">F16B 25/04</a> | covered by | <a href="#">F16B 25/00</a>   |
| <a href="#">F16B 25/06</a> | covered by | <a href="#">F16B 25/00</a>   |

|            |            |   |
|------------|------------|---|
| F16B 25/08 | covered by | <a href="#">F16B 25/00</a>                                  |
| F16B 33/04 | covered by | <a href="#">F16B 33/02</a>                                  |
| F16B 37/10 | covered by | <a href="#">F16B 37/0842</a> , <a href="#">F16B 37/0871</a> |

## Project: MP0270 (F16C)

|          |                     |  |
|----------|---------------------|--|
| <b>U</b> | <b>F16C 2202/00</b> | <b>Solid materials defined by their properties</b>           |
| U        | F16C 2202/30        | • Electric properties; Magnetic properties                   |
| U        | F16C 2202/32        | • • Conductivity   |
| M        | F16C 2202/34        | • • • <del>Super-conductivity</del> <b>Superconductivity</b> |

## Project: N/A (F16C)

|          |                     |   |
|----------|---------------------|---|
| <b>U</b> | <b>F16C 2220/00</b> | <b>Shaping</b>  |
| U        | F16C 2220/02        | • by casting (in general <a href="#">B22D</a> ; for plastics <a href="#">B29C 39/00</a> ) |
|          | F16C 2220/06        | • • <del>in situ</del> -situ casting or moulding  |

## Project: N/A (F16D)

### F16D

### COUPLINGS FOR TRANSMITTING ROTATION; CLUTCHES; BRAKES

#### NOTE

Attention is drawn to the following places:

|  |   |
|--|---|
| <a href="#">A01D 69/08</a> ,<br><a href="#">A01D 69/10</a> | Clutches or brakes of harvesting machines for grass or cereals;           |
| <a href="#">A61C 1/18</a>                                  | Clutches in dental machines for boring or cutting;                        |
| <a href="#">B21B 35/14</a>                                 | Drive couplings for metal-rolling mills;                                  |
| <a href="#">B30B 15/10</a>                                 | Brakes specially adapted for presses;                                     |
| <a href="#">B30B 15/12</a>                                 | Clutches specially adapted for presses;                                   |
| <a href="#">B41J 33/52</a>                                 | Braking devices for ribbon-feed devices in selective printing mechanisms; |
| <a href="#">B60K 17/00</a>                                 | Arrangement or location of clutches in vehicles;                          |
| <a href="#">B61H</a>                                       | Brakes peculiar to rail vehicles;   |
| <a href="#">B62B 5/04</a>                                  | Braking mechanisms for hand carts;  |
| <a href="#">B62B 9/08</a>                                  | Braking mechanisms for children's carriages or perambulators;             |
| <a href="#">B62C 7/00</a>                                  | Braking mechanisms for animal-drawn vehicles;                             |
| <a href="#">B62L</a>                                       | Cycle brakes;   |
| <a href="#">B66D 5/00</a>                                  | Braking devices for lifting or hoisting gear;                             |
| <a href="#">E21B 17/02</a>                                 | Couplings for drilling rods;  |
| <a href="#">H02P 3/04</a>                                  | Brakes for electric motors, generators, dynamo-electric converters;       |
| <a href="#">H04L 13/04</a>                                 | Clutches for apparatus for transmission of coded digital information.     |

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~**The subject** matter ~~covered by~~**for** these ~~IPC~~ groups is classified in the following CPC groups:

|                            |            |   |
|----------------------------|------------|---|
| <a href="#">F16D 3/19</a>  | covered by | <a href="#">F16D 3/50</a> ;                               |
| <a href="#">F16D 3/27</a>  | covered by | <a href="#">F16D 3/265</a> ;                              |
| <a href="#">F16D 27/07</a> | covered by | <a href="#">F16D 27/06</a> , <a href="#">F16D 27/14</a> ; |
| <a href="#">F16D 48/12</a> | covered by | <a href="#">B60K 23/0808</a> ;                            |
| <b>F16D65/35</b>           | covered by | <a href="#">F16D 63/00</a> .                              |

**Project: MP0164 (F16D)****U F16D 65/00****M F16D 65/14****Parts or details (similar members for clutches [F16D 13/58](#))**

- Actuating mechanisms for brakes; Means for initiating operation at a predetermined position (brake control systems, parts thereof [B60T](#))

**NOTE**

*In this group, it is desirable to add the indexing codes of groups [F16D 2121/00](#) - [F16D 2131/00](#) relating to actuators.*

**Project: N/A (F16D)****U F16D 2500/00****U F16D 2500/30****U F16D 2500/304****U F16D 2500/3042****U F16D 2500/30421****F16D 2500/30425****U F16D 2500/70****U F16D 2500/706****U F16D 2500/70673****F16D 2500/70678****External control of clutches by electric or electronic means**

- Signal inputs
  - • from the clutch
  - • • from the output shaft
  - • • • Torque of the output shaft
  - • • • • Estimation of the transmitted clutch torque-ej, e.g. applying dynamic torque balance equation
- Details about the implementation of the control system
  - • Strategy of control
  - • • Statistical calculations
  - • • • using ~~histogrames~~ **histograms**

**Project: N/A (F16F)****F16F****SPRINGS; SHOCK-ABSORBERS; MEANS FOR DAMPING VIBRATION****NOTES**

1. This subclass covers:
  - springs, shock-absorbers or vibration-dampers;
  - their arrangement in, or adaptation for, particular apparatus if not provided for in the subclasses covering said apparatus.
2. This subclass does not cover inventions concerning the arrangement or adaptation of springs, shock-absorbers or vibration-dampers in, or for, particular apparatus, if provided for in the subclasses concerning the said apparatus, e.g.
  - [A47C 23/00](#) - Spring mattresses
  - [A47C 27/00](#)
  - [{A61F 2/00}](#) {Prostheses}
  - [A63C 5/075](#) Vibration dampers in skis
  - [B60G](#) Vehicle suspensions
  - [B60R 19/24](#) Mounting of bumpers on vehicles
  - [B61F](#) Rail vehicle suspensions
  - [B61G 11/00](#) Buffers for railway or tramway vehicles
  - [B62D 21/15](#) Vehicle chassis frames having impact absorbing means
  - [B62J 1/02](#) Resiliently mounted saddles on cycles
  - [B62K 21/08](#) Steering dampers
  - [B63H 21/30](#) Anti-vibration mounting of marine propulsion plant in ships
  - [B64C 25/58](#) Arrangement of shock-absorbers or springs in aeroplane alighting gear
  - [B65D 81/02](#) Containers, packing elements or packages with shock-absorbing means
  - [D06F 37/20](#) Resilient mountings in washing machines
  - [D06F 49/06](#) Resilient mountings in domestic spin-dryers



|                             |   |
|-----------------------------|---|
| <a href="#">{E04B 1/98}</a> | {Protection of buildings against vibrations or shocks}  |
| <a href="#">E05D 7/086</a>  | Braking devices structurally combined with hinges   |
| <a href="#">F03G 1/00</a>   | Spring motors   |
| <a href="#">{F16L 3/20}</a> | {Pipe or cable supports}  |
| <a href="#">F21V 15/04</a>  | Resilient mounting of lighting devices  |
| <a href="#">F41A 25/00</a>  | Gun cradles to permit recoil  |
| <a href="#">F41B 5/1426</a> | Vibration dampers for archery bows  |
| <a href="#">G01D 11/00</a>  | Indicating or recording in connection with measuring  |
| <a href="#">G01G 21/10</a>  | Weighing apparatus, e.g. arrangement of shock-absorbers in weighing apparatus                 |
| <a href="#">G04B</a>        | Clocks, watches   |
| <a href="#">G12B 3/08</a>   | Damping of movements in instruments   |
| <a href="#">G21C 7/20</a>   | Disposition of shock-absorbing devices for displaceable control elements in nuclear reactors. |
| <a href="#">{H02G 7/14}</a> | {Arrangements or devices for damping mechanical oscillations of power lines}                  |

3. Mention of "steel" or "metal" in groups [F16F](#), unless specific mention is made otherwise, should be seen in the light of the title of group [F16F 1/00](#), i.e. material having low internal friction. This normally includes composite materials such as fibre-reinforced plastics.

4. Mention of "rubber" or "plastics" in group [F16F](#), unless specific mention is made otherwise, should be seen in the light of the title of group [F16F 1/36](#), i.e. material having high internal friction. This normally does NOT include composite materials such as fibre-reinforced plastics except in the case of groups [F16F 1/366](#) - [F16F 1/3686](#) and [F16F 15/305](#).

#### WARNING

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|                            |            |   |
|----------------------------|------------|---|
| <a href="#">F16F 3/07</a>  | covered by | <a href="#">F16F 13/00</a>  |
| <a href="#">F16F 9/24</a>  | covered by | <a href="#">F16F 9/22</a>   |
| <a href="#">F16F 9/40</a>  | covered by | <a href="#">F16F 9/00</a> - <a href="#">F16F 9/50</a>                                 |
| <a href="#">F16F 9/508</a> | covered by | <a href="#">F16F 9/512</a>  |
| <a href="#">F16F 11/00</a> | covered by | <a href="#">F16F 7/00</a> , <a href="#">F16F 9/00</a> ,<br><a href="#">F16F 15/00</a> |
| <a href="#">F16F 13/12</a> | covered by | <a href="#">F16F 13/08</a>  |

## Project: N/A (F16H)

### F16H

### GEARING

#### NOTES

1. Combinations including mechanical gearings are classified in groups [F16H 37/00](#) or [F16H 47/00](#), unless they are provided for in groups [F16H 1/00](#) - [F16H 35/00](#).

2. In this subclass, sets of rigidly-connected members are regarded as single members.

3. In this subclass, the following terms or expressions are used with the meanings indicated:

- "toothed gearing" includes worm gearing and other gearing involving at least one wheel or sector provided with teeth or the equivalent, EXCEPT gearing with chains or toothed belts, which is treated as friction gearing;
- "conveying motion" includes transmitting energy, and means that the applied and resultant motions are of the same kind, though they may differ in, e.g. speed, direction extent:

- "rotary" implies that the motion may continue indefinitely;
- "oscillating" means moving about an axis to an extent which is limited by the construction of the gearing, and which may exceed one revolution, the movement being alternately forwards and backwards during continued operation of the gearing;
- "reciprocating" means moving substantially in a straight line, the movement being alternately forwards and backwards during continued operation of the gearing;
- "reversing" or "reversal" means that an applied movement in one direction may produce a resultant movement in either of two opposed directions at will;
- "central gears" includes any gears whose axis is the main axis of the gearing.

4. Attention is drawn to the following places:

|  |  |
|--|--|
| <a href="#">A01D 69/06</a>                                 | Gearings in harvesting machines  |
| <a href="#">A63H 31/00</a>                                 | Gearing for toys   |
| <a href="#">B21B 35/12</a>                                 | Toothed- <del>weel</del> <del>wheel</del> gearing for metal-rolling mills              |
| <a href="#">B60K</a>                                       | Arrangement of transmissions in vehicles   |
| <a href="#">B61C 9/00</a>                                  | Transmissions for railway locomotives  |
| <a href="#">B62D 3/00</a>                                  | Vehicle steering gears   |
| <a href="#">B62M</a>                                       | Transmissions for cycles   |
| <a href="#">B63H 23/00</a>                                 | Transmissions for marine propulsions   |
| <a href="#">B63H 25/00</a>                                 | Marine steering gears  |
| <a href="#">B64C 27/12</a> ,<br><a href="#">B64C 27/58</a> | {Transmissions for helicopters}  |
| <a href="#">B64D 35/00</a>                                 | {Transmissions for aircraft}   |
| <a href="#">F01-F04</a>                                    | Machines, engines, pumps   |
| <a href="#">F15B 15/00</a>                                 | Gearings associated with fluid-actuated devices  |
| <a href="#">G01D 5/04</a>                                  | Gearing used in indicating or recording apparatus in connection with measuring devices |
| <a href="#">H03J 1/00</a>                                  | Driving arrangements for tuning resonant circuits                                      |
| <a href="#">H04L 13/04</a>                                 | Driving mechanisms for apparatus for transmission of coded digital information.        |

|          |                   |  |
|----------|-------------------|--|
| <b>U</b> | <b>F16H 25/00</b> | <b>Gearings comprising primarily only cams, cam-followers and screw-and-nut mechanisms</b>   |
| U        | F16H 25/18        | • for conveying or interconverting oscillating or reciprocating motions  |
| U        | F16H 25/20        | • • Screw mechanisms (with automatic reversal <a href="#">F16H 25/12</a> )   |
| U        | F16H 25/22        | • • • with balls, rollers, or similar members between the co-operating parts;<br>Elements essential to the use of such members   |
| U        | F16H 25/2204      | • • • • {with balls}   |
| U        | F16H 25/2214      | • • • • • {with elements for guiding the circulating balls}  |
|          | F16H 25/2223      | • • • • • {Cross over defectors between adjacent thread turns, e.g. S-form defectors connecting <del>neighbouring</del> <del>neighbouring</del> threads}   |
| <b>U</b> | <b>F16H 59/00</b> | <b>Control inputs to {control units of} change-speed-, or reversing-gearings for conveying rotary motion</b>   |
| U        | F16H 59/02        | • Selector apparatus   |
|          |                   | <u>NOTE</u><br>Selection apparatus of general applicability or of interest apart from its use in control of gearings conveying rotary motion is also classified in subclass <a href="#">G05G</a> |
| U        | F16H 59/04        | • • Ratio selector apparatus   |

- F16H 2059/048
- • {with means for ~~un-locking~~**unlocking** select or shift movement to allow access to reverse gear position (particular details of the lever handle [F16H 2059/0282](#))}

**U F16H 61/00** **Control functions within {control units of} change-speed- or reversing-gearings for conveying rotary motion {; Control of exclusively fluid gearing, friction gearing, gearings with endless flexible members or other particular types of gearing}**

U F16H 61/04 • Smoothing ratio shift

U F16H 61/08 • • Timing control

F16H 2061/085 • • • {Timing of ~~auxilliary~~**auxiliary** gear shifts}

**F16H 2700/00** **Transmission housings and mounting of transmission components therein; Cooling; ~~Lubrification~~**Lubrication**; Flexible suspensions, e.g. floating frames**

## Project: N/A (F16J)

**F16J** **PISTONS {(specially adapted for dampers [F16F 9/32](#))}; CYLINDERS; SEALINGS**

### NOTE

Attention is drawn to the following places:

|                            |   |
|----------------------------|---|
| <a href="#">A47J 27/08</a> | Pressure cookers  |
| <a href="#">E04B 1/68</a>  | Sealing building joints   |
| <a href="#">E05C 9/00</a>  | Multi-point fastening of wings in general   |
| <a href="#">F01B</a>       | Machines or engines in general or of reciprocating type, e.g. cylinders peculiar to steam engines |
| <a href="#">F01B 31/28</a> |   |
| <a href="#">F02F 1/00</a>  | Cylinders for combustion engines  |
| <a href="#">F02F 3/00</a>  | Pistons for combustion engines  |
| <a href="#">F04D 29/08</a> | Sealings of non-positive displacement pumps   |
| <a href="#">F17B 1/04</a>  | Sealing devices for sliding parts of gas holders of variable capacity                             |
| <a href="#">F28F 9/04</a>  | Arrangements for sealing elements into header boxes or end plates of heat-exchangers.             |

### WARNING

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[F16J 15/53](#) covered by [F16J 15/43](#)

## Project: N/A (F16K)

**F16K** **VALVES; TAPS; COCKS; ACTUATING-FLOATS; DEVICES FOR VENTING OR AERATING {(devices for emptying and evacuating the excess liquid in valves or conduits [F16L 55/07](#))}**

### NOTE

Attention is drawn to the following places:

|                             |   |
|-----------------------------|---|
| <a href="#">A47J 27/09</a>  | Safety devices for pressure cookers                                       |
| <a href="#">A47J 31/46</a>  | Dispensing spouts, drain valves or like beverage-making apparatus         |
| <a href="#">A61B 5/0235</a> | Valves specially adapted for measuring pressure in heart or blood vessels |
| <a href="#">A61F 2/24</a>   | Heart valves  |
| <a href="#">A61M 16/20</a>  | Valves specially adapted for medical respiratory devices                  |

|   |   |
|---|---|
| <a href="#">A61M 39/00</a>                                | Tube connectors, tube couplings, valves or branch units specially adapted for medical use in general  |
| <a href="#">A62B 9/02</a>                                 | Valves for respiratory apparatus  |
| <a href="#">A62B 18/10</a>                                | Valves for breathing masks or helmets   |
| <a href="#">A62C</a>                                      | Fire extinguishers  |
| <a href="#">{B01D 35/04}</a>                              | {Plug, tap, or cock filters}  |
| <a href="#">B05B</a>                                      | Nozzles, spray heads or other discharge apparatus for spraying or atomising   |
| <a href="#">B60C 29/00</a>                                | Arrangements of tyre-inflating valves relative to tyres or wheel rims; Connection of valves to wheel rims, tyres or other inflatable elastic bodies |
| <a href="#">B60G 17/048</a>                               | Valves specially adapted for adjusting vehicle fluid-spring characteristics   |
| <a href="#">B60T</a>                                      | Valves specially adapted for vehicle brake control systems  |
| <a href="#">B62D 5/08</a>                                 | Vehicle power-assisted steering characterised by the type of valve used   |
| <a href="#">B63B 7/00,</a><br><a href="#">B63C 9/00</a>   | Arrangement of inflating valves for floatable life-saving equipment   |
| <a href="#">B65D 47/04</a>                                | Container closures with discharging valves  |
| <a href="#">B65D 90/32</a>                                | Safety valves for large containers  |
| <a href="#">B65D 90/54</a>                                | Gates or closures on large containers   |
| <a href="#">B67C 3/28</a>                                 | Flow control devices for bottling liquids   |
| <a href="#">B67D</a>                                      | Dispensing, delivering or transferring liquids  |
| <a href="#">{C21B 9/12}</a>                               | {Hot-blast valves for blast furnaces}   |
| <a href="#">E02B 8/00</a>                                 | Details, e.g. valves, of barrages or weirs  |
| <a href="#">E02B 13/02</a>                                | Closures for irrigation conduits  |
| <a href="#">{E03C 1/04}</a>                               | {Water-basin installations specially adapted for wash-basins or baths}  |
| <a href="#">{E03C 1/05}</a>                               | {Arrangements on wash-basins for the remote control of taps}  |
| <a href="#">E03D</a>                                      | Flushing valves for water-closets or urinals  |
| <a href="#">{E03F 7/04}</a>                               | {Valves for preventing return flow in sewer systems}  |
| <a href="#">E05F 3/12</a>                                 | Valve arrangements in door closers  |
| <a href="#">E21B 21/10</a>                                | Valve arrangements in drilling-fluid circulation systems  |
| <a href="#">E21B 34/00</a>                                | Valve arrangements for boreholes or wells   |
| <a href="#">{E21D 15/51}</a>                              | {Arrangement of relief valves in hydraulic mine props}  |
| <a href="#">F01B 25/10</a>                                | Working-fluid valves for controlling machines or engines in general or of positive-displacement type  |
| <a href="#">F01D 17/10</a>                                | Final actuators for controlling non-positive displacement machines or engines   |
| <a href="#">F01L</a>                                      | Cyclically operated valves for machines or engines  |
| <a href="#">F02D 9/08</a>                                 | Throttle valves for controlling combustion engines  |
| <a href="#">F02K 9/58</a>                                 | Propellant feed valves for rocket-engines   |
| <a href="#">F02M</a>                                      | Carburettors, fuel injection  |
| <a href="#">F02M 59/46</a>                                | Valves for fuel injection pumps   |
| <a href="#">F04</a>                                       | Pumps   |
| <a href="#">F16F 9/34</a>                                 | Valves for shock absorbers  |
| <a href="#">F16L 29/00,</a><br><a href="#">F16L 37/28</a> | Pipe joints or quick-acting couplings with fluid cut-off means  |
| <a href="#">F16L 55/00</a>                                | Arrangement of valves in pipes  |
| <a href="#">F16L 55/055</a>                               | Valves specially adapted to prevent or minimise the effect of water hammer  |

|  |   |
|--|---|
| <a href="#">F16L 55/46</a>                               | Launching devices for pigs or moles                               |
| <a href="#">F16N 23/00</a>                               | Check valves for lubrication systems                              |
| <a href="#">{F16T}</a>                                   | {Draining-off liquids from steam traps}                           |
| <a href="#">F17C 13/04</a>                               | Arrangement of valves in pressure vessels                         |
| <a href="#">F22B 37/44</a>                               | Arrangement of safety valves on steam boilers                     |
| <a href="#">F22D 5/34</a>                                | Application of valves to automatic water-feed in boiler           |
| <a href="#">F23L 13/00</a>                               | Valves for air supply control to burners                          |
| <a href="#">{F23Q 2/16}</a>                              | {Valves for lighters with gaseous fuel and adjustable flame}      |
| <a href="#">F24C 3/12</a> ,<br><a href="#">F24C 5/16</a> | Arrangement of valves on stoves or ranges                         |
| <a href="#">F24F</a>                                     | Air conditioning; Ventilation                                     |
| <a href="#">F25B 41/04</a>                               | Disposition of fluid circulation valves in refrigeration machines |
| <a href="#">G05D</a>                                     | Controlling non-electric variables                                |
| <a href="#">G10B 3/06</a>                                | Valves for organs   |
| <a href="#">G10D 9/04</a>                                | Valves for other wind-actuated musical instruments                |
| <a href="#">{G21C 9/06}</a>                              | {Safety valves structurally associated with nuclear reactors}     |
| <a href="#">{H01M 2/12}</a>                              | {Vent plugs in batteries or cells}                                |

#### WARNING

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|                            |            |   |
|----------------------------|------------|---|
| <a href="#">F16K 31/11</a> | covered by | <a href="#">F16K 31/06</a> , <a href="#">F16K 31/08</a> ,<br><a href="#">F16K 31/10</a> |
| <a href="#">F16K 31/64</a> | covered by | <a href="#">G05D</a>  |
| <a href="#">F16K 31/66</a> | covered by | <a href="#">F16K 31/06</a> ; <a href="#">H01F</a>                                       |
| <a href="#">F16K 31/68</a> | covered by | <a href="#">G05D</a>  |
| <a href="#">F16K 31/70</a> | covered by | <a href="#">F16K 31/002</a>   |
| <a href="#">F16K 31/72</a> | covered by | <a href="#">F16K 31/00</a>  |

**F16K 7/00** Diaphragm {valves or} cut-off apparatus, e.g. with a member deformed, but not moved bodily, to close the passage (container gates or closures operating by deformation of flexible walls [B65D 90/56](#); means for plugging pipes or hoses [F16L 55/10](#) )**{Pinch-valves}; Pinch valves}**

#### Project: RP0494 (F16K)

**F16K 49/00** Means in or on valves for heating or cooling (**for pipes F16L 53/00; heating or cooling of pipes or pipe systems F16L 53/00**; thermal insulation in connection with pipes or pipe systems [F16L 59/16](#))

#### Project: N/A (F16L)

**F16L** **PIPES; JOINTS OR FITTINGS FOR PIPES; SUPPORTS FOR PIPES, CABLES OR PROTECTIVE TUBING; MEANS FOR THERMAL INSULATION IN GENERAL**

#### NOTES

- In this subclass, the following terms are used with the meanings indicated:
  - "pipe" means a conduit of closed cross-section, which is specially adapted to convey fluids, materials or objects;
  - "hose" means a pipe, as defined above, which has flexibility as an essential characteristic.
- Attention is drawn to the following places:

|                              |   |
|------------------------------|---|
| <a href="#">A61M 39/00</a>   | Tube connectors, tube couplings or branch units, specially adapted for medical use  |
| <a href="#">B05B 1/20</a>    | Perforated pipes  |
| <a href="#">{B60T 17/04}</a> | {Arrangement of piping or air hoses in brake systems}   |
| <a href="#">B63B 35/03</a>   | Pipe-laying vessels   |
| <a href="#">B64D 39/04</a>   | Adaptation of hose constructions for refuelling aircraft during flight  |
| <a href="#">{B65G 51/00}</a> | {Conveying articles through pipes or tubes by fluid flow or pressure}   |
| <a href="#">{B65G 53/00}</a> | {Conveying materials in bulk through pipes or tubes}  |
| <a href="#">B67D 7/38</a>    | Arrangements of hoses in apparatus for transferring liquids, e.g. fuel, from bulk to vehicles or portable containers      |
| <a href="#">E01D 19/10</a>   | Fastening of pipes or cables to bridges   |
| <a href="#">E03B</a>         | Water supply installations  |
| <a href="#">E03D 11/17</a>   | Means for connecting water-closet bowls to the flushing pipe  |
| <a href="#">E03D 11/18</a>   | Siphons for water-closets   |
| <a href="#">E03F 3/04</a>    | Pipes or fittings specially adapted to sewers   |
| <a href="#">E04D 13/08</a>   | Down pipes for roof drainage; Clamping means therefor   |
| <a href="#">E04F 17/00</a>   | Vertical ducts, channels in buildings, e.g. chimneys  |
| <a href="#">E21F 1/04</a>    | Air ducts for ventilation of mines or tunnels; Connections therefor   |
| <a href="#">E21F 17/02</a>   | Suspension devices for tubes or the like in mines or tunnels  |
| <a href="#">F01N</a>         | Gas flow silencers or exhaust apparatus for machines or engines   |
| <a href="#">{F16B 7/00}</a>  | {Connections of rods or tubes}  |
| <a href="#">F16N 21/00</a>   | Conduits, junctions for lubrication systems   |
| <a href="#">F17C 3/02</a>    | Thermal insulation of vessels not under pressure for storing liquefied or solidified gases, e.g. Dewar flask              |
| <a href="#">{F17D}</a>       | {Pipe-line systems, pipe-lines}   |
| <a href="#">F22B 37/10</a>   | Water tubes of steam boilers  |
| <a href="#">F23J 13/04</a>   | Joints, connections for chimneys or flues   |
| <a href="#">F24H 9/12</a>    | Connecting circulation pipes to heaters   |
| <a href="#">F28F 9/04</a>    | Arrangements for sealing elements into header boxes or end plates of heat-exchangers                                      |
| <a href="#">G21C 15/22</a>   | Structural association of coolant tubes with headers or other pipes in <del>nuclearreactors</del> <i>nuclear reactors</i> |
| <a href="#">H02G 3/04</a>    | Protective tubing or conduits for electric cables   |
| <a href="#">H02G 3/26</a>    | Installations of electric cables or lines, or protective tubing on or in walls, ceilings or floors.                       |

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                             |            |   |
|-----------------------------|------------|---|
| <a href="#">F16L 3/21</a>   | covered by | <a href="#">F16L 3/2053</a> , <a href="#">F16L 3/2056</a> ; |
| <a href="#">F16L 13/013</a> | covered by | <a href="#">F16L 13/007</a> ;                               |
| <a href="#">F16L 19/03</a>  | covered by | <a href="#">F16L 19/0212</a> ;                              |
| <a href="#">F16L 59/05</a>  | covered by | <a href="#">F16L 59/021</a> .                               |
| <a href="#">F16L 101/14</a> | covered by |   |



## F16L 25/00

Constructive types of pipe joints not provided for in groups [F16L 13/00](#) - [F16L 23/00](#) (adjustable joints [F16L 27/00](#); couplings of the quick-acting type [F16L 37/00](#); specially adapted to be made of plastics or to be used with pipes made of plastics [F16L 47/00](#) )~~{Details of pipe joints not otherwise provided for, e.g. electrically conducting or insulating means}; Details of pipe joints not otherwise provided for, e.g. electrically conducting or insulating means}~~

## Project: RP0494 (F16L)

## C F16L 53/00

Heating ~~or cooling of~~ pipes or pipe systems ~~(preventing freezing of pipes, thawing frozen pipes E03B 7/12, E03B 7/14; pipe-line systems, pipe-lines F17D); Cooling of pipes or pipe systems~~

WARNING

Group [F16L 53/00](#) is impacted by reclassification into groups [F16L 53/70](#) and [F16L 53/75](#).

Groups [F16L 53/00](#), [F16L 53/70](#), and [F16L 53/75](#) should be considered in order to perform a complete search.

- D F16L 53/001
  - {Heating of pipes or pipe systems}
  - <administratively transferred to [F16L 53/30](#)>
- D F16L 53/002
  - • {by means of a hot fluid, e.g. gas, steam or liquid}
  - <administratively transferred to [F16L 53/32](#)>
- D F16L 53/004
  - • {by electric, magnetic or electromagnetic fields, e.g. using induction, dielectric or microwave heating}
  - <administratively transferred to [F16L 53/34](#)>
- D F16L 53/005
  - • {by ohmic-resistance heating}
  - <administratively transferred to [F16L 53/35](#)>
- D F16L 53/007
  - • • {the heating current flowing directly through the pipe to be heated}
  - <administratively transferred to [F16L 53/37](#)>
- D F16L 53/008
  - • • {using electric heating elements in the form of wires, cables, strips, ribbons or the like}
  - <administratively transferred to [F16L 53/38](#)>
- N F16L 53/30
  - Heating of pipes or pipe systems
- N F16L 53/32
  - • using hot fluids
- N F16L 53/34
  - • using electric, magnetic or electromagnetic fields, e.g. using induction, dielectric or microwave heating
- N F16L 53/35
  - • Ohmic-resistance heating
- N F16L 53/37
  - • • the heating current flowing directly through the pipe to be heated
- N F16L 53/38
  - • • using elongate electric heating elements, e.g. wires or ribbons
- N F16L 53/70
  - Cooling of pipes or pipe systems

WARNING

Group [F16L 53/70](#) is incomplete pending reclassification of documents from group [F16L 53/00](#).

Groups [F16L 53/00](#) and [F16L 53/70](#) should be considered in order to perform a complete search.

## N F16L 53/75

- • using cooling fins

WARNING

Group [F16L 53/75](#) is incomplete pending reclassification of documents from group [F16L 53/00](#).

Groups [F16L 53/00](#) and [F16L 53/75](#) should be considered in order to perform a complete search.

**Project: N/A (F16N)**

- U F16N 21/00 Conduits; Junctions (in general [F16L](#)); Fittings for lubrication apertures  
F16N 2021/005
  - {~~Modulair~~[Modular](#) units}

**Project: N/A (F16P)**

- U F16P 1/00 Safety devices independent of the control and operation of any machine (protective devices for the eyes or ears, worn on the body or carried in the hand, [A61F 9/00](#), [A61F 11/00](#))  
F16P 1/005
  - {Guards for rolls in ~~calandering~~[calendering](#) or other roll machines, e.g. nip guards, finger guards}
- U F16P 3/00 Safety devices acting in conjunction with the control or operation of a machine; Control arrangements requiring the simultaneous use of two or more parts of the body ([F16P 5/00](#) takes precedence)
- U F16P 3/12
  - with means, e.g. feelers, which in case of the presence of a body part of a person in or near the danger zone influence the control or operation of the machine ([F16P 3/08](#) takes precedence)
- F16P 3/125
  - {Guards for rolls in ~~calandering~~[calendering](#) or other roll machines, e.g. nip guards, finger guards}

**Project: N/A (F17C)**

- F17C 1/00 Pressure vessels, e.g. gas cylinder, gas tank, replaceable cartridge (pressurised apparatus for purposes other than storage, see the relevant subclasses such as [A62C](#), [B05B](#); associated with vehicles, see the appropriate subclass of classes [B60](#) - [B64](#); pressure vessels in general [F16J 12/00](#) {; {autoclaves [B01J 3/04](#); tank vehicles [B60P 3/22](#); railway tank wagons for carrying fluent materials [B61D 5/00](#); accumulators for supplying fluid under pressure [F15B 1/04](#); ~~liquified gas stoves~~ [F24C 3/00](#)}; ~~liquified gas stoves~~ [F24C 3/00](#)})
- U F17C 2250/00 Accessories; Control means; Indicating, measuring or monitoring of parameters
- U F17C 2250/06
  - Controlling or regulating of parameters as output values
- U F17C 2250/0605
  - • Parameters
- F17C 2250/0668
  - • • Constraints, e.g. by ~~jauges~~[gauges](#)

**Project: MP0270 (F17C)**

- U F17C 2270/00 Applications
- U F17C 2270/05
  - for industrial use
- M F17C 2270/0527
  - • ~~Supra-conductors~~[Superconductors](#)

**Project: RP0494 (F17D)**

- U F17D 1/00 Pipe-line systems (conveying articles or materials through a pipe- line by means of a fluid carrier [B65G 51/00](#), [B65G 53/00](#); liquids [B67D](#); special devices for transferring liquids from bulk storage containers into vehicles or boats or *vice versa*, e.g. loading or unloading vehicles or portable containers [B67D 7/00](#); conveying material which has been excavated by a dredger or soil shifter through a pipe-line [E02F 7/10](#); sewer pipe-line systems [E03F 3/00](#); thermal insulation of pipe-lines [F16L 59/00](#); central heating systems [F24D](#))
- U F17D 1/02      • for gases or vapours
- U F17D 1/04      • • for distribution of gas
- F17D 1/05      • • Preventing freezing (by heating [F16L 53/00](#) [F16L 53/30](#))

**Project: N/A (F17D)**

- U F17D 1/08      • for liquids or viscous products (water-main or service pipe systems [E03B 7/04](#); domestic hot-water supply systems [F24D 17/00](#))
- F17D 1/082      • • {for cold fluids, e.g. *liquified/liquefied* gas ([F17D 1/086](#) takes precedence)}

**Project: N/A (F21K)****F21K****LIGHT SOURCES NOT OTHERWISE PROVIDED FOR**NOTE

In this subclass, it is desirable to add the indexing codes of subclasses [F21W](#) and [F21Y](#).

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these *IPC* groups is classified in the following CPC groups:

|                           |            |   |
|---------------------------|------------|---|
| <a href="#">F21K 5/04</a> | covered by | <a href="#">G03B 15/0457</a> ;                              |
| <a href="#">F21K 5/06</a> | covered by | <a href="#">G03B 15/0442</a> ;                              |
| <a href="#">F21K 5/08</a> | covered by | <a href="#">F21K 5/02</a> , <a href="#">G03B 15/0442</a> ;  |
| <a href="#">F21K 5/10</a> | covered by | <a href="#">G03B 15/0442</a> ;                              |
| <a href="#">F21K 5/12</a> | covered by | <a href="#">F21K 5/023</a> ;                                |
| <a href="#">F21K 5/14</a> | covered by | <a href="#">F21K 5/026</a> , <a href="#">G03B 15/0489</a> ; |
| <a href="#">F21K 5/16</a> | covered by | <a href="#">G03B 15/0452</a> ;                              |
| <a href="#">F21K 5/18</a> | covered by | <a href="#">G03B 15/0452</a> ;                              |
| <a href="#">F21K 5/20</a> | covered by | <a href="#">G03B 15/0447</a> ;                              |
| <a href="#">F21K 5/22</a> | covered by | <a href="#">G03B 15/0442</a> .                              |

**F21K 9/00**

**Light sources using semiconductor devices as light-generating elements, e.g. using light-emitting diodes [LED] or lasers**

NOTES

- In this group, the following expressions are used with the meaning indicated:
  - “light source” means a light-generating component intended for installation in a fitting or holder incorporated in a lighting device;
  - “retrofit light source” means a light source comprising substantially the same attachment means as those of incandescent lamps or fluorescent

lamps. **"Retrofit light sources"** are specially adapted for replacing or substituting such lamps.

2. Semiconductor devices *per se*, or assemblies thereof, specially adapted for light emission, e.g. for use in light sources (in the sense of Note (1)) are covered by subclass [H01L](#), e.g. [H01L 33/00](#) or [H01L 51/50](#), or by subclass [H01S](#).
3. Lighting devices or systems in which light sources are used are covered by subclasses [F21L](#) or [F21S](#).
4. When classifying in this group, classification is also made in subclass [F21V](#) if detail aspects covered by that subclass are of interest.

#### WARNINGS

1. Group [F21K 9/00](#) is incomplete pending reclassification of documents from groups [F21K 99/00](#), [F21V 19/042](#), [F21V 19/045](#), [F21S 2/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

2. Group [F21K 9/00](#) is impacted by reclassification into groups [F21K 9/20](#), [F21K 9/23](#), [F21K 9/232](#), [F21K 9/233](#), [F21K 9/235](#), [F21K 9/237](#), [F21K 9/238](#), [F21K 9/27](#), [F21K 9/272](#), [F21K 9/275](#), [F21K 9/278](#), [F21K 9/60](#), [F21K 9/61](#), [F21K 9/62](#), [F21K 9/64](#), [F21K 9/65](#), [F21K 9/66](#), [F21K 9/68](#), [F21K 9/69](#), [F21K 9/90](#) and [F21K 99/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

## Project: RP0503 (F21S)

### M F21S

#### NON-PORTABLE LIGHTING DEVICES; SYSTEMS THEREOF; **VEHICLE LIGHTING DEVICES SPECIALLY ADAPTED FOR VEHICLE EXTERIORS**

#### NOTE

**1. This subclass covers devices or systems intended for fixed installation, e.g. vehicle lighting, or for use at a permanent location, e.g. free-standing floor- or table-lamps.**

**1. This subclass covers:**

- *devices or systems intended for fixed installation or for use at a permanent location, e.g. free-standing floor- or table-lamps.*
- *aspects related to the optical, mechanical, thermal or electrical arrangement of elements in vehicle illuminating devices specially adapted for vehicle exterior, e.g. headlamps.*
- *aspects related to the optical, mechanical, thermal or electrical arrangement of elements in vehicle light signalling devices specially adapted for vehicle exterior, e.g. brake lamps or direction indicator lights.*

**2. This subclass does not cover devices or systems specially adapted for transportation, which are covered by subclass F21L.**

**2. This subclass does not cover:**

- *devices or systems specially adapted for transportation, which are covered by subclass F21L.*
- *aspects related to the vehicles in which lighting devices are arranged, e.g. the arrangement or operation of lighting devices on vehicles, which are covered by B60Q.*
- *control of vehicle lighting devices in relation to the vehicle as a whole, e.g. for levelling, swivelling or aiming. Such arrangements are covered by group*

*B60Q 1/06, even if the movement of the lighting device occurs inside the lamp housing.*

3. Non-electric lighting devices or systems are classified in groups [F21S 11/00](#) - [F21S 15/00](#) only if a special adaptation related to the use of a non-electric light source is of interest.

*4. In this subclass, it is desirable to add the indexing codes of subclasses [F21W](#) and [F21Y](#).*

- U F21S 8/00**      **Lighting devices intended for fixed installation ([F21S 9/00](#), [F21S 10/00](#) take precedence; using a string or strip of light sources [F21S 4/00](#))**
- M F21S 8/02**      • of recess-mounted type, e.g. downlighters (~~F21S 8/10 takes precedence~~; details of recessed bases [F21V 21/04](#))*specifically adapted for vehicle exteriors [F21S 41/00](#)-[F21S 45/00](#)*)
- D F21S 8/10**      • specially adapted for vehicles  
WARNING  
This group is no longer used for the classification of new documents as from January 1st, 2012. The backlog of this group is being continuously reclassified to [F21S 48/00](#) and subgroups  
<administratively transferred to [F21S 43/00](#)>
- D F21S 8/12**      • providing single shaped beams or asymmetric beams, e.g. for penetrating fog or for preventing glare  
WARNING  
This group is no longer used for the classification of new documents as from January 1st, 2012. The backlog of this group is being continuously reclassified to [F21S 48/00](#) and subgroups  
<administratively transferred to [F21S 41/00](#)>

**Project: N/A (F21S)**

- U F21S 10/00**      **Lighting devices or systems producing a varying lighting effect**  
F21S 10/005      • {using light guides (light guides specially ~~adpated~~*adapted* for lighting devices [G02B 6/0001](#))}

**Project: RP0503 (F21S)**

- N F21S 41/00 - F21S 45/00**      **Vehicle lighting devices specially adapted for vehicle exteriors**
- N F21S 41/00**      **Illuminating devices specially adapted for vehicle exteriors, e.g. headlamps (reversing lights [F21S 43/00](#))**  
WARNING  
Group [F21S 41/00](#) is incomplete pending reclassification of documents from group [F21S 43/00](#).  
Groups [F21S 43/00](#) and [F21S 41/00](#) should be considered in order to perform a complete search.
- N F21S 41/10**      • characterised by the light source
- N F21S 41/12**      • • characterised by the type of emitted light
- N F21S 41/125**      • • • Coloured light
- N F21S 41/13**      • • • Ultraviolet light; Infrared light
- N F21S 41/135**      • • • Polarised

- Q F21S 41/14
- • characterised by the type of light source
- WARNING  
Group [F21S 41/14](#) is impacted by reclassification into groups [F21S 41/16](#) and [F21S 41/176](#).  
Groups [F21S 41/14](#), [F21S 41/16](#) and [F21S 41/176](#) should be considered in order to perform a complete search.
- Q F21S 41/141
- • • Light emitting diodes [LED]
- WARNING  
Group [F21S 41/141](#) is impacted by reclassification into groups [F21S 41/151](#) and [F21S 41/153](#).  
Groups [F21S 41/141](#), [F21S 41/151](#) and [F21S 41/153](#) should be considered in order to perform a complete search.
- Q F21S 41/143
- • • • the main emission direction of the LED being parallel to the optical axis of the illuminating device
- WARNING  
Group [F21S 41/143](#) is impacted by reclassification into groups [F21S 41/145](#), [F21S 41/151](#) and [F21S 41/153](#).  
All groups listed in this Warning should be considered should be considered in order to perform a complete search.
- N F21S 41/145
- • • • • the main emission direction of the LED being opposite to the main emission direction of the illuminating device
- WARNING  
Group [F21S 41/145](#) is incomplete pending reclassification of documents from group [F21S 41/143](#).  
Groups [F21S 41/143](#) and [F21S 41/145](#) should be considered in order to perform a complete search.
- Q F21S 41/147
- • • • the main emission direction of the LED being angled to the optical axis of the illuminating device
- WARNING  
Group [F21S 41/147](#) is impacted by reclassification into groups [F21S 41/148](#), [F21S 41/151](#) and [F21S 41/153](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 41/148
- • • • • the main emission direction of the LED being perpendicular to the optical axis
- WARNING  
Group [F21S 41/148](#) is incomplete pending reclassification of documents from group [F21S 41/147](#).  
Groups [F21S 41/147](#) and [F21S 41/148](#) should be considered in order to perform a complete search.
- N F21S 41/151
- • • • arranged in one or more lines
- WARNING  
Group [F21S 41/151](#) is incomplete pending reclassification of documents from groups [F21S 41/141](#), [F21S 41/143](#) and [F21S 41/147](#).  
All groups should be considered in order to perform a complete search.

- N F21S 41/153 . . . . arranged in a matrix
- WARNING  
Group [F21S 41/153](#) is incomplete pending reclassification of documents from groups [F21S 41/141](#), [F21S 41/143](#) and [F21S 41/147](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 41/155 . . . . Surface emitters, e.g. organic light emitting diodes [OLED]
- N F21S 41/16 . . . . Laser light sources
- WARNING  
Group [F21S 41/16](#) is incomplete pending reclassification of documents from group [F21S 41/14](#).  
Groups [F21S 41/14](#) and [F21S 41/16](#) should be considered in order to perform a complete search.
- N F21S 41/162 . . . . Incandescent light sources, e.g. filament or halogen lamps
- N F21S 41/164 . . . . having two or more filaments
- N F21S 41/166 . . . . characterised by the shape of the filament
- N F21S 41/168 . . . . having a filament arranged transversally to the optical axis of the illuminating device
- Q F21S 41/17 . . . . Discharge light sources
- WARNING  
Group [F21S 41/17](#) is impacted by reclassification into group [F21S 41/172](#).  
Groups [F21S 41/17](#) and [F21S 41/172](#) should be considered in order to perform a complete search.
- N F21S 41/172 . . . . High-intensity discharge light sources
- WARNING  
Group [F21S 41/172](#) is incomplete pending reclassification of documents from group [F21S 41/17](#).  
Groups [F21S 41/17](#) and [F21S 41/172](#) should be considered in order to perform a complete search.
- N F21S 41/173 . . . . Fluorescent light sources
- N F21S 41/176 . . . . Light sources where the light is generated by photoluminescent material spaced from a primary light generating element
- WARNING  
Group [F21S 41/176](#) is incomplete pending reclassification of documents from group [F21S 41/14](#).  
Groups [F21S 41/14](#) and [F21S 41/176](#) should be considered in order to perform a complete search.
- N F21S 41/18 . . . . {Combination of light sources of different types or shapes}
- N F21S 41/19 . . . . Attachment of light sources or lamp holders (achieving variable light distribution by movable light sources [F21S 41/657](#))
- N F21S 41/192 . . . . {Details of lamp holders, terminals or connectors}
- N F21S 41/194 . . . . {Bayonet attachments}
- N F21S 41/196 . . . . {Wire spring attachments}
- N F21S 41/198 . . . . {Snap-fit attachments}
- N F21S 41/20 . . . . characterised by refractors, transparent cover plates, light guides or filters
- N F21S 41/24 . . . . Light guides
- N F21S 41/25 . . . . Projection lenses



- N F21S 41/255 . . . Lenses with a front view of circular or truncated circular outline
- N F21S 41/26 . . . Elongated lenses
- N F21S 41/265 . . . Composite lenses; Lenses with a patch-like shape
- N F21S 41/27 . . . Thick lenses
- N F21S 41/275 . . . Lens surfaces, e.g. coatings or surface structures
- N F21S 41/28 . . {Cover glass}
- N F21S 41/285 . . {Refractors, transparent cover plates, light guides or filters not provided in groups [F21S 41/24-F21S 41/28](#)}
- N F21S 41/29 . . Attachment thereof (for achieving variable light distribution [F21S 41/63](#))
- N F21S 41/295 . . . {specially adapted to projection lenses}
- N F21S 41/30 . characterised by reflectors
- Q F21S 41/32 . . Optical layout thereof

WARNING

Group [F21S 41/32](#) is impacted by reclassification into group [F21S 41/33](#).  
Groups [F21S 41/32](#) and [F21S 41/33](#).  
Groups [F21S 41/32](#) and [F21S 41/33](#) should be considered in order to perform a complete search.

- N F21S 41/321 . . . {the reflector being a surface of revolution or a planar surface, e.g. truncated}
- N F21S 41/322 . . . {the reflector using total internal reflection}
- N F21S 41/323 . . . {the reflector having two perpendicular cross sections having regular geometrical curves of a distinct nature}
- N F21S 41/33 . . . Multi-surface reflectors, e.g. reflectors with facets or reflectors with portions of different curvature

WARNING

Group [F21S 41/33](#) is incomplete pending reclassification of documents from group [F21S 41/32](#).  
Groups [F21S 41/32](#) and [F21S 41/33](#) should be considered in order to perform a complete search.

- N F21S 41/331 . . . . {the reflector consisting of complete annular areas}
- N F21S 41/332 . . . . {with continuity at the junction between adjacent areas}
- N F21S 41/333 . . . . {with discontinuity at the junction between adjacent areas}
- N F21S 41/334 . . . . {the reflector consisting of patch like sectors}
- N F21S 41/335 . . . . {with continuity at the junction between adjacent areas}
- N F21S 41/336 . . . . {with discontinuity at the junction between adjacent areas}
- N F21S 41/337 . . . . {the reflector having a structured surface, e.g. with facets or corrugations}
- N F21S 41/338 . . . . {the reflector having surface portions added to its general concavity}
- Q F21S 41/36 . . . Combinations of two or more separate reflectors

WARNING

Group [F21S 41/36](#) is impacted by reclassification into group [F21S 41/365](#).  
Groups [F21S 41/36](#) and [F21S 41/365](#) should be considered in order to perform a complete search.

- N F21S 41/365 . . . . successively reflecting the light

WARNING

Group [F21S 41/365](#) is incomplete pending reclassification of documents from group [F21S 41/36](#).

Groups [F21S 41/36](#) and [F21S 41/365](#) should be considered in order to perform a complete search.

- N F21S 41/37
  - • characterised by their material, surface treatment or coatings
- N F21S 41/39
  - • Attachment thereof (achieving variable light distribution by movable reflectors [F21S 41/675](#))
- N F21S 41/395
  - • • {specially adapted to extension reflectors}
- N F21S 41/40
  - characterised by screens, non-reflecting members, light-shielding members or fixed shades
- N F21S 41/43
  - • characterised by the shape thereof
- N F21S 41/435
  - • • {Hoods or cap-shaped}
- N F21S 41/47
  - • Attachment thereof (achieving variable light distribution by movable screens [F21S 41/683](#))
- N F21S 41/50
  - characterised by aesthetic components not otherwise provided for, e.g. decorative trim, partition walls or covers
- N F21S 41/55
  - • Attachment thereof
- N F21S 41/60
  - characterised by a variable light distribution
- N F21S 41/62
  - • for adaptation between right-hand and left-hand traffic
- N F21S 41/63
  - • by acting on refractors, filters or transparent cover plates
- N F21S 41/635
  - • • {by moving refractors, filters or transparent cover plates}
- N F21S 41/64
  - • • by changing their light transmissivity, e.g. by liquid crystal or electrochromic devices
- N F21S 41/645
  - • • • {by electro-optic means, e.g. liquid crystal or electrochromic devices}
- N F21S 41/65
  - • by acting on light sources
- N F21S 41/657
  - • • by moving light sources
- N F21S 41/663
  - • • by switching light sources (by switching incandescent light sources [F21S 41/162](#))
- N F21S 41/67
  - • by acting on reflectors
- N F21S 41/675
  - • • by moving reflectors
- N F21S 41/68
  - • by acting on screens
- N F21S 41/683
  - • • by moving screens
- N F21S 41/686
  - • • • Blades, i.e. screens moving in a vertical plane
- N F21S 41/689
  - • • • Flaps, i.e. screens pivoting around one of their edges
- N F21S 41/692
  - • • • Shields, i.e. screens not creating an image meant to be projected
- N F21S 41/695
  - • • • Screens rotating around a vertical axis (rotating flaps [F21S 41/689](#))
- N F21S 41/698
  - • • • Shaft-shaped screens rotating along its longitudinal axis

**Q F21S 43/00** **Signalling devices specially adapted for vehicle exteriors, e.g. brake lamps, direction indicator lights or reversing lights**

WARNING

Group [F21S 43/00](#) is impacted by reclassification into groups [F21S 41/00](#) and [F21W 2104/00](#).

Groups [F21S 43/00](#), [F21S 41/00](#) and [F21W 2104/00](#) should be considered in order to perform a complete search.

- N F21S 43/10
  - characterised by the light source
- Q F21S 43/13
  - • characterised by the type of light source

WARNING

Group [F21S 43/13](#) is impacted by reclassification into group [F21S 43/16](#).

Groups [F21S 43/13](#) and [F21S 43/16](#) should be considered in order to perform a complete search.

- N F21S 43/14
  - • • Light emitting diodes [LED]
- N F21S 43/145
  - • • • Surface emitters, e.g. organic light emitting diodes [OLED]
- N F21S 43/15
  - • • Strips of light sources
- N F21S 43/16
  - • • Light sources where the light is generated by photoluminescent material spaced from a primary light generating element

#### WARNING

Group [F21S 43/16](#) is incomplete pending reclassification of documents from group [F21S 43/13](#).

Groups [F21S 43/13](#) and [F21S 43/16](#) should be considered in order to perform a complete search.

- N F21S 43/19
  - • Attachment of light sources or lamp holders
- N F21S 43/195
  - • • {Details of lamp holders, terminals or connectors}
- N F21S 43/20
  - characterised by refractors, transparent cover plates, light guides or filters
- N F21S 43/235
  - • Light guides
- N F21S 43/236
  - • • characterised by the shape of the light guide
- N F21S 43/237
  - • • • rod-shaped
- N F21S 43/239
  - • • • plate-shaped
- N F21S 43/241
  - • • • of complex shape
- N F21S 43/242
  - • • characterised by the emission area
- N F21S 43/243
  - • • • emitting light from one or more of its extremities
- N F21S 43/245
  - • • • emitting light from one or more of its major surfaces
- N F21S 43/247
  - • • with a single light source being coupled into the light guide
- N F21S 43/249
  - • • with two or more light sources being coupled into the light guide
- N F21S 43/251
  - • • the light guides being used to transmit light from remote light sources
- N F21S 43/255
  - • {Filters}
- N F21S 43/26
  - • {Refractors, transparent cover plates, light guides or filters not provided in groups [F21S 43/235](#) - [F21S 43/255](#)}
- N F21S 43/27
  - • Attachment thereof
- N F21S 43/30
  - characterised by reflectors
- N F21S 43/31
  - • Optical layout thereof
- N F21S 43/315
  - • • {using total internal reflection}
- N F21S 43/33
  - • characterised by their material, surface treatment or coatings
- N F21S 43/37
  - • Attachment thereof
- N F21S 43/40
  - characterised by the combination of reflectors and refractors
- N F21S 43/50
  - characterised by aesthetic components not otherwise provided for, e.g. decorative trim, partition walls or covers
- N F21S 43/51
  - • {Attachment thereof}

- Q F21S 45/00** **Arrangements within vehicle lighting devices specially adapted for vehicle exteriors, for purposes other than emission or distribution of light**

#### WARNING

Group [F21S 45/00](#) is impacted by reclassification into groups [F21S 45/20](#), [F21S 45/70](#) and [F21W 2104/00](#).

All groups should be considered in order to perform a complete search.

- N F21S 45/10
- Protection of lighting devices (cooling of lighting devices [F21S 45/40](#); waterproofing of lighting devices [F21S 45/50](#))
- N F21S 45/20
- Promoting gas flow in lighting devices, e.g. directing flow toward the cover glass for demisting (ventilation [F21S 45/30](#); forced cooling [F21S 45/42](#))
- WARNING
- Group [F21S 45/20](#) is incomplete pending reclassification of documents from group [F21S 45/00](#).  
Groups [F21S 45/00](#) and [F21S 45/20](#) should be considered in order to perform a complete search.
- N F21S 45/30
- Ventilation or drainage of lighting devices
- N F21S 45/33
- • specially adapted for headlamps
- N F21S 45/37
- • specially adapted for signal lamps
- N F21S 45/40
- Cooling of lighting devices
- N F21S 45/42
- • Forced cooling
- Q F21S 45/43
- • • using gas
- WARNING
- Group [F21S 45/43](#) is impacted by reclassification into group [F21S 45/435](#).  
Groups [F21S 45/43](#) and [F21S 45/435](#) should be considered in order to perform a complete search.
- N F21S 45/435
- • • circulating the gas within a closed system
- WARNING
- Group [F21S 45/435](#) is incomplete pending reclassification of documents from group [F21S 45/43](#).  
Groups [F21S 45/43](#) and [F21S 45/435](#) should be considered in order to perform a complete search.
- Q F21S 45/46
- • • using liquid
- WARNING
- Group [F21S 45/46](#) is impacted by reclassification into group [F21S 45/465](#).  
Groups [F21S 45/46](#) and [F21S 45/465](#) should should be considered in order to perform a complete search.
- N F21S 45/465
- • • from other vehicle cooling systems, e.g. from air-conditioning or engine cooling systems
- WARNING
- Group [F21S 45/465](#) is incomplete pending reclassification of documents from group [F21S 45/46](#).  
Groups [F21S 45/46](#) and [F21S 45/465](#) should be considered in order to perform a complete search.
- Q F21S 45/47
- • Passive cooling, e.g. using fins, thermal conductive elements or openings
- WARNING
- Group [F21S 45/47](#) is impacted by reclassification into group [F21S 45/48](#).  
Groups [F21S 45/47](#) and [F21S 45/48](#) should should be considered in order to perform a complete search.
- N F21S 45/48
- • • with means for conducting heat from the inside to the outside of the lighting devices, e.g. with fins on the outer surface of the lighting device
- WARNING
- Group [F21S 45/48](#) is incomplete pending reclassification of documents from group [F21S 45/47](#).

Groups [F21S 45/47](#) and [F21S 45/48](#) should be considered in order to perform a complete search.

- N F21S 45/49      • Attachment of the cooling means
- N F21S 45/50      • Waterproofing
- N F21S 45/60      • Heating of lighting devices, e.g. for demisting
- N F21S 45/70      • Prevention of harmful light leakage

**WARNING**

Group [F21S 45/70](#) is incomplete pending reclassification of documents from group [F21S 45/00](#).

Groups [F21S 45/00](#) and [F21S 45/70](#) should be considered in order to perform a complete search.

- D F21S 48/00**      ~~{Lighting devices or systems specially adapted for vehicles (arrangements or adaptations for ships or waterborne vessels B63B 45/00)}~~  
                          <administratively transferred to [F21S 43/00](#)>
- D F21S 48/10      • {Headlamps}  
                          <administratively transferred to [F21S 41/00](#)>
- D F21S 48/11      • • {characterised by the light source}  
                          <administratively transferred to [F21S 41/10](#)>
- D F21S 48/1104    • • • {Attachment of light sources; Lamp holders; Terminals or connectors therefor (F21S 48/1742 takes precedence)}  
                          <administratively transferred to [F21S 41/19](#)>
- D F21S 48/1109    • • • • {Details of lamp holders, terminals or connectors (mounting of a ballast for a high intensity discharge lamp on the housing wall of a headlamp B60Q)}  
                          <administratively transferred to [F21S 41/192](#)>
- D F21S 48/1113    • • • • {Bayonet attachments}  
                          <administratively transferred to [F21S 41/194](#)>
- D F21S 48/1118    • • • • {Wire spring attachments}  
                          <administratively transferred to [F21S 41/196](#)>
- D F21S 48/1122    • • • • {Snap-fit attachments}  
                          <administratively transferred to [F21S 41/198](#)>
- D F21S 48/1127    • • • {Type of emitted light}  
                          <administratively transferred to [F21S 41/12](#)>
- D F21S 48/1131    • • • • {Colored light}  
                          <administratively transferred to [F21S 41/125](#)>
- D F21S 48/1136    • • • • {Ultraviolet [UV] or infrared [IR] light}  
                          <administratively transferred to [F21S 41/13](#)>
- D F21S 48/114     • • • • {Polarized light}  
                          <administratively transferred to [F21S 41/135](#)>
- D F21S 48/1145    • • • {Type of light source}  
                          <administratively transferred to [F21S 41/14](#)>
- D F21S 48/115     • • • • {Light emitting diodes (LEDs)}  
                          <administratively transferred to [F21S 41/141](#)>
- D F21S 48/1154    • • • • • {the main emission direction of the LED being parallel to the optical axis of the headlamp}  
                          <administratively transferred to [F21S 41/143](#)>
- D F21S 48/1159    • • • • • {the main emission direction of the LED being angled to the optical axis of the headlamp}  
                          <administratively transferred to [F21S 41/147](#)>
- D F21S 48/1163    • • • • • {Surface emitters, e.g. OLEDs}  
                          <administratively transferred to [F21S 41/155](#)>

- D F21S 48/1168 . . . . {Incandescent light sources, e.g. filament or halogen lamps}  
<administratively transferred to [F21S 41/162](#)>
- D F21S 48/1172 . . . . {having two or more filaments}  
<administratively transferred to [F21S 41/164](#)>
- D F21S 48/1177 . . . . {characterised by the shape of the filament}  
<administratively transferred to [F21S 41/166](#)>
- D F21S 48/1181 . . . . {having a filament being arranged transversally to the optical axis of the headlamp}  
<administratively transferred to [F21S 41/168](#)>
- D F21S 48/1186 . . . . {High intensity discharge [HID] light source}  
<administratively transferred to [F21S 41/17](#)>
- D F21S 48/119 . . . . {Fluorescent, elongated light source}  
<administratively transferred to [F21S 41/173](#)>
- D F21S 48/1195 . . . . {Combination of light sources of different types or shapes}  
<administratively transferred to [F21S 41/18](#)>
- D F21S 48/12 . . {characterised by refractors, transparent cover plates or filters}  
<administratively transferred to [F21S 41/20](#)>
- D F21S 48/1208 . . . {Attachment of refractors, transparent cover plates or filters (F21S 48/1721 takes precedence)}  
<administratively transferred to [F21S 41/29](#)>
- D F21S 48/1216 . . . . {specially adapted to projection lenses}  
<administratively transferred to [F21S 41/295](#)>
- D F21S 48/1225 . . . {Type of refractor, transparent cover plates or filters}  
<administratively transferred to [F21S 41/285](#)>
- D F21S 48/1233 . . . . {Cover glass}  
<administratively transferred to [F21S 41/28](#)>
- D F21S 48/1241 . . . . {Light guides (light guides per se G02B 6/0001)}  
<administratively transferred to [F21S 41/24](#)>
- D F21S 48/125 . . . . {Projection lenses}  
<administratively transferred to [F21S 41/25](#)>
- D F21S 48/1258 . . . . {Lenses with a circular or truncated circular outline, when seen from the front}  
<administratively transferred to [F21S 41/255](#)>
- D F21S 48/1266 . . . . {Elongated lenses}  
<administratively transferred to [F21S 41/26](#)>
- D F21S 48/1275 . . . . {Composite lenses; Lenses with a patch like shape}  
<administratively transferred to [F21S 41/265](#)>
- D F21S 48/1283 . . . . {Lens surfaces, e.g. coatings, surface structures}  
<administratively transferred to [F21S 41/275](#)>
- D F21S 48/1291 . . . . {Thick lenses for providing the final automotive light distribution}  
<administratively transferred to [F21S 41/27](#)>
- D F21S 48/13 . . {characterised by reflectors}  
<administratively transferred to [F21S 41/30](#)>
- D F21S 48/1305 . . . {Attachment of reflectors (F21S 48/1757 takes precedence)}  
<administratively transferred to [F21S 41/39](#)>
- D F21S 48/1311 . . . . {specially adapted to extension reflectors}  
<administratively transferred to [F21S 41/395](#)>
- D F21S 48/1317 . . . {Optical design}  
<administratively transferred to [F21S 41/32](#)>



- D F21S 48/1323 . . . {the reflector being a surface of revolution or a planar surface, e.g. truncated}  
<administratively transferred to [F21S 41/321](#)>
- D F21S 48/1329 . . . {the reflector using total internal reflection}  
<administratively transferred to [F21S 41/322](#)>
- D F21S 48/1335 . . . {the reflector having two perpendicular cross sections having regular geometrical curves of a distinct nature}  
<administratively transferred to [F21S 41/323](#)>
- D F21S 48/1341 . . . {the reflector consisting of complete annular areas}  
<administratively transferred to [F21S 41/331](#)>
- D F21S 48/1347 . . . . {with continuity at the junction between adjacent areas}  
<administratively transferred to [F21S 41/332](#)>
- D F21S 48/1352 . . . . {with discontinuity at the junction between adjacent areas}  
<administratively transferred to [F21S 41/333](#)>
- D F21S 48/1358 . . . {the reflector consisting of patch like sectors}  
<administratively transferred to [F21S 41/334](#)>
- D F21S 48/1364 . . . . {with continuity at the junction between adjacent areas}  
<administratively transferred to [F21S 41/335](#)>
- D F21S 48/137 . . . . {with discontinuity at the junction between adjacent areas}  
<administratively transferred to [F21S 41/336](#)>
- D F21S 48/1376 . . . {the reflector having a structured surface, e.g. with facets or corrugations}  
<administratively transferred to [F21S 41/337](#)>
- D F21S 48/1382 . . . {the reflector having surface portions added to its general concavity}  
<administratively transferred to [F21S 41/338](#)>
- D F21S 48/1388 . . . {Combination of two or more reflectors}  
<administratively transferred to [F21S 41/36](#)>
- D F21S 48/1394 . . {Material, surface treatment or coating of the reflector}  
<administratively transferred to [F21S 41/37](#)>
- D F21S 48/14 . . {characterised by screens, non-reflecting members, light-shielding members or fixed shades}  
<administratively transferred to [F21S 41/40](#)>
- D F21S 48/142 . . {Attachment thereof (F21S 48/1768 takes precedence)}  
<administratively transferred to [F21S 41/47](#)>
- D F21S 48/145 . . {Details of the shape of screens, non-reflecting members, light-shielding members or fixed shades}  
<administratively transferred to [F21S 41/43](#)>
- D F21S 48/147 . . . {Hoods or cap-shaped}  
<administratively transferred to [F21S 41/435](#)>
- D F21S 48/15 . . {characterised by aesthetical components or components other than light sources, reflectors, refractors or screens, e.g. partition walls, covers, decorative trims}  
<administratively transferred to [F21S 41/50](#)>
- D F21S 48/155 . . {Attachment thereof}  
<administratively transferred to [F21S 41/55](#)>
- D F21S 48/17 . . {characterised by a variable light distribution}  
<administratively transferred to [F21S 41/60](#)>
- D F21S 48/1705 . . {Light distributions being switched}  
<administratively transferred to [F21S 41/60](#)>
- D F21S 48/171 . . . {between right and left traffic side}  
<administratively transferred to [F21S 41/62](#)>



- |   |              |   |
|---|--------------|---|
| D | F21S 48/1715 | . . . {by acting on refractors, filters or transparent cover plates}<br><administratively transferred to <a href="#">F21S 41/63</a> >   |
| D | F21S 48/1721 | . . . . {by moving refractors, filters or transparent cover plates}<br><administratively transferred to <a href="#">F21S 41/635</a> >   |
| D | F21S 48/1726 | . . . . {by changing the light transmissivity of the refractors, filters or transparent cover plates}<br><administratively transferred to <a href="#">F21S 41/64</a> >  |
| D | F21S 48/1731 | . . . . . {by electro-optic means, e.g. liquid crystal or electrochromic devices}<br><administratively transferred to <a href="#">F21S 41/645</a> >   |
| D | F21S 48/1736 | . . . {by acting on light sources}<br><administratively transferred to <a href="#">F21S 41/65</a> >   |
| D | F21S 48/1742 | . . . . {by moving light sources}<br><administratively transferred to <a href="#">F21S 41/657</a> >   |
| D | F21S 48/1747 | . . . . {by switching light sources (F21S 48/1168 takes precedence)}<br><administratively transferred to <a href="#">F21S 41/663</a> >  |
| D | F21S 48/1752 | . . . {by acting on reflectors}<br><administratively transferred to <a href="#">F21S 41/67</a> >  |
| D | F21S 48/1757 | . . . . {by moving reflectors}<br><administratively transferred to <a href="#">F21S 41/675</a> >  |
| D | F21S 48/1763 | . . . {by acting on screens}<br><administratively transferred to <a href="#">F21S 41/68</a> >   |
| D | F21S 48/1768 | . . . . {by moving screens}<br><administratively transferred to <a href="#">F21S 41/683</a> >   |
| D | F21S 48/1773 | . . . . . {Blades, i.e. screens moving in a vertical plane}<br><administratively transferred to <a href="#">F21S 41/686</a> >   |
| D | F21S 48/1778 | . . . . . {Flaps, i.e. screens pivoting around one of its edges}<br><administratively transferred to <a href="#">F21S 41/689</a> >  |
| D | F21S 48/1784 | . . . . . {Shields, i.e. screens not creating an image meant to be projected, e.g. shielding a part of the light source or a part of an additional optical element}<br><administratively transferred to <a href="#">F21S 41/692</a> > |
| D | F21S 48/1789 | . . . . . {Rotating screens, i.e. screens rotating around a vertical axis}<br><administratively transferred to <a href="#">F21S 41/695</a> >  |
| D | F21S 48/1794 | . . . . . {Shafts, i.e. screens being a rotating shaft}<br><administratively transferred to <a href="#">F21S 41/698</a> >   |
| D | F21S 48/20   | . {Signal lamps, e.g. brake lamps or turn signal lamps}<br><administratively transferred to <a href="#">F21S 43/00</a> >  |
| D | F21S 48/21   | . . {characterised by the light source}<br><administratively transferred to <a href="#">F21S 43/10</a> >  |
| D | F21S 48/211  | . . . {Attachment of light sources; Lamp holders, terminals or connectors therefor}<br><administratively transferred to <a href="#">F21S 43/19</a> >  |
| D | F21S 48/212  | . . . . {Details of lamp holders, terminals or connectors}<br><administratively transferred to <a href="#">F21S 43/195</a> >  |
| D | F21S 48/214  | . . . {Type of the light source}<br><administratively transferred to <a href="#">F21S 43/13</a> >   |
| D | F21S 48/215  | . . . . {Light emitting diodes (LEDs)}<br><administratively transferred to <a href="#">F21S 43/14</a> >   |
| D | F21S 48/217  | . . . . . {Surface emitters, e.g. OLEDs}<br><administratively transferred to <a href="#">F21S 43/145</a> >  |

- D F21S 48/218 . . . {Strips of light sources}  
<administratively transferred to [F21S 43/15](#)>
  - D F21S 48/22 . . {characterised by refractors, filters or transparent cover plates}  
<administratively transferred to [F21S 43/20](#)>
  - D F21S 48/2206 . . . {Attachment thereof}  
<administratively transferred to [F21S 43/27](#)>
  - D F21S 48/2212 . . . {Type of refractors, filters or transparent cover plates}  
<administratively transferred to [F21S 43/26](#)>
  - D F21S 48/2218 . . . . {Filters}  
<administratively transferred to [F21S 43/255](#)>
  - D F21S 48/2225 . . . . {Light guides (light guides per se G02B 6/0004)}  
<administratively transferred to [F21S 43/235](#)>
  - D F21S 48/2231 . . . . . {characterised by the shape of the light guide}  
<administratively transferred to [F21S 43/236](#)>
  - D F21S 48/2237 . . . . . {Bar or rod-like light guides}  
<administratively transferred to [F21S 43/237](#)>
  - D F21S 48/2243 . . . . . {Plate-like light guides}  
<administratively transferred to [F21S 43/239](#)>
  - D F21S 48/225 . . . . . {Light guides of complex shape or comprising a portion having a complex shape}
- NOTE  
additional classification should be given in the groups characterising the shape of the light guides
- <administratively transferred to [F21S 43/241](#)>
  - D F21S 48/2256 . . . . . {characterised by the emission area}  
<administratively transferred to [F21S 43/242](#)>
  - D F21S 48/2262 . . . . . {the light guide emitting on its extremity}  
<administratively transferred to [F21S 43/243](#)>
  - D F21S 48/2268 . . . . . {the light guide emitting on its surface}  
<administratively transferred to [F21S 43/245](#)>
  - D F21S 48/2275 . . . . . {characterised by the number of light sources coupled into the light guide}  
<administratively transferred to [F21S 43/235](#)>
  - D F21S 48/2281 . . . . . {Multiple light sources}  
<administratively transferred to [F21S 43/249](#)>
  - D F21S 48/2287 . . . . . {Single light source}  
<administratively transferred to [F21S 43/247](#)>
  - D F21S 48/2293 . . . . . {the light guide being used to transport light from a remote light source, e.g. from light generators}  
<administratively transferred to [F21S 43/251](#)>
  - D F21S 48/23 . . {characterised by reflectors}  
<administratively transferred to [F21S 43/30](#)>
  - D F21S 48/232 . . . {Attachment thereof}  
<administratively transferred to [F21S 43/37](#)>
  - D F21S 48/234 . . . {Optical design thereof}  
<administratively transferred to [F21S 43/31](#)>
  - D F21S 48/236 . . . . {using total internal reflection}  
<administratively transferred to [F21S 43/315](#)>
  - D F21S 48/238 . . . {Materials thereof, e.g. coatings}  
<administratively transferred to [F21S 43/33](#)>

- D F21S 48/24
  - • {characterised by the combination of reflectors and refractors}  
<administratively transferred to [F21S 43/40](#)>
- D F21S 48/25
  - • {characterised by aesthetical components or components other than light sources, reflectors, refractors, e.g. partition walls, covers or decorative trims}  
<administratively transferred to [F21S 43/50](#)>
- D F21S 48/255
  - • • {Attachment thereof}  
<administratively transferred to [F21S 43/51](#)>
- D F21S 48/30
  - {Arrangements dedicated to purposes other than light emission or distribution}  
<administratively transferred to [F21S 45/00](#)>
- D F21S 48/31
  - • {Protection of the lighting devices}  
<administratively transferred to [F21S 45/10](#)>
- D F21S 48/32
  - • {Cooling of the lighting devices}  
<administratively transferred to [F21S 45/40](#)>
- D F21S 48/321
  - • • {Attachment of the means for cooling; Cooling arrangements}  
<administratively transferred to [F21S 45/49](#)>
- D F21S 48/323
  - • • {Forced cooling}  
<administratively transferred to [F21S 45/42](#)>
- D F21S 48/325
  - • • • {using air or other gas}  
<administratively transferred to [F21S 45/43](#)>
- D F21S 48/326
  - • • • {using liquid}  
<administratively transferred to [F21S 45/46](#)>
- D F21S 48/328
  - • • {Passive cooling}  
<administratively transferred to [F21S 45/47](#)>
- D F21S 48/33
  - • {Waterproofing}  
<administratively transferred to [F21S 45/50](#)>
- D F21S 48/332
  - • • {Provisions for ventilation or drainage}  
<administratively transferred to [F21S 45/30](#)>
- D F21S 48/335
  - • • • {specifically adapted for headlamps}  
<administratively transferred to [F21S 45/33](#)>
- D F21S 48/337
  - • • • {specifically adapted for signal lamps}  
<administratively transferred to [F21S 45/37](#)>
- D F21S 48/34
  - • {Heating of the lighting devices, e.g. for de-fogging}  
<administratively transferred to [F21S 45/60](#)>

**Project: N/A (F21V)****F21V****FUNCTIONAL FEATURES OR DETAILS OF LIGHTING DEVICES OR SYSTEMS THEREOF; STRUCTURAL COMBINATIONS OF LIGHTING DEVICES WITH OTHER ARTICLES, NOT OTHERWISE PROVIDED FOR**NOTES

1. Groups [F21V 1/00-F21V 14/00](#) cover aspects related to light emission or distribution. Groups [F21V 15/00-F21V 31/00](#) cover aspects not related to light emission or distribution.
2. Details of non-electric lighting devices or systems are classified in groups [F21V 35/00-F21V 37/00](#) only if a special adaptation related to the use of a non-electric light source is of interest.
3. In this subclass, it is desirable to add the indexing codes of subclasses [F21W](#) and [F21Y](#)

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

F21V 8/00

covered by

[G02B 6/00](#)

## Project: RP0503 (F21V)

- U F21V 13/00** Producing particular characteristics or distribution of the light emitted by means of a combination of elements specified in two or more of main groups [F21V 1/00](#) [F21V 11/00](#) (by means of a combination of two or more elements covered by a single one of main groups [F21V 1/00](#) [F21V 11/00](#), see the relevant group; changing the characteristics or distribution of the light emitted by adjustment of parts [F21V 14/00](#))
- WARNING  
Groups [F21V 13/00](#) - [F21V 13/14](#) are incomplete pending reclassification of documents from group [F21L 15/02](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- U F21V 13/02** • Combinations of only two kinds of elements
- F21V 13/04** • • the elements being reflectors and refractors {(for vehicle rear lights [F21S 48/24](#) [F21S 43/40](#))}
- U F21V 14/00** Changing the characteristics or distribution of the light emitted by adjustment of parts {or by interposition of elements with electrically controlled variable light transmissivity}{reflectors with provision for adjusting the curvature [F21V 7/16](#); light filters with provision for variation of colour or intensity [F21V 9/10](#); screens using adjustable parallel laminae or strips, e.g. of Venetian-blind type, [F21V 11/04](#); screens using iris-type diaphragms [F21V 11/10](#); screens using movable sheets without apertures, e.g. flaps or slides, [F21V 11/18](#); adjustable mountings for lighting devices [F21V 21/14](#)}
- F21V 14/02** • by movement of light sources {(in vehicle head lamps [F21S 48/1742](#) [F21S 41/657](#))}
- F21V 14/04** • by movement of reflectors {(in vehicle head lamps [F21S 48/1757](#) [F21S 41/675](#))}
- F21V 14/06** • by movement of refractors {(in vehicle head lamps [F21S 48/1721](#) [F21S 41/635](#))}
- F21V 27/00** Cable-stowing arrangements structurally associated with lighting devices, e.g. reels (storing lengths of cable in general [B65H](#) {the lighting devices being vehicle headlamps [F21S 48/1109](#) [F21S 41/192](#); the lighting devices being vehicle lights [F21S 48/212](#) [F21S 43/195](#))}
- U F21V 31/00** Gas-tight or water-tight arrangements
- F21V 31/03** • with provision for venting {(for vehicle head lights [F21S 48/335](#) [F21S 45/33](#); for vehicle rear lights [F21S 48/337](#) [F21S 41/192](#))}

## Project: RP0503 (F21W)

- D F21W 2101/00** ~~Use or application of lighting devices on or in vehicles~~  
<administratively transferred to [F21W 2107/00](#)>
- D F21W 2101/02** • for land vehicles  
<administratively transferred to [F21W 2107/10](#)>
- D F21W 2101/023** • • for cycles  
<administratively transferred to [F21W 2107/13](#)>
- D F21W 2101/027** • • • for motorcycles  
<administratively transferred to [F21W 2107/17](#)>
- D F21W 2101/04** • for water vehicles  
<administratively transferred to [F21W 2107/20](#)>

- D F21W 2101/06
  - for aircraft
  - <administratively transferred to [F21W 2107/30](#)>
- D F21W 2101/08
  - Interior lights
  - <administratively transferred to [F21W 2106/00](#)>
- D F21W 2101/10
  - Head-, spot- or fog-lights
  - <administratively transferred to [F21W 2102/00](#)>
- D F21W 2101/12
  - Direction-indicator lights
  - <administratively transferred to [F21W 2103/20](#)>
- D F21W 2101/14
  - Rear or stop lights
  - <administratively transferred to [F21W 2103/00](#)>

**Q F21W 2102/00****Exterior vehicle lighting devices for illuminating purposes**WARNING

Group [F21W 2102/00](#) is impacted by reclassification into groups [F21W 2102/10](#), [F21W 2102/13](#), [F21W 2102/135](#), [F21W 2102/14](#), [F21W 2102/145](#), [F21W 2102/15](#), [F21W 2102/155](#), [F21W 2102/16](#), [F21W 2102/165](#), [F21W 2102/17](#), [F21W 2102/18](#), [F21W 2102/19](#), [F21W 2102/20](#), [F21W 2102/30](#), [F21W 2102/40](#) and [F21W 2105/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N F21W 2102/10
  - Arrangement or contour of the emitted light

WARNING

Group [F21W 2102/10](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).

Groups [F21W 2102/00](#) and [F21W 2102/10](#) should be considered in order to perform a complete search.

- N F21W 2102/13
  - • for high-beam region or low-beam region

WARNING

Group [F21W 2102/13](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).

Groups [F21W 2102/00](#) and [F21W 2102/13](#) should be considered in order to perform a complete search.

- N F21W 2102/135
  - • • the light having cut-off lines, i.e. clear borderlines between emitted regions and dark regions

WARNING

Group [F21W 2102/135](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).

Groups [F21W 2102/00](#) and [F21W 2102/135](#) should be considered in order to perform a complete search.

- N F21W 2102/14
  - • • having vertical cut-off lines; specially adapted for adaptive high beams, i.e. wherein the beam is broader but avoids glaring other road users

WARNING

Group [F21W 2102/14](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).

Groups [F21W 2102/00](#) and [F21W 2102/14](#) should be considered in order to perform a complete search.

- N F21W 2102/145      • • • • wherein the light is emitted between two parallel vertical cutoff lines, e.g. selectively emitted rectangular-shaped high beam
- WARNING  
Group [F21W 2102/145](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).  
Groups [F21W 2102/00](#) and [F21W 2102/145](#) should be considered in order to perform a complete search.
- N F21W 2102/15      • • • • wherein the light is emitted under L-shaped cut-off lines, i.e. vertical and horizontal cutoff lines
- WARNING  
Group [F21W 2102/15](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).  
Groups [F21W 2102/00](#) and [F21W 2102/15](#) should be considered in order to perform a complete search.
- N F21W 2102/155      • • • • having inclined and horizontal cutoff lines
- WARNING  
Group [F21W 2102/155](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).  
Groups [F21W 2102/00](#) and [F21W 2102/155](#) should be considered in order to perform a complete search.
- N F21W 2102/16      • • • • having blurred cut-off lines
- WARNING  
Group [F21W 2102/16](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).  
Groups [F21W 2102/00](#) and [F21W 2102/16](#) should be considered in order to perform a complete search.
- N F21W 2102/165      • • • the borderlines between emitted regions and dark regions other than cut-off lines being variable
- WARNING  
Group [F21W 2102/165](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).  
Groups [F21W 2102/00](#) and [F21W 2102/165](#) should be considered in order to perform a complete search.
- N F21W 2102/17      • • for regions other than high beam or low beam
- WARNING  
Group [F21W 2102/17](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).  
Groups [F21W 2102/00](#) and [F21W 2102/17](#) should be considered in order to perform a complete search.
- N F21W 2102/18      • • • for overhead signs
- WARNING  
Group [F21W 2102/18](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).  
Groups [F21W 2102/00](#) and [F21W 2102/18](#) should be considered in order to perform a complete search.



- N F21W 2102/19      • • • for curves  
     WARNING  
     Group [F21W 2102/19](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).  
     Groups [F21W 2102/00](#) and [F21W 2102/19](#) should be considered in order to perform a complete search.
- N F21W 2102/20      • Illuminance distribution within the emitted light  
     WARNING  
     Group [F21W 2102/20](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).  
     Groups [F21W 2102/00](#) and [F21W 2102/20](#) should be considered in order to perform a complete search.
- N F21W 2102/30      • Fog lights  
     WARNING  
     Group [F21W 2102/30](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).  
     Groups [F21W 2102/00](#) and [F21W 2102/30](#) should be considered in order to perform a complete search.
- N F21W 2102/40      • the light being emitted to facilitate access to the vehicle  
     WARNING  
     Group [F21W 2102/40](#) is incomplete pending reclassification of documents from group [F21W 2102/00](#).  
     Groups [F21W 2102/00](#) and [F21W 2102/40](#) should be considered in order to perform a complete search.
- Q F21W 2103/00      Exterior vehicle lighting devices for signalling purposes**  
     WARNING  
     Group [F21W 2103/00](#) is impacted by reclassification into groups [F21W 2103/10](#), [F21W 2103/15](#), [F21W 2103/30](#), [F21W 2103/35](#), [F21W 2103/40](#), [F21W 2103/45](#), [F21W 2103/50](#), [F21W 2103/55](#), [F21W 2103/60](#) and [F21W 2105/00](#).  
     All groups listed in this Warning should be considered in order to perform a complete search.
- N F21W 2103/10      • Position lights  
     WARNING  
     Group [F21W 2103/10](#) is incomplete pending reclassification of documents from group [F21W 2103/00](#).  
     Groups [F21W 2103/00](#) and [F21W 2103/10](#) should be considered in order to perform a complete search.
- N F21W 2103/15      • Side marker lights  
     WARNING  
     Group [F21W 2103/15](#) is incomplete pending reclassification of documents from group [F21W 2103/00](#).  
     Groups [F21W 2103/00](#) and [F21W 2103/15](#) should be considered in order to perform a complete search.
- Q F21W 2103/20      • Direction indicator lights  
     WARNING  
     Group [F21W 2103/20](#) is impacted by reclassification into group [F21W 2103/25](#).

Groups [F21W 2103/20](#) and [F21W 2103/25](#) should be considered in order to perform a complete search.

N F21W 2103/25

- for rear-view mirrors

WARNING

Group [F21W 2103/25](#) is incomplete pending reclassification of documents from group [F21W 2103/20](#).

Groups [F21W 2103/20](#) and [F21W 2103/25](#) should be considered in order to perform a complete search.

N F21W 2103/30

- Hazard lights

WARNING

Group [F21W 2103/30](#) is incomplete pending reclassification of documents from group [F21W 2103/00](#).

Groups [F21W 2103/00](#) and [F21W 2103/30](#) should be considered in order to perform a complete search.

N F21W 2103/35

- Brake lights

WARNING

Group [F21W 2103/35](#) is incomplete pending reclassification of documents from group [F21W 2103/00](#).

Groups [F21W 2103/00](#) and [F21W 2103/35](#) should be considered in order to perform a complete search.

N F21W 2103/40

- Rear fog lights

WARNING

Group [F21W 2103/40](#) is incomplete pending reclassification of documents from group [F21W 2103/00](#).

Groups [F21W 2103/00](#) and [F21W 2103/40](#) should be considered in order to perform a complete search.

N F21W 2103/45

- Reversing lights

WARNING

Group [F21W 2103/45](#) is incomplete pending reclassification of documents from group [F21W 2103/00](#).

Groups [F21W 2103/00](#) and [F21W 2103/45](#) should be considered in order to perform a complete search.

N F21W 2103/50

- Registration plate lights

WARNING

Group [F21W 2103/50](#) is incomplete pending reclassification of documents from group [F21W 2103/00](#).

Groups [F21W 2103/00](#) and [F21W 2103/50](#) should be considered in order to perform a complete search.

N F21W 2103/55

- Daytime running lights [DRL]

WARNING

Group [F21W 2103/55](#) is incomplete pending reclassification of documents from group [F21W 2103/00](#).

Groups [F21W 2103/00](#) and [F21W 2103/55](#) should be considered in order to perform a complete search.

- N F21W 2103/60**      • Projection of signs from lighting devices, e.g. symbols or information being projected onto the road
- WARNING  
Group [F21W 2103/60](#) is incomplete pending reclassification of documents from group [F21W 2103/00](#).  
Groups [F21W 2103/00](#) and [F21W 2103/60](#) should be considered in order to perform a complete search.
- N F21W 2104/00**      **Exterior vehicle lighting devices for decorative purposes**
- WARNING  
Group [F21W 2104/00](#) is incomplete pending reclassification of documents from groups [F21S 43/00](#) and [F21S 45/00](#).  
Groups [F21S 43/00](#), [F21S 45/00](#) and [F21W 2104/00](#) should be considered in order to perform a complete search.
- N F21W 2105/00**      **Combinations of lighting devices covered by codes [F21W 2102/00](#) – [F21W 2104/00](#)**
- WARNING  
Group [F21W 2105/00](#) is incomplete pending reclassification of documents from groups [F21W 2102/00](#) and [F21W 2103/00](#).  
Groups [F21W 2102/00](#), [F21W 2103/00](#) and [F21W 2105/00](#) should be considered in order to perform a complete search.
- N F21W 2106/00**      **Interior vehicle lighting devices**
- N F21W 2107/00**      **Use or application of lighting devices on or in particular types of vehicles**
- N F21W 2107/10**      • for land vehicles
- N F21W 2107/13**      • • for cycles
- N F21W 2107/17**      • • • for motorcycles
- N F21W 2107/20**      • for water vehicles
- N F21W 2107/30**      • for aircraft
- M F21W 2111/00**      **Use or application of lighting devices or systems for signalling, marking or indicating, not provided for in ~~code codes~~ [F21W 2101/00](#) [F21W 2102/00](#) – [F21W 2107/00](#)**
- M F21W 2121/00**      **Use or application of lighting devices or systems for decorative purposes, not provided for in codes [F21W 2102/00](#) – [F21W 2107/00](#)**
- M F21W 2131/00**      **Uses Use or ~~applications~~ application of lighting devices or systems not provided for in codes ~~[F21W 2101/00](#)~~ [F21W 2102/00](#) – [F21W 2121/00](#)**

**Project: N/A (F23B)**

- U F23B 2700/00**      **Combustion apparatus for solid fuel**
- F23B 2700/012      • with predrying in fuel ~~supply~~ supply area

**Project: N/A (F23C)****F23C**

**COMBUSTION APPARATUS USING FLUENT FUEL** (combustion apparatus for solid fuel only [F23B](#); burners [F23D](#); constructional details of combustion chambers not otherwise provided for [F23M](#); combustion chambers for generating combustion products of high pressure or high velocity [F23R](#))

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[F23C 101/00](#) covered by

**Project: N/A (F23G)****U F23G 2201/00****Pretreatment**

U F23G 2201/60

• Separating

F23G 2201/603

• • ~~recyclible~~ *recyclable* material**U F23G 2203/00****Furnace arrangements**

U F23G 2203/20

• Rotary drum furnace

F23G 2203/212

• • Sealing arrangements between rotary and ~~stationnary~~ *stationary* parts**U F23G 2209/00****Specific waste**

F23G 2209/30

• Solid combustion ~~residus~~ *residues*, e.g. bottom or flyash**Project: N/A (F23Q)****F23Q 23/00**

**Testing of ignition installations** (peculiar to ~~internal combustion~~ *internal-combustion* engines [F02P 17/00](#))

**Project: RP0482 (F24F)****F24F**

**AIR-CONDITIONING, AIR-HUMIDIFICATION, VENTILATION, USE OF AIR CURRENTS FOR SCREENING** (devices for ventilating greenhouses [A01G](#) {air-conditioning systems for greenhouses [A01G 9/246](#)}; animal husbandry [A01K](#), e.g. controlling humidity in incubators [A01K 41/04](#); disinfecting or sterilising of air [A61L](#); devices for reconditioning breathing air in sealed rooms or for ventilating gas-proof shelters [A62B](#); filtering, washing or drying of gases [B01D](#); mixing gases with vapours or liquids in general [B01F 3/00](#); spraying [B05B](#), [B05D](#); removing dirt or fumes from areas where they are produced [B08B 15/00](#); ventilation, air-conditioning or cooling, specially adapted for vehicles, *see* the relevant vehicle places, e.g. [B60H](#), [B61D 27/00](#), {[B64D 13/00](#)}; production of ozone [C01B 13/10](#); chimneys or flues [E04F 17/02](#), [E04H 12/28](#), [F23J 11/00](#), [F23L 17/02](#); air ducts or conduits [E04F 17/04](#), [F16L](#); ventilation in doors or windows [E06B 7/02](#); fans, blowers [F04](#); noise-absorbing in pipes or pipe systems [F16L](#); tops for chimneys and ventilating shafts [F23L](#); cooling [F25](#); details of heat-exchange or heat-transfer apparatus, of general application [F28F](#); apparatus for generating ions to be introduced into non-enclosed gases, e.g. the atmosphere [H01T 23/00](#))

NOTES

1. In this subclass:

- air-humidification as auxiliary treatment in air-conditioning, i.e. in units wherein the air is also either cooled or heated, is covered by groups [F24F 1/00](#) or [F24F 3/14](#);

- air-humidification per se, e.g. "room humidifiers", is covered by group [F24F 6/00](#).

2. In this subclass, the following terms or expressions are used with the meanings indicated:

- "air-conditioning" means the supply of air to rooms or spaces by means which provide for the treatment of the air in at least two of the following ways: heating — cooling — any other kind of treatment, e.g. humidification.
- *"ventilation" means the supply of air to, or its extraction from, rooms or spaces, and systems for circulating air within rooms or spaces, but does not cover the mere treatment of air being supplied to, extracted from, or circulated within, rooms or spaces.*

3. In this subclass, control or safety arrangements are classified in [F24F 11/00](#). In order to indicate the type of air-treatment system in which these arrangements are used, further classification may be made in main groups [F24F 1/00](#) - [F24F 9/00](#).

D F24F 1/00 -  
F24F 9/00

### **Air-conditioning**

M F24F 1/00

**Rooms** **Room** units, e.g. *separate or self-contained units or units* receiving primary air from a central station {or with supply of heating or cooling agents from a central station, such as those applied to air-treatment systems included in [F24F 3/00](#) and [F24F 5/00](#) ~~(arrangement or assembly of components for the primary treatment of air F24F 11/08; mixing chambers for air F24F 13/04)~~}

F24F 1/01

- in which secondary air is induced by injector action of the primary air ([F24F 1/02](#) takes precedence; {arrangement or assembly of or components for the regulation of the air supply through a heat exchanger and the associated bypass for the secondary treatment of the air ~~F24F 11/027~~ [F24F 11/81](#); nozzle for induction unit [F24F 13/26](#)})

F24F 1/02

- self-contained, i.e. with all apparatus for treatment installed in a common casing {(arrangement or assembly of components for the primary treatment of air in independent units ~~F24F 11/085~~ [F24F 11/30](#))}

M F24F 3/00

**Air-conditioning systems in which conditioned primary air is supplied from one or more central stations to distributing units in the rooms or spaces where it may receive secondary treatment; Apparatus specially designed for such systems (room units [F24F 1/00](#); ~~construction of heat-exchangers F28 {F24F 3/044 takes precedence; arrangement or assembly of components for the primary treatment of air F24F 11/08}~~)**

F24F 3/06

- characterised by the arrangements for the supply of heat-exchange fluid for the subsequent treatment of primary air in the room units ([F24F 3/02](#) takes precedence {Arrangement or assembly of components for the regulation of the supply of heating or cooling media for the secondary treatment of air ~~F24F 11/06~~ [F24F 11/83](#)})

M F24F 5/00

**Air-conditioning systems or apparatus not covered by [F24F 1/00](#) or [F24F 3/00](#) {, e.g. using solar heat *or combined with household units such as an oven or water heater*; ~~combined with household units such as an oven or water heater~~}**

M F24F 6/00

**Air-humidification {, e.g. ~~for increasing comfort in living spaces by "room humidifiers"~~ {cooling by humidification}**

M F24F 7/00

**Ventilation {, e.g. by means of wall-ducts *or systems using window or roof apertures*; ~~systems using window or roof apertures~~}**

M F24F 9/00 Use of air currents for screening, e.g. air ~~curtain~~ **curtains** (~~air curtains for vehicles B60J 9/04~~)

D F24F 11/00 - F24F 13/00 Common features or details

M F24F 11/00 Control or safety ~~systems or apparatus~~ **arrangements** (~~{extinguishing or preventing fire A62C 3/14}; control valves per se F16K; humidity control G05D 22/00~~)

NOTE

*In this group, it is desirable to add the indexing codes of groups F24F 2110/00 – F24F 2140/00.*

- M F24F 11/0001 • {for ventilation (~~F24F 11/0009~~ **F24F 11/30** takes precedence)}
- U F24F 2011/0002 • • {for admittance of outside air}
- U F24F 2011/0004 • • • {to create overpressure in a room}
- U F24F 2011/0005 • • • {to create underpressure in a room, keeping contamination inside}
- U F24F 2011/0006 • • {using low temperature external supply air to assist cooling}
- M F24F 11/0008 • {for air-humidification (~~F24F 11/0009~~ **F24F 11/30** takes precedence)}
- D F24F 11/0009 • {Electrical control or safety systems or apparatus}  
<administratively transferred to [F24F 11/30](#)>
- D F24F 11/001 • • {Control systems or circuits characterised by their inputs, e.g. using sensors}  
<administratively transferred to [F24F 11/30](#) and [F24F 2110/00](#)>
- D F24F 11/0012 • • • {Air temperature}  
<administratively transferred to [F24F 11/30](#) and [F24F 2110/10](#)>
- D F24F 2011/0013 • • • • {of the outside air}  
<administratively transferred to [F24F 2110/12](#)>
- D F24F 11/0015 • • • {Air humidity}  
<administratively transferred to [F24F 11/30](#) and [F24F 2110/20](#)>
- D F24F 2011/0016 • • • • {of the outside air}  
<administratively transferred to [F24F 2110/22](#)>
- D F24F 11/0017 • • • {Air quality properties}  
<administratively transferred to [F24F 11/30](#) and [F24F 2110/50](#)>
- D F24F 2011/0019 • • • • {of the outside air}  
<administratively transferred to [F24F 2110/52](#)>
- D F24F 2011/002 • • • • {Odor concentration}  
<administratively transferred to [F24F 2110/60](#)>
- D F24F 2011/0021 • • • • {Ozone concentration}  
<administratively transferred to [F24F 2110/74](#)>
- D F24F 2011/0023 • • • • {Concentration of air-borne particles}  
<administratively transferred to [F24F 2110/64](#)>
- D F24F 2011/0024 • • • • • {Tobacco smoke}  
<administratively transferred to [F24F 2110/62](#)>
- D F24F 2011/0026 • • • • {Carbon dioxide concentration}  
<administratively transferred to [F24F 2110/70](#)>
- D F24F 2011/0027 • • • • {Carbon monoxide concentration}  
<administratively transferred to [F24F 2110/72](#)>
- D F24F 2011/0028 • • • • {Oxygen concentration}  
<administratively transferred to [F24F 2110/76](#)>
- D F24F 2011/003 • • • • {Radon concentration}  
<administratively transferred to [F24F 2110/68](#)>



|   |                |   |
|---|----------------|---|
| D | F24F 2011/0031 | . . . {Electric charge}<br><administratively transferred to <a href="#">F24F 2110/80</a> >  |
| D | F24F 2011/0032 | . . . {Volatile organic compound [VOC]}<br><administratively transferred to <a href="#">F24F 2110/66</a> >  |
| D | F24F 11/0034   | . . . {Occupancy}<br><administratively transferred to <a href="#">F24F 11/30</a> and <a href="#">F24F 2120/10</a> >   |
| D | F24F 2011/0035 | . . . {Position of occupants}<br><administratively transferred to <a href="#">F24F 2120/12</a> >  |
| D | F24F 2011/0036 | . . . {Activity of occupants}<br><administratively transferred to <a href="#">F24F 2120/14</a> >  |
| D | F24F 2011/0038 | . . . {Air velocity}<br><administratively transferred to <a href="#">F24F 2110/30</a> >   |
| D | F24F 2011/0039 | . . . {of the outside air}<br><administratively transferred to <a href="#">F24F 2110/32</a> >   |
| D | F24F 2011/0041 | . . . {Pressure}<br><administratively transferred to <a href="#">F24F 2110/40</a> >   |
| D | F24F 2011/0042 | . . . {Air pressure}<br><administratively transferred to <a href="#">F24F 2110/40</a> >   |
| D | F24F 2011/0043 | . . . {Heat exchange fluid pressure}<br><administratively transferred to <a href="#">F24F 2140/12</a> >   |
| D | F24F 2011/0045 | . . . {Heat exchange fluid temperature}<br><administratively transferred to <a href="#">F24F 2140/20</a> >  |
| D | F24F 2011/0046 | . . . {Load}<br><administratively transferred to <a href="#">F24F 2140/50</a> >   |
| D | F24F 2011/0047 | . . . {Energy consumption}<br><administratively transferred to <a href="#">F24F 2140/60</a> >   |
| D | F24F 2011/0049 | . . . {Sunlight}<br><administratively transferred to <a href="#">F24F 2130/20</a> >   |
| D | F24F 2011/005  | . . . {Artificial light}<br><administratively transferred to <a href="#">F24F 2130/30</a> >   |
| D | F24F 2011/0052 | . . . {Malfunction}<br><administratively transferred to <a href="#">F24F 11/32</a> >  |
| D | F24F 2011/0053 | . . . {Sound}<br><administratively transferred to <a href="#">F24F 2130/40</a> >  |
| D | F24F 2011/0054 | . . . {Condensate}<br><administratively transferred to <a href="#">F24F 2140/30</a> >   |
| D | F24F 2011/0056 | . . . {Damper state, e.g. open or closed}<br><administratively transferred to <a href="#">F24F 2140/40</a> >  |
| D | F24F 2011/0057 | . . . {using feedback from user}<br><administratively transferred to <a href="#">F24F 2120/20</a> >   |
| D | F24F 2011/0058 | . . . {using weather information or forecast}<br><administratively transferred to <a href="#">F24F 2130/00</a> and <a href="#">F24F 2130/10</a> >   |
| D | F24F 11/006    | . . {Control systems or circuits characterised by type of control, internal processing or calculations, e.g. using fuzzy logic adaptive control or estimating values}<br><administratively transferred to <a href="#">F24F 11/30</a> and <a href="#">F24F 11/62</a> > |
| D | F24F 2011/0061 | . . . {using electronic processing}<br><administratively transferred to <a href="#">F24F 11/63</a> >  |
| D | F24F 2011/0063 | . . . {using pre-stored data}<br><administratively transferred to <a href="#">F24F 11/64</a> >  |

- D F24F 2011/0064 . . . {for selecting an operative mode}  
<administratively transferred to [F24F 11/65](#)>
- D F24F 2011/0065 . . . {Sleeping mode}  
<administratively transferred to [F24F 11/66](#)>
- D F24F 2011/0067 . . {using one central controller connected to several sub-controllers}  
<administratively transferred to [F24F 11/54](#)>
- D F24F 2011/0068 . . {using remote control device}  
<administratively transferred to [F24F 11/56](#)>
- D F24F 2011/0069 . . . {using a telephone line}  
<administratively transferred to [F24F 11/57](#)>
- D F24F 2011/0071 . . . {using internet communication}  
<administratively transferred to [F24F 11/58](#)>
- D F24F 2011/0072 . . . {for programming}  
<administratively transferred to [F24F 11/59](#)>
- D F24F 2011/0073 . . {using timers}  
<administratively transferred to [F24F 11/61](#)>
- D F24F 2011/0075 . . {for electric energy efficiency or saving}  
<administratively transferred to [F24F 11/46](#)>
- D F24F 11/0076 . {Control systems or circuits characterised by their outputs, e.g. using a variable flow fan}  
<administratively transferred to [F24F 11/70](#)>
- D F24F 11/0078 . . {controlling the angle of the air stream}  
<administratively transferred to [F24F 11/79](#)>
- D F24F 11/0079 . . {controlling the speed of ventilators}  
<administratively transferred to [F24F 11/77](#)>
- D F24F 11/008 . . {controlling the supply of heat-exchange fluid}  
<administratively transferred to [F24F 11/83](#)>
- D F24F 2011/0082 . . . {using a valve}  
<administratively transferred to [F24F 11/84](#)>
- D F24F 2011/0083 . . . {using a variable flow pump}  
<administratively transferred to [F24F 11/85](#)>
- D F24F 2011/0084 . . . {monitoring refrigerant leakage}  
<administratively transferred to [F24F 11/36](#)>
- D F24F 11/0086 . {Control systems or circuits characterised by other control features, e.g. display or monitoring devices}  
<administratively transferred to [F24F 11/30](#)>
- D F24F 2011/0087 . . {for defrosting}  
<administratively transferred to [F24F 11/41](#)>
- D F24F 2011/0089 . . . {an outdoor unit}  
<administratively transferred to [F24F 11/42](#)>
- D F24F 2011/009 . . . {an indoor unit}  
<administratively transferred to [F24F 11/43](#)>
- D F24F 2011/0091 . . {Display or monitoring devices}  
<administratively transferred to [F24F 11/52](#)>
- D F24F 2011/0093 . . . {Devices monitoring filter performance}  
<administratively transferred to [F24F 11/39](#)>
- D F24F 2011/0094 . . . {for computing energy costs}  
<administratively transferred to [F24F 11/47](#)>
- D F24F 2011/0095 . . {Devices triggered by fire, excessive heat or smoke}  
<administratively transferred to [F24F 11/33](#)>

- D F24F 2011/0097 . . . {opening air passage in case of fire, excessive heat or smoke}  
<administratively transferred to [F24F 11/34](#)>
  - D F24F 2011/0098 . . . {closing air passage in case of fire, excessive heat or smoke}  
<administratively transferred to [F24F 11/35](#)>
  - D F24F 11/02 . Arrangements or mounting of control or safety devices  
<administratively transferred to [F24F 11/89](#)>
  - D F24F 11/022 . {for the control of flow conditions, e.g. pressure, velocity}  
<administratively transferred to [F24F 11/72](#)>
  - D F24F 11/025 . . {characterised by velocity control}  
<administratively transferred to [F24F 11/74](#)>
  - D F24F 11/027 . {exclusively for controlling the air supply to a heat-exchanger or the ancillary bypass (F24F 11/08 takes precedence)}  
<administratively transferred to [F24F 11/81](#)>
  - D F24F 11/04 . solely for controlling the rate of air-flow (F24F 11/08 takes precedence)  
<administratively transferred to [F24F 11/74](#)>
  - D F24F 11/043 . . {dependent on air-current or wind pressure (F24F 11/04 takes precedence)}  
<administratively transferred to [F24F 11/745](#)>
  - D F24F 11/047 . . to constant value  
<administratively transferred to [F24F 11/75](#)>
  - D F24F 11/053 . . by means responsive to temperature  
<administratively transferred to [F24F 11/76](#)>
  - D F24F 11/06 . solely for controlling the supply of heating or cooling fluids for secondary treatment (F24F 11/08 takes precedence)  
<administratively transferred to [F24F 11/83](#)>
  - D F24F 11/08 . for controlling the primary treatment of air  
<administratively transferred to [F24F 11/30](#)>
  - D F24F 11/085 . . {in independent units}  
<administratively transferred to [F24F 11/30](#)>
  - Q F24F 11/30 . for purposes related to the operation of the system, e.g. for safety or monitoring
- WARNINGS
1. Group [F24F 11/30](#) is impacted by reclassification into groups [F24F 11/32](#) – [F24F 11/88](#), [F24F 2120/00](#), and [F24F 2140/00](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
2. Groups [F24F 11/32](#) – [F24F 11/49](#) are incomplete pending reclassification of documents from group [F24F 11/30](#).  
Groups [F24F 11/30](#) and [F24F 11/32](#) – [F24F 11/49](#) should be considered in order to perform a complete search.
- N F24F 11/32 . Responding to malfunctions or emergencies
  - N F24F 11/33 . . to fire, excessive heat or smoke
  - N F24F 11/34 . . . by opening air passages
  - N F24F 11/35 . . . by closing air passages
  - N F24F 11/36 . . to leakage of heat-exchange fluid
  - N F24F 11/37 . . Resuming operation, e.g. after power outages; Emergency starting
  - N F24F 11/38 . . Failure diagnosis
  - N F24F 11/39 . . Monitoring filter performance
  - N F24F 11/41 . Defrosting; Preventing freezing
  - N F24F 11/42 . . of outdoor units
  - N F24F 11/43 . . of indoor units

- N F24F 11/46
  - Improving electric energy efficiency or saving
- N F24F 11/47
  - Responding to energy costs
- N F24F 11/48
  - prior to normal operation, e.g. pre-heating or pre-cooling
- N F24F 11/49
  - ensuring correct operation, e.g. by trial operation or configuration checks
- N F24F 11/50
  - characterised by user interfaces or communication

WARNING

Groups [F24F 11/50](#) – [F24F 11/61](#) are incomplete pending reclassification of documents from group [F24F 11/30](#).

Groups [F24F 11/50](#) – [F24F 11/61](#) and [F24F 11/30](#) should be considered in order to perform a complete search.

- N F24F 11/52
  - Indication arrangements, e.g. displays
- N F24F 11/523
  - for displaying temperature data
- N F24F 11/526
  - giving audible indications
- N F24F 11/54
  - using one central controller connected to several sub-controllers
- N F24F 11/56
  - Remote control
- N F24F 11/57
  - using telephone networks
- N F24F 11/58
  - using Internet communication
- N F24F 11/59
  - for presetting
- N F24F 11/61
  - using timers
- N F24F 11/62
  - characterised by the type of control or by internal processing, e.g. using fuzzy logic, adaptive control or estimation of values

WARNING

Groups [F24F 11/62](#) – [F24F 11/67](#) are incomplete pending reclassification of documents from group [F24F 11/30](#).

Groups [F24F 11/62](#) – [F24F 11/67](#) and [F24F 11/30](#) should be considered in order to perform a complete search.

- N F24F 11/63
  - Electronic processing
- N F24F 11/64
  - using pre-stored data
- Q F24F 11/65
  - for selecting an operating mode

WARNING

Group [F24F 11/65](#) is incomplete pending reclassification of documents from group [F24F 11/30](#).

Group [F24F 11/65](#) is also impacted by reclassification into group [F24F 11/67](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N F24F 11/66
  - Sleep mode
- N F24F 11/67
  - Switching between heating and cooling modes

WARNING

Group [F24F 11/67](#) is incomplete pending reclassification of documents from groups [F24F 11/30](#) and [F24F 11/65](#).

Groups [F24F 11/30](#), [F24F 11/65](#), and [F24F 11/67](#) should be considered in order to perform a complete search.

- Q F24F 11/70
  - Control systems characterised by their outputs; Constructional details thereof

WARNING

Groups [F24F 11/70](#) – [F24F 11/875](#) are incomplete pending reclassification of documents from group [F24F 11/30](#).

Group [F24F 11/70](#) is also impacted by reclassification into groups [F24F 11/80](#) – [F24F 11/875](#).

All groups listed in this warning should be considered in order to perform a complete search.

- N F24F 11/72      . . for controlling the supply of treated air, e.g. its pressure
- Q F24F 11/74      . . . for controlling air flow rate or air velocity

WARNING

Group [F24F 11/74](#) is incomplete pending reclassification of documents from group [F24F 11/30](#) and [F24F 11/70](#).

Group [F24F 11/74](#) is also impacted by reclassification into group [F24F 11/755](#).

All groups listed in this warning should be considered in order to perform a complete search

- N F24F 11/745      . . . {the air flow rate increasing with an increase of air-current or wind pressure}
- N F24F 11/75      . . . for maintaining constant air flow rate or air velocity
- N F24F 11/755      . . . for cyclical variation of air flow rate or air velocity

WARNING

Group [F24F 11/755](#) is incomplete pending reclassification of documents from groups [F24F 11/30](#), [F24F 11/70](#) and [F24F 11/74](#).

All groups listed in this warning should be considered in order to perform a complete search.

- N F24F 11/76      . . . by means responsive to temperature, e.g. bimetal springs
- N F24F 11/77      . . . by controlling the speed of ventilators
- N F24F 11/79      . . for controlling the direction of the supplied air
- N F24F 11/80      . . for controlling the temperature of the supplied air

WARNING

Groups [F24F 11/80](#) – [F24F 11/875](#) are incomplete pending reclassification of documents from groups [F24F 11/30](#) and [F24F 11/70](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N F24F 11/81      . . . by controlling the air supply to heat-exchangers or bypass channels
- Q F24F 11/83      . . . by controlling the supply of heat-exchange fluids to heat-exchangers

WARNING

Group [F24F 11/83](#) is incomplete pending reclassification of documents from groups [F24F 11/30](#) and [F24F 11/70](#).

Group [F24F 11/83](#) is also impacted by reclassification into groups [F24F 11/84](#) and [F24F 11/85](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N F24F 11/84      . . . using valves

WARNING

Group [F24F 11/84](#) is incomplete pending reclassification of documents from groups [F24F 11/30](#), [F24F 11/70](#) and [F24F 11/83](#).

All groups listed in this warning should be considered in order to perform a complete search.

- N F24F 11/85
- • • using variable-flow pumps
- WARNING  
Group [F24F 11/85](#) is incomplete pending reclassification of documents from groups [F24F 11/30](#), [F24F 11/70](#) and [F24F 11/83](#).  
All groups listed should be considered in order to perform a complete search.
- N F24F 11/86
- • • by controlling compressors within refrigeration or heat pump circuits
- N F24F 11/87
- • • by controlling absorption or discharge of heat in outdoor units
- N F24F 11/871
- • • • by controlling outdoor fans
- N F24F 11/873
- • • by controlling refrigerant heaters
- N F24F 11/875
- • • by controlling heat-storage apparatus
- N F24F 11/88
- Electrical aspects, e.g. circuits
- WARNING  
Group [F24F 11/88](#) is incomplete pending reclassification of documents from group [F24F 11/30](#).  
Groups [F24F 11/30](#) and [F24F 11/88](#) should be considered in order to perform a complete search.
- N F24F 11/89
- Arrangement or mounting of control or safety devices
- N F24F 2110/00 - F24F 2140/00**
- Indexing scheme associated with group [F24F 11/00](#), relating to control inputs, e.g. measured or estimated values or parameters**
- N F24F 2110/00**
- Control inputs relating to air properties**
- N F24F 2110/10
- Temperature
- N F24F 2110/12
- • of the outside air
- N F24F 2110/20
- Humidity
- N F24F 2110/22
- • of the outside air
- N F24F 2110/30
- Velocity
- N F24F 2110/32
- • of the outside air
- Q F24F 2110/40
- Pressure, e.g. wind pressure
- WARNING  
Group [F24F 2110/40](#) is impacted by reclassification into groups [F24F 2140/10](#) and [F24F 2140/12](#).  
Groups [F24F 2110/40](#), [F24F 2140/10](#), and [F24F 2140/12](#) should be considered in order to perform a complete search.
- Q F24F 2110/50
- Air quality properties
- WARNING  
Group [F24F 2110/50](#) is impacted by reclassification into group [F24F 2110/65](#).  
Groups [F24F 2110/50](#) and [F24F 2110/65](#) should be considered in order to perform a complete search.
- N F24F 2110/52
- • of the outside air
- N F24F 2110/60
- • Odour
- N F24F 2110/62
- • Tobacco smoke
- N F24F 2110/64
- • Airborne particle content
- N F24F 2110/65
- • Concentration of specific substances or contaminants
- WARNING  
Group [F24F 2110/65](#) is incomplete pending reclassification of documents from group [F24F 2110/50](#).



Groups [F24F 2110/50](#) and [F24F 2110/65](#) should be considered in order to perform a complete search.

- N F24F 2110/66      • • • Volatile organic compounds [VOC]
- N F24F 2110/68      • • • Radon
- N F24F 2110/70      • • • Carbon dioxide
- N F24F 2110/72      • • • Carbon monoxide
- N F24F 2110/74      • • • Ozone
- N F24F 2110/76      • • • Oxygen
- N F24F 2110/80      • • Electric charge

**N F24F 2120/00      Control inputs relating to users or occupants**

WARNING

Group [F24F 2120/00](#) is incomplete pending reclassification of documents from group [F24F 11/30](#).

Groups [F24F 11/30](#) and [F24F 2120/00](#) should be considered in order to perform a complete search.

- N F24F 2120/10      • Occupancy
- N F24F 2120/12      • • Position of occupants
- N F24F 2120/14      • • Activity of occupants
- N F24F 2120/20      • Feedback from users

**N F24F 2130/00      Control inputs relating to environmental factors not covered by group [F24F 2110/00](#)**

- N F24F 2130/10      • Weather information or forecasts
- N F24F 2130/20      • Sunlight
- N F24F 2130/30      • Artificial light
- N F24F 2130/40      • Noise

**N F24F 2140/00      Control inputs relating to system states**

WARNING

Group [F24F 2140/00](#) is incomplete pending reclassification of documents from group [F24F 11/30](#).

Groups [F24F 11/30](#) and [F24F 2140/00](#) should be considered in order to perform a complete search.

- N F24F 2140/10      • Pressure

WARNING

Groups [F24F 2140/10](#) and [F24F 2140/12](#) are incomplete pending reclassification of documents from group [F24F 2110/40](#).

Groups [F24F 2110/40](#), [F24F 2140/10](#) and [F24F 2140/12](#) should be considered in order to perform a complete search.

- N F24F 2140/12      • • Heat-exchange fluid pressure
- N F24F 2140/20      • Heat-exchange fluid temperature
- N F24F 2140/30      • Condensation of water from cooled air
- N F24F 2140/40      • Damper positions, e.g. open or closed
- N F24F 2140/50      • Load
- N F24F 2140/60      • Energy consumption

## Project: RP0497 (F25C)

M F25C

**PRODUCTION**~~PRODUCING~~, **WORKING**, **STORING** OR **DISTRIBUTION OF HANDLING ICE** (~~frozen sweets, including ice-cream, their production A23G 9/00; concentrating solutions by removing frozen solvents B01D 9/04; purification of water by freezing G02F 1/22; refrigeration machines, plants or systems F25B; solidification of gases or gaseous mixtures F25J; freeze-drying F26B~~)

NOTE

Within the subclass, the term "ice" means any frozen liquid and is to be understood as also covering frozen semi-liquids or pasty substances.

*In this subclass, the following term is used with the meaning indicated:*

- "ice" means any frozen liquid and also covers frozen semiliquids or pasty substances.

M F25C 1/00

**Production of** ~~Producing~~ ice (**F25C 3/00** takes precedence)

M F25C 1/02

- ~~Production of~~ ~~Producing~~ natural ice, i.e. without refrigeration

U F25C 1/04

- by using stationary moulds

M F25C 1/045

- • {with the open end pointing downwards}

U F25C 1/12

- by freezing water on cooled surfaces, e.g. to form slabs

M F25C 1/14

- • to form thin sheets which are removed by scraping or wedging, *e.g. in the form of flakes*

M F25C 1/142

- • • {from the outer ~~wall~~ *walls* of a-cooled ~~body~~ *bodies*}

M F25C 1/145

- • • {from the inner ~~wall~~ *walls* of a-cooled ~~body~~ *bodies*}

M F25C 1/147

- • • • {by using augers}

M F25C 1/22

- Construction of moulds; Filling devices ~~therefor for moulds~~ (*metering by volume in general G01F*)

D F25C 1/225

- • {Filling devices for moulds}  
<administratively transferred to [F25C 1/25](#)>

U F25C 1/24

- • for refrigerators, e.g. freezing trays

M F25C 1/243

- • • {*Moulds made* of ~~plastic materials~~ *plastics e.g. silicone*}

M F25C 1/246

- • • {*Moulds* with separate grid structure}

N F25C 1/25

- • *Filling devices for moulds*

M F25C 3/00

**Methods**~~Processes~~ or apparatus specially adapted for **the production of producing** ice or snow for winter sports or similar recreational purposes, e.g. for sporting installations; **Production of** ~~Producing~~ artificial snow (~~foundations or pavings for artificial surfaces for outdoor or indoor practice of snow or ice sports E01C 13/10; working on surfaces of snow or ice in order to make them suitable for traffic or sporting purposes E01H 4/00~~)

M F25C 3/02

- for ice rinks (~~shape of rinks A63C 19/10; construction of rinks E01C~~)

M F25C 3/04

- for sledging or ski trails; ~~Production of~~ ~~Producing~~ artificial snow (~~shape of trails A63C 19/10; construction of trails E01C~~)

E F25C 5/00

**Working**, ~~storing~~ or **distribution of ice** ~~handling ice~~ (**F25C 3/00** takes precedence)

D F25C 5/002

- {Distributing ice}  
<administratively transferred to [F25C 5/20](#)>

D F25C 5/005

- • {particularly adapted for household refrigerators}  
<administratively transferred to [F25C 5/22](#)>

D F25C 5/007

- • {for storing bins (ice bins in general F25C 5/182)}  
<administratively transferred to [F25C 5/24](#)>

|   |               |  |
|---|---------------|--|
| M | F25C 5/02     | • <del>Tools or machines</del> <b>Apparatus</b> for disintegrating, removing or harvesting ice   |
| U | F25C 5/04     | • • without the use of saws  |
| M | F25C 5/06     | • • • by deforming bodies with which the ice is in contact, e.g. <b>by using</b> inflatable members  |
| M | F25C 5/14     | • <del>Tools or machines</del> <b>Apparatus</b> for shaping or finishing ice pieces, e.g. ice presses  |
| D | F25C 5/16     | • Tools or devices for ice handling not covered by any other subclass <administratively transferred to <a href="#">F25C 5/00</a> >   |
| U | F25C 5/18     | • Storing ice  |
| M | F25C 5/182    | • • {Ice bins <b>therefor</b> <del>(distributing arrangements therefor F25C 5/007)</del> }   |
| M | F25C 5/185    | • • • { <del>combined</del> with freezing trays}   |
| M | F25C 5/187    | • • • { <del>combined</del> with ice level sensing means}  |
| N | F25C 5/20     | • <i>Distributing ice</i>  |
| N | F25C 5/22     | • • { <i>particularly adapted for household refrigerators</i> }  |
| N | F25C 5/24     | • • { <i>for storing bins (ice bins <a href="#">F25C 5/182</a>)</i> }  |
| M | F25C 2300/00  | Special arrangements or features for <b>production</b> <b>producing</b> , working, <b>storing</b> or <b>distribution of</b> <b>handling</b> ice  |
| M | F25C 2301/00  | Special arrangements or features for <del>the production of</del> <b>producing</b> ice   |
| M | F25C 2301/002 | • <del>Production of</del> <b>Producing</b> ice slurries   |
| M | F25C 2303/00  | Special arrangements or features for <del>the production of</del> <b>producing</b> ice or snow for winter sports or similar recreational purposes, e.g. for sporting installations; Special arrangements or features for <del>the production of</del> <b>producing</b> artificial snow |
| M | F25C 2305/00  | Special arrangements or features for working or <b>distributing</b> <b>handling</b> ice  |
| M | F25C 2305/022 | • Harvesting <del>of</del> ice including rotating or tilting or pivoting of a mould or tray  |
| M | F25C 2400/00  | Auxiliary features or devices for <b>production</b> <b>producing</b> , working, <del>storing</del> or <del>distribution of</del> <b>handling</b> ice   |

## Project: N/A (F25D)

|              |  |
|--------------|--|
| F25D 2303/00 | {Details of devices using other cold materials; Details of devices using cold-storage bodies}  |
| F25D 2317/00 | {Details or arrangements for circulating cooling fluids; Details or arrangements for circulating gas, e.g. air, within refrigerated spaces, not provided for in other groups of this subclass} |
| F25D 2321/00 | {Details or arrangements for defrosting; Preventing frosting; Removing condensed or defrost water, not provided for in other groups of this subclass}  |
| F25D 2323/00 | {General constructional features not provided for in other groups of this subclass}  |
| F25D 2325/00 | {Charging, supporting or discharging the articles to be cooled, not provided for in other groups of this subclass}   |
| F25D 2327/00 | {Lighting arrangements not provided for in other groups of this subclass}  |
| F25D 2331/00 | {Details or arrangements of other cooling or freezing apparatus not provided for in other groups of this subclass}   |

## Project: N/A (F26B)

## F26B

**DRYING SOLID MATERIALS OR OBJECTS BY REMOVING LIQUID THEREFROM** (racks for drying fruit and vegetables [A01F 25/12](#); drying foodstuffs [A23](#); drying hair [A45D 20/00](#); body-drying implements [A47K 10/00](#); drying household articles [A47L](#), {e.g. drying footwear [A47L 23/20](#);} drying gases and vapours [B01D](#); chemical and physical processes for dewatering or like separating liquids from solids [B01D 43/00](#); centrifugal apparatus [B04](#); drying ceramics [C04B 33/30](#); drying yarns and fabrics in association with some other form of treatment [D06C](#); drying frames for laundry without heating or positive air circulation, domestic and like spin-dryers, wringing and hot pressing laundry [D06F](#); furnaces, kilns, ovens [F27](#); {treatment including a drying step of semiconductor substrates, e.g. wafers, [H01L 21/67028](#)})

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                            |            |   |
|----------------------------|------------|---|
| <a href="#">F26B 11/06</a> | covered by | <a href="#">F26B 11/0486</a>                            |
| <a href="#">F26B 13/02</a> | covered by | <a href="#">F26B 13/10</a>                              |
| <a href="#">F26B 13/04</a> | covered by | <a href="#">F26B 13/10</a>                              |
| <a href="#">F26B 13/20</a> | covered by | <a href="#">F26B 13/104</a>                             |
| <a href="#">F26B 23/08</a> | covered by | <a href="#">F26B 3/343</a> , <a href="#">F26B 3/347</a> |

- U F26B 1/00** Preliminary treatment of solid materials or objects to facilitate drying {, e.g. mixing or backmixing the materials to be dried with predominantly dry solids ([F26B 5/005](#) takes precedence)}
- F26B 1/005 • {by means of ~~desintegrating~~ *disintegrating*, e.g. crushing, shredding, milling the materials to be dried ([F26B 17/102](#), [F26B 17/103](#) take precedence)}
- U F26B 13/00** Machines and apparatus for drying fabrics, fibres, yarns, or other materials in long lengths, with progressive movement
- F26B 13/008 • {Controlling the moisture profile ~~accross~~ *across* the width of the material}
- U F26B 17/00** Machines or apparatus for drying materials in loose, plastic, or fluidised form, e.g. granules, staple fibres, with progressive movement ([F26B 13/00](#) takes precedence {; feed or discharge arrangements [F26B 25/002](#)})
- U F26B 17/10 • with movement performed by fluid currents, e.g. issuing from a nozzle, {e.g. pneumatic, flash, vortex or entrainment dryers}([F26B 3/08](#) takes precedence)
- U F26B 17/101 • {the drying enclosure having the shape of one or a plurality of shafts or ducts, e.g. with substantially straight and vertical axis ([F26B 17/107](#) takes precedence)}
- F26B 17/102 • • {with material recirculation, classifying or ~~desintegrating~~ *disintegrating* means ([F26B 17/103](#) takes precedence)}
- F26B 17/103 • • {with specific material feeding arrangements, e.g. combined with ~~desintegrating~~ *disintegrating* means}
- U F26B 25/00** Details of general application not covered by group [F26B 21/00](#) or [F26B 23/00](#) (loading, conveying, and unloading in general [B65G](#))
- U F26B 25/22 • Controlling the drying process in dependence on liquid content of solid materials or objects
- F26B 25/225 • {by repeated or ~~contineous~~ *continuous* weighing of the material or a sample thereof}

**Project: N/A (F27B)****F27B****FURNACES, KILNS, OVENS, OR RETORTS IN GENERAL; OPEN SINTERING OR LIKE APPARATUS****NOTE**

Attention is drawn to the references and notes following the title of class [F27](#) and the note (par. III) following the Contents of Section [H](#).

**WARNING**

The following IPC groups are not **used** in the CPC **system scheme**. **Subject** *The subject* matter **covered by** for these **IPC** groups is classified in the following CPC groups:

|   |            |                              |
|---|------------|------------------------------|
| <a href="#">F27B 1/09</a>                               | covered by | <a href="#">F27B 1/08</a>    |
| <a href="#">F27B 5/05</a>                               | covered by | <a href="#">F27B 5/04</a>    |
| <a href="#">F27B 14/16</a> , <a href="#">F27B 14/18</a> | covered by | <a href="#">F27B 14/0806</a> |
| <a href="#">F27B 21/08</a> - <a href="#">F27B 21/14</a> | covered by | <a href="#">F27D</a>         |

**Project: N/A (F27D)****U F27D 1/00****Casings; Linings; Walls; Roofs (refractory materials [C04B](#); firebridges for combustion chambers [F23M 3/00](#))**

## U F27D 2001/0079

- {Means to assemble at least two parts of a furnace or of any device or accessory associated to its use (assembling elements for linings parts [F27D 1/145](#))}

## F27D 2001/0083

- • {Means to assemble a moving part to a fixed one (movements due to thermal expansion [F27D 1/0003](#); movements of the cover [F27D 1/18](#); movements of the container or of the support of the ~~cahrge~~ **charge** [F27D 2003/0085](#))}

**U F27D 3/00****Charging; Discharging; Manipulation of charge (moving charge through a furnace [F27B 9/14](#))**

## U F27D 2003/0034

- {Means for moving, conveying, transporting the charge in the furnace or in the charging facilities}

## U F27D 2003/0054

- • {Means to move molten metal, e.g. electromagnetic pump}

## F27D 2003/0056

- • • {through a syphon in a vacuum chamber, e.g. involving aspiration or **pression** **pressure** on the bath}

**U F27D 19/00****Arrangements of controlling devices**

## F27D 2019/0006

- {Monitoring the characteristics (composition, quantities, temperature, **pression** **pressure**) of at least one of the gases of the kiln atmosphere and using it as a controlling value}

## F27D 2019/0009

- • {Monitoring the **pression** **pressure** in an enclosure or kiln zone}

**U F27D 21/00****Arrangements of monitoring devices; Arrangements of safety devices**

## F27D 2021/0007

- {Monitoring the **pression** **pressure**}

**U F27D 99/00****Subject matter not provided for in other groups of this subclass**

## U F27D 99/0001

- {Heating elements or systems}

## U F27D 99/0006

- • {Electric heating elements or system}

## F27D 2099/003

- • • {Bombardment heating, e.g. with ions or ~~eletrons~~ **electrons**}

## F27D 2099/0083

- {Drives; ~~Auxilliary~~ **Auxiliary** drives}

**Project: N/A (F27M)****U F27M 2001/00****Composition, conformation or state of the charge**

## F27M 2001/21

- ~~Briquets~~ **Briquettes**

- U F27M 2002/00 Disposition of the charge  
F27M 2002/04 · ~~Palettised~~ *Palletised*

## Project: N/A (F28D)

- U F28D 7/00 Heat-exchange apparatus having stationary tubular conduit assemblies for both heat-exchange media, the media being in contact with different sides of a conduit wall
- U F28D 7/0066 · {Multi-circuit heat-exchangers, e.g. integrating different heat exchange sections in the same unit or heat-exchangers for more than two fluids ([F28D 7/103](#) takes precedence)}
- U F28D 7/0083 · · {with units having particular arrangement relative to a supplementary heat exchange medium, e.g. with interleaved units or with adjacent units arranged in common flow of supplementary heat exchange medium}
- F28D 7/0091 · · · {the supplementary medium flowing in ~~serie~~ *series* through the units}
- U F28D 7/16 · the conduits being arranged in parallel spaced relation ([F28D 7/0008](#) - [F28D 7/0058](#) take precedence); [F28D 7/02](#) - [F28D 7/10](#) take precedence)
- F28D 7/163 · · {with conduit assemblies having a particular shape, e.g. square or annular; with assemblies of conduits having different geometrical features; with multiple groups of conduits connected in ~~serie~~ *series* or parallel and arranged inside common casing ([F28D 7/1615](#) takes precedence)}

## Project: N/A (F41B)

## F41B

**WEAPONS FOR PROJECTING MISSILES WITHOUT USE OF EXPLOSIVE OR COMBUSTIBLE PROPELLANT CHARGE; WEAPONS NOT OTHERWISE PROVIDED FOR (projectiles for fishing, e.g. fish-spears, [A01K 81/00](#); sports implements for throwing [A63B 65/00](#), e.g. boomerangs [A63B 65/08](#); stationary apparatus for projecting sports balls, e.g. tennis balls, [A63B 69/40](#); throwing or slinging toys [A63H 33/18](#); knives, axes [B26B](#); projectiles or missiles other than those incorporating springs as projecting means [F42B 6/00](#))**

## WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|                           |            |
|---------------------------|------------|
| <a href="#">F41B 5/16</a> | covered by |
| <a href="#">F41B 5/18</a> | covered by |
| <a href="#">F41B 5/20</a> | covered by |
| <a href="#">F41B 5/22</a> | covered by |

- U F41B 5/00 Bows; Crossbows
- U F41B 5/10 · Compound bows {(compound crossbows [F41B 5/123](#))}
- F41B 5/105 · · {Cams or ~~pullies~~ *pulleys* for compound bows}

## Project: N/A (F41C)

- U F41C 33/00 Means for wearing or carrying smallarms
- U F41C 33/02 · Holsters, i.e. cases for pistols having means for being carried or worn, e.g. at the belt or under the arm
- F41C 33/0263 · · {having a locking system for preventing ~~un-authorized~~ *unauthorized* or accidental removal of the small arm from the holster ([F41C 33/0227](#) takes precedence)}



**Project: MP0394 (F41G)****M F41G 3/00**

**Aiming means; Laying Aiming or laying means (sighting-devices F41G 1/00; sighting devices F41G 1/00; {mounting tubular or beam-shaped aiming devices on firearms F41G 11/001; determining direction, distance or velocity by use of radio or other waves G01S; } determining direction, distance or velocity by use of radio or other waves G01S; computers G06; aeriels H01Q; antennas H01Q)**

**Project: N/A (F42)****F42****AMMUNITION; BLASTING**NOTES

1. This class covers also means for practice or training which may have aspects of simulation, although simulators are generally covered by class [G09](#).

2. In this class, the following terms or expressions are used with the meanings indicated:

- "primer" effects the first explosive step in the sequence of explosion;
- "percussion cap" means a primer which is struck to explode;
- "igniter" effects the first spark-producing or heat-producing step but may not be explosive;
- "firing-means" or "initiator" (used respectively in the arts of weaponry and blasting) means a device acting directly on the primer, which device may or may not form part of the fuze;
- "detonator" or "detonator charge" means a charge used to amplify the explosion of the primer;
- "fuze" means an assembly or mechanism which incorporates safety and arming means in order that the explosion can only take place under certain conditions; this assembly or mechanism determines also the moment (~~instaneous~~ *instantaneous* or delayed) or the manner, e.g. impact, proximity, hydrostatic pressure, of the firing;
- "ammunition" covers propulsive charge and projectile whether or not forming a single body, unless otherwise made clear;
- "projectile", "missile" or "projectile or missile" means any body which is projected or propelled;
- "guided missile" means projectile or missile which is guided during at least part of its trajectory;
- "rocket" means projectile or missile which is self-propelled, during at least part of its trajectory, by a rocket engine, i.e. by a jet-propulsion engine carrying both fuel and oxidant therefor;
- "fuse" or "fuse cord" means a continuous train of explosive enclosed in a usually flexible cord or cable for setting-off an explosive charge in the art of blasting.

**Project: N/A (F42B)****F42B**

**EXPLOSIVE CHARGES, e.g. FOR BLASTING, FIREWORKS, AMMUNITION (explosive compositions [C06B](#); fuzes [F42C](#); blasting [F42D](#))**

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[F42B 5/14](#)

covered by

[F42B 12/40](#), [A01K 11/00](#)[F42B 19/10](#)

covered by

[F41G 7/24](#)

**Project: N/A (G01C)****G01C**

**MEASURING DISTANCES, LEVELS OR BEARINGS; SURVEYING; NAVIGATION; GYROSCOPIC INSTRUMENTS; PHOTOGRAMMETRY OR VIDEOGRAMMETRY** (measuring dimensions or angles of objects [G01B](#); measuring liquid level [G01F](#); measuring intensity or direction of magnetic fields, other than the earth's field, in general [G01R](#); radio navigation, determining distance or velocity by use of propagation effects, e.g. Doppler effects, propagation time, of radio waves, analogous arrangements using other waves [G01S](#); optical systems therefor [G02B](#); maps, globes [G09B](#))

**NOTES**

1. In this subclass, the following term is used with the meaning indicated:  
"navigation" means determining the position and course of land vehicles, ships, aircraft, and space vehicles.
2. Attention is drawn to the Notes following the title of class [G01](#).

**WARNING**

*The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:*

*G01C 11/36 covered by [G01C 11/00-G01C 11/34](#)*

**G01C 11/00**

**Photogrammetry or videogrammetry, e.g. stereogrammetry; Photographic surveying** (cameras combined with surveying instruments, e.g. with theodolites, [G01C 1/00](#), [G01C 3/00](#), [G01C 5/00](#), [G01C 9/00](#); surveying cameras [G03B 37/00](#))

**WARNING**

~~The following IPC group is not used in the CPC scheme: Subject-matter covered by this group is classified in the following CPC groups:~~

~~G01C 11/36 covered by [G01C 11/00-G01C 11/34](#)~~

**Project: N/A (G01J)****U G01J 3/00**

**Spectrometry; Spectrophotometry; Monochromators; Measuring colours**

## U G01J 3/28

- Investigating the spectrum (using colour filters [G01J 3/51](#))

## U G01J 3/42

- • Absorption spectrometry; Double beam spectrometry; Flicker spectrometry; Reflection spectrometry (beam switching arrangements [G01J 3/08](#))

## U G01J 3/433

- • • Modulation spectrometry; Derivative spectrometry

## G01J 2003/4332

- • • • {~~frequence~~[frequency](#)-modulated}

**Project: MP0392 (G01J)****U G01J 5/00**

**Radiation pyrometry** (photometry in general [G01J 1/00](#); spectrometry in general [G01J 3/00](#) {measuring temperature in general, i.e. with a contacting sensor [G01K](#); calorimetry of radiation beams [G01K 17/00](#); direction finders for radiant sources [G01S](#); intrusion detection by radiation [G08B](#)})

## U G01J 5/10

- using electric radiation detectors

## M G01J 5/20

- • using resistors, thermistors, or semiconductors sensitive to radiation

**Project: N/A (G01M)****G01M**

**TESTING STATIC OR DYNAMIC BALANCE OF MACHINES OR STRUCTURES; TESTING STRUCTURES OR APPARATUS NOT OTHERWISE PROVIDED FOR {(devices for testing the performance of portable percussive tools with fluid-pressure drive [B25D 9/005](#))}**

NOTE

Attention is drawn to the Note following the title of Class [G01](#).

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these *IPC* groups is classified in the following CPC groups:

[G01M 1/38](#) covered by [G01M 1/14](#) and [G01M 1/30](#) and subgroups

**Project: N/A (G01N)****U G01N 21/00**

**Investigating or analysing materials by the use of optical means, i.e. using infra-red, visible or ultra-violet light ([G01N 3/00-G01N 19/00](#) take precedence)**

NOTE

This group does not cover the investigation of spectral properties of light per se, or measurements of the properties of materials where spectral properties of light are sensed and primary emphasis is placed on creating, detecting or analysing the spectrum providing that the properties of the materials to be investigated are of minor importance (see also Note (4) after the title of class [G01](#)). Those subjects are covered by group [G01J 3/00](#).

U G01N 21/17

• Systems in which incident light is modified in accordance with the properties of the material investigated (where the material investigated is optically excited causing a change in wavelength of the incident light [G01N 21/63](#))

U G01N 21/25

• • Colour; Spectral properties, i.e. comparison of effect of material on the light at two or more different wavelengths or wavelength bands

G01N 21/27

• • • *using photo-electric detection ([G01N 21/31](#) takes precedence)*; *using photo-electric detection ([G01N 21/31](#) takes precedence)*{circuits for computing concentration (logarithmic circuits [G06G 7/24](#); photometric circuits in general [G01J](#))}

**Project: RP0486 (G01N)****U G01N 33/00**

**Investigating or analysing materials by specific methods not covered by the preceding groups**

U G01N 33/48

• Biological material, e.g. blood, urine ([G01N 33/02](#) - [G01N 33/14](#), [G01N 33/26](#), [G01N 33/44](#), [G01N 33/46](#) take precedence; determining the germinating capacity of seeds [A01C 1/02](#)); Haemocytometers (counting blood corpuscles distributed over a surface by scanning the surface [G06M 11/02](#))

U G01N 33/483

• • Physical analysis of biological material

U G01N 33/487

• • • of liquid biological material

U G01N 33/48785

• • • • {Electrical and electronic details of measuring devices for physical analysis of liquid biological material not specific to a particular test method, e.g. user interface or power supply}

G01N 33/48792

• • • • {Data management, e.g. communication with processing unit (for *in vivo* diagnostics [A61B 5/0002](#); ~~medical informatics~~ [G06F 19/30](#); transmission systems for measured values [G08C](#))}

**Project: MP0270 (G01N)**

- U G01N 2223/00** Investigating materials by wave or particle radiation
- U G01N 2223/60     • Specific applications or type of materials
- M G01N 2223/608     • • ~~supraconductors~~superconductors

**Project: N/A (G01N)**

- U G01N 2333/00** Assays involving biological materials from specific organisms or of a specific nature

NOTE

In groups [G01N 2333/47](#) - [G01N 2333/994](#) indexing codes are assigned according to the chemical nature of the materials irrespective of the source organism.

- U G01N 2333/435     • from animals; from humans
- U G01N 2333/52     • • Assays involving cytokines
- G01N 2333/521     • • • {Chemokines}

**Project: MP0270 (G01R)**

- M G01R 27/00** Arrangements for measuring resistance, reactance, impedance, or electric characteristics derived therefrom {(measuring ~~super-conductive~~superconductive properties [G01R 33/1238](#))}

**Project: MP0394 (G01R)**

- U G01R 29/00** Arrangements for measuring or indicating electric quantities not covered by groups [G01R 19/00](#) - [G01R 27/00](#)
- U G01R 29/08     • Measuring electromagnetic field characteristics {(measuring electrostatic fields [G01R 29/12](#); for determining a voltage [G01R 15/14](#); measuring magnetic fields [G01R 33/00](#); measuring or estimating received signal strength [H04B 17/318](#))}
- M G01R 29/10     • • Radiation diagrams of ~~aerials~~{~~antennas~~; Antenna testing in general}

**Project: N/A (G01R)**

- U G01R 31/00** Arrangements for testing electric properties; Arrangements for locating electric faults; Arrangements for electrical testing characterised by what is being tested not provided for elsewhere {(measuring superconductive properties [G01R 33/1238](#); testing or measuring semiconductors or solid state devices during manufacture {[H01L 22/00](#)}; testing line transmission systems [H04B 3/46](#))}
- U G01R 31/28     • Testing of electronic circuits, e.g. by signal tracer {(EMC, EMP or similar testing of electronic circuits [G01R 31/002](#) ; testing for short-circuits, discontinuities, leakage or incorrect line connection [G01R 31/02](#); checking computers {or computer components} [G06F 11/00](#); checking static stores for correct operation [G11C 29/00](#); {testing receivers or transmitters of transmission systems [H04B 17/00](#))}
- U G01R 31/2851     • • {Testing of integrated circuits [IC] ([G01R 31/317](#) takes precedence; testing individual devices [G01R 31/26](#); testing printed circuits [G01R 31/2801](#))}
- U G01R 31/2886     • • • {Features relating to contacting the IC under test, e.g. probe heads; chucks ([G01R 31/2865](#) takes precedence, test connections, e.g. test sockets, or probes per se, [G01R 1/04](#) or [G01R 1/06](#))}
- G01R 31/2891     • • • • {related to sensing or controlling of force, position, temperature ([G01R 31/2874](#) takes ~~precedences~~precedence; sensing of force [G01L](#); sensing of position [G01B](#), [G01D](#); sensing of temperature [G01K](#); controlling in general [G05](#))}

**Project: MP0270 (G01R)**

- U G01R 33/00 Arrangements or instruments for measuring magnetic variables**
- U G01R 33/12 • Measuring magnetic properties of articles or specimens of solids or fluids (involving magnetic resonance [G01R 33/20](#) {; using magnetic-optic devices [G01R 33/032](#)})
- M G01R 33/1238 • • {Measuring ~~super-conductive~~[superconductive](#) properties}

**Project: N/A (G01S)****G01S**

**RADIO DIRECTION-FINDING; RADIO NAVIGATION; DETERMINING DISTANCE OR VELOCITY BY USE OF RADIO WAVES; LOCATING OR PRESENCE-DETECTING BY USE OF THE REFLECTION OR RERADIATION OF RADIO WAVES; ANALOGOUS ARRANGEMENTS USING OTHER WAVES** ({for special applications, see the relevant subclasses, e.g. [A61B](#), [G01F](#), [G01N](#), [G02B](#); measuring dimensions or angles of objects [G01B](#); navigation in general [G01C](#); measuring infrasonic, sonic or ultrasonic vibrations in general [G01H](#); measuring infra-red, visible, or ultra-violet radiation in general [G01J](#); transducers per se, see the relevant subclasses, e.g. [G01L](#), [H01L](#), [H04R](#); measuring direction or velocity of flowing fluids by reception or emission of radiowaves or other waves and based on propagation effects caused in the fluid itself [G01P](#); measuring electric or magnetic variables in general [G01R](#); detecting masses or objects by methods not involving reflection or radiation of radio, acoustic or other waves [G01V](#); {time-interval measuring [G04F](#)}; aerials [H01Q](#))

NOTES

1. In this subclass, the following term is used with the meaning indicated:
  - "transponder" means an arrangement which reacts to an incoming interrogating or detecting wave by emitting a specific answering or identifying wave.
2. Attention is drawn to the Notes following the title of class [G01](#) and to Note (1) following the title of subclass [G09B](#).

WARNING

The following IPC ~~group is~~[groups are](#) not ~~used~~ in the CPC scheme. ~~Subject-~~[The subject](#) matter ~~covered by this group for these IPC groups~~ is classified in the following CPC groups:

[G01S 7/26](#) covered by [G01S 7/06](#)

**Project: MP0394 (G01S)**

- U G01S 1/00 Beacons or beacon systems transmitting signals having a characteristic or characteristics capable of being detected by non-directional receivers and defining directions, positions, or position lines fixed relatively to the beacon transmitters; Receivers co-operating therewith (position fixing by co-ordinating a plurality of determinations of direction or position lines [G01S 5/00](#))**
- U G01S 1/02 • using radio waves ([G01S 19/00](#) takes precedence)
- U G01S 1/08 • • Systems for determining direction or position line {(aerial arrangements for changing or varying the orientation or the shape of the directional pattern [H01Q 3/00](#); combinations of different interacting units for giving a desired directional characteristic [H01Q 21/29](#); aerials or aerial systems providing at least two radiation patterns [H01Q 25/00](#))}
- M G01S 1/10 • • using amplitude comparison of signals transmitted sequentially from ~~aerials~~[antennas](#) or ~~aerial~~[antenna](#) systems having differently-oriented overlapping directivity-~~characteristics~~ characteristics, e.g. equi-signal A-N type

- |   |           |  |
|---|-----------|--|
| M | G01S 1/12 | <ul style="list-style-type: none"> <li>• • • the signals being transmitted sequentially from an <del>aerial</del>antenna or <del>aerial</del>antenna system having the orientation of its directivity characteristic periodically varied, e.g. by means of sequentially effective reflectors</li> </ul>  |
| M | G01S 1/14 | <ul style="list-style-type: none"> <li>• • • using amplitude comparison of signals transmitted simultaneously from <del>aerials</del>antennas or <del>aerial</del>antenna systems having differently-oriented overlapping directivity-characteristics</li> </ul>   |
| M | G01S 1/20 | <ul style="list-style-type: none"> <li>• • • using a comparison of transit time of synchronised signals transmitted from non-directional <del>aerials</del>antennas or <del>aerial</del>antenna systems spaced apart, i.e. path-difference systems <del>{(synchronisation in general H03L 7/00)}</del></li> </ul>  |
| U | G01S 1/24 | <ul style="list-style-type: none"> <li>• • • the synchronised signals being pulses or equivalent modulations on carrier waves and the transit times being compared by measuring the difference in arrival time of a significant part of the modulations {, e.g. LORAN systems}</li> </ul>  |
| M | G01S 1/26 | <ul style="list-style-type: none"> <li>• • • • Systems in which pulses or time-base signals are generated locally at the receiver and brought into predetermined time-relationship with received signals, e.g. pulse duration coincides with time interval between arrival of significant part of modulation of signals received from first and second <del>aerials</del>antennas or <del>aerial</del>antenna systems <del>{contains no documents}</del></li> </ul>  |
| U | G01S 1/30 | <ul style="list-style-type: none"> <li>• • • the synchronised signals being continuous waves or intermittent trains of continuous waves, the intermittency not being for the purpose of determining direction or position line and the transit times being compared by measuring the phase difference</li> </ul>   |
| M | G01S 1/34 | <ul style="list-style-type: none"> <li>• • • • Systems in which first and second synchronised signals are transmitted from both <del>aerials</del>antennas or <del>aerial</del>antenna systems and a beat frequency, obtained by heterodyning the first signals with each other is compared in phase with a beat frequency obtained by heterodyning the second signals with each other <del>{contains no documents}</del></li> </ul>   |
| M | G01S 1/38 | <ul style="list-style-type: none"> <li>• • • using comparison of <del>{(1)}</del> the phase of the envelope of the change of frequency, due to Doppler effect, of the signal transmitted by an <del>aerial</del>antenna moving, or appearing to move, in a cyclic path with <del>{(2)}</del> the phase of a reference signal, the frequency of this reference signal being synchronised with that of the cyclic movement, or apparent cyclic movement, of the <del>aerial</del>antenna</li> </ul>  |
| M | G01S 1/40 | <ul style="list-style-type: none"> <li>• • • the apparent movement of the <del>aerial</del>antenna being produced by cyclic sequential energisation of fixed <del>aerials</del>antennas</li> </ul>   |
| U | G01S 3/00 | <p><b>Direction-finders for determining the direction from which infrasonic, sonic, ultrasonic, or electromagnetic waves, or particle emission, not having a directional significance, are being received (position fixing by co-ordinating a plurality of determinations of direction or position lines <a href="#">G01S 5/00</a>; for geophysical measurement <a href="#">G01C</a>; telescope mountings <a href="#">G02B</a>)</b></p>  |
| U | G01S 3/02 | <ul style="list-style-type: none"> <li>• using radio waves</li> </ul>  |
| U | G01S 3/04 | <ul style="list-style-type: none"> <li>• • Details</li> </ul>  |
| M | G01S 3/06 | <ul style="list-style-type: none"> <li>• • • Means for increasing effective directivity, e.g. by combining signals having differently-oriented directivity characteristics, <del>or</del> by sharpening the envelope waveform of the signal <del>desired</del>derived from a rotating or oscillating beam <del>aerial</del>antenna (comparing amplitude of signals having differently-oriented directivity characteristics to determine direction <a href="#">G01S 3/16</a>, <a href="#">G01S 3/28</a>; <del>modifications of aerials or aerial systems H01Q</del>)</li> </ul> |
| M | G01S 3/08 | <ul style="list-style-type: none"> <li>• • • Means for reducing polarisation errors, e.g. by use of Adcock or spaced loop <del>aerial</del>antenna systems</li> </ul>  |



- |   |           |  |
|---|-----------|--|
| M | G01S 3/12 | <ul style="list-style-type: none"> <li>• • • Means for determining sense of direction, e.g. by combining signals from directional <del>aerial</del> <i>antenna</i> or goniometer search coil with those from non-directional <del>aerial</del> <i>antenna</i> (<del>{G01S 3/065 takes precedence} determining direction by amplitude comparison of signals derived by combining directional and non-directional signals G01S 3/24, G01S 3/34</del> <i>determining direction by amplitude comparison of signals derived by combining directional and non-directional signals G01S 3/24, G01S 3/34</i>)</li> </ul> |
| U | G01S 3/14 | <ul style="list-style-type: none"> <li>• • Systems for determining direction or deviation from predetermined direction {(aerial arrangements for changing or varying the orientation or the shape of the directional pattern <a href="#">H01Q 3/00</a>; combinations of different interacting aerial units for giving a desired directional characteristic <a href="#">H01Q 21/29</a>; aeriels or aerial systems providing at least two radiation patterns <a href="#">H01Q 25/00</a>)}</li> </ul>   |
| M | G01S 3/16 | <ul style="list-style-type: none"> <li>• • • using amplitude comparison of signals derived sequentially from receiving <del>aeriels</del> <i>antennas</i> or <del>aerial</del> <i>antenna</i> systems having differently-oriented directivity characteristics or from an <del>aerial</del> <i>antenna</i> system having periodically-varied orientation of directivity characteristic (<del>{G01S 3/146 takes precedence}</del>)</li> </ul>  |
| M | G01S 3/18 | <ul style="list-style-type: none"> <li>• • • • derived directly from separate directional <del>aeriels</del> <i>antennas</i></li> </ul>  |
| M | G01S 3/20 | <ul style="list-style-type: none"> <li>• • • • derived by sampling signal received by an <del>aerial</del> <i>antenna</i> system having periodically-varied orientation of directivity characteristic</li> </ul>   |
| M | G01S 3/22 | <ul style="list-style-type: none"> <li>• • • • derived from different combinations of signals from separate <del>aeriels</del> <i>antennas</i>, e.g. comparing sum with difference</li> </ul>  |
| M | G01S 3/24 | <ul style="list-style-type: none"> <li>• • • • • the separate <del>aeriels</del> <i>antennas</i> comprising one directional <del>aerial</del> <i>antenna</i> and one non-directional <del>aerial</del> <i>antenna</i>, e.g. combination of loop and open <del>aeriels</del> <i>antennas</i> producing a reversed cardioid directivity characteristic</li> </ul>  |
| M | G01S 3/26 | <ul style="list-style-type: none"> <li>• • • • • the separate <del>aeriels</del> <i>antennas</i> having differently-oriented directivity characteristics</li> </ul>  |
| M | G01S 3/28 | <ul style="list-style-type: none"> <li>• • • using amplitude comparison of signals derived simultaneously from receiving <del>aeriels</del> <i>antennas</i> or <del>aerial</del> <i>antenna</i> systems having differently-oriented directivity characteristics (<del>{G01S 3/146 takes precedence}</del>)</li> </ul>  |
| M | G01S 3/32 | <ul style="list-style-type: none"> <li>• • • • derived from different combinations of signals from separate <del>aeriels</del> <i>antennas</i>, e.g. comparing sum with difference</li> </ul>  |
| M | G01S 3/34 | <ul style="list-style-type: none"> <li>• • • • • the separate <del>aeriels</del> <i>antennas</i> comprising one directional <del>aerial</del> <i>antenna</i> and one non-directional <del>aerial</del> <i>antenna</i>, e.g. combination of loop and open <del>aeriels</del> <i>antennas</i> producing a reversed cardioid directivity characteristic</li> </ul>  |
| M | G01S 3/36 | <ul style="list-style-type: none"> <li>• • • • • the separate <del>aeriels</del> <i>antennas</i> having differently-oriented directivity characteristics</li> </ul>  |
| M | G01S 3/38 | <ul style="list-style-type: none"> <li>• • • using adjustment of real or effective orientation of directivity characteristic of an <del>aerial</del> <i>antenna</i> or <del>aerial</del> <i>an antenna</i> system to give a desired condition of signal derived from that <del>aerial</del> <i>antenna</i> or <del>aerial</del> <i>antenna</i> system, e.g. to give a maximum or minimum signal (<a href="#">G01S 3/16</a>, <a href="#">G01S 3/28</a> take precedence)</li> </ul>  |
| M | G01S 3/40 | <ul style="list-style-type: none"> <li>• • • • adjusting orientation of a single directivity characteristic to produce maximum or minimum signal, e.g. rotatable loop <del>aerial</del> <i>antenna</i> or equivalent goniometer system</li> </ul>  |
| M | G01S 3/46 | <ul style="list-style-type: none"> <li>• • • using <del>aeriels</del> <i>antennas</i> spaced apart and measuring (<del>frequency</del>) phase or time difference between signals therefrom, i.e. path-difference systems</li> </ul>  |
| M | G01S 3/48 | <ul style="list-style-type: none"> <li>• • • • the waves arriving at the <del>aeriels</del> <i>antennas</i> being continuous or intermittent and the phase difference of signals derived therefrom being measured</li> </ul>   |
| M | G01S 3/50 | <ul style="list-style-type: none"> <li>• • • • the waves arriving at the <del>aeriels</del> <i>antennas</i> being pulse modulated and the time difference of their arrival being measured</li> </ul>   |

- M G01S 3/52
  - • • using a receiving ~~aerial~~*antenna* moving, or appearing to move, in a cyclic path to produce a Doppler variation of frequency of the received signal
- M G01S 3/54
  - • • the apparent movement of the ~~aerial~~*antenna* being produced by coupling the receiver cyclically and sequentially to each of several fixed spaced ~~aerials~~*antennas*
- M G01S 3/74
  - • Multi-channel systems specially adapted for direction-finding, i.e. having a single ~~aerial~~*antenna* system capable of giving simultaneous indications of the directions of different signals (systems in which the directions of different signals are determined sequentially and displayed simultaneously [G01S 3/04](#), [G01S 3/14](#))

**Project: N/A (G01T)**

- U G01T 1/00 **Measuring X-radiation, gamma radiation, corpuscular radiation, or cosmic radiation ([G01T 3/00](#), [G01T 5/00](#) take precedence)**
- U G01T 1/16
  - Measuring radiation intensity ([G01T 1/29](#) takes precedence {; self-powered detectors [G01T 3/006](#); using an ionisation chamber filled with a liquid or solid, e.g. frozen liquid, dielectric [G01T 3/008](#)})
- G01T 1/169
  - • Exploration, location of contaminated surface areas (prospecting by the use of nuclear radiation, e.g. of natural or induced radioactivity [G01V 5/00](#) ){~~in situ measurement, e.g. floor contamination monitor (directional detectors [G01T 1/2907](#))~~; *in situ measurement, e.g. floor contamination monitor (directional detectors [G01T 1/2907](#))*}
- G01T 1/28
  - • with secondary-emission detectors (secondary-electron-emitting electrodes in general [H01J 1/32](#) ){~~optionally combined with scintillation counters (secondary emission tubes [H01J 43/00](#))~~; *optionally combined with scintillation counters (secondary emission tubes [H01J 43/00](#))*}

**Project: N/A (G01V)****G01V**

**GEOPHYSICS; GRAVITATIONAL MEASUREMENTS; DETECTING MASSES OR OBJECTS** (detecting or locating foreign bodies for diagnostic, surgical or person-identification purposes [A61B](#); means for indicating the location of accidentally buried, e.g. snow-buried persons [A63B 29/02](#); investigating or analysing earth materials by determining their chemical or physical properties [G01N](#); measuring electric or magnetic variables in general, other than direction or magnitude of the earth's field [G01R](#); electronic or nuclear magnetic resonance arrangements [G01R 33/20](#); radar, sonar or analogous methods in general, detecting masses or objects involving these methods [G01S](#))

NOTES

1. In this subclass, the geophysical methods apply both to the earth and to other celestial objects, e.g. planets.
2. Attention is drawn to the Notes following the title of class [G01](#).

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~*The subject* matter ~~covered by~~*for* these *IPC* groups is classified in the following CPC groups:  
[G01V 3/11](#) covered by [G01V 3/101](#), [G01V 3/104](#)

**Project: N/A (G02B)****G02B**

**OPTICAL ELEMENTS, SYSTEMS, OR APPARATUS** (**G02F** takes precedence; measuring-instruments, see the relevant subclass of **G01**, e.g. optical rangefinders **G01C**; testing of optical elements, systems, or apparatus **G01M 11/00**; spectacles **G02C**; sound lenses **G10K 11/30**; electron and ion "optics" **H01J**; X-ray "optics" **H01J**, **H05G 1/00**; optical elements structurally combined with electric discharge tubes **H01J 5/16**, **H01J 29/89**, **H01J 37/22**; microwave "optics" **H01Q**; combination of optical elements with television receivers **H04N 5/72**; heating arrangements specially adapted for transparent or reflecting areas **H05B 3/84**; {optical apparatus **42H**})

NOTE

In this subclass, the following terms are used with the meanings indicated :

- "simple lens or prism" means a single lens or prism;
- "compound lens or prism" means an optical member, the constituents of which either are close together without air-space or (except in group ) are "in broken contact", i.e. with the air-space between the constituents having no essential optical influence;
- "objective" means a lens or an optical system designed to produce a real image of a real object;
- "eyepiece" means a lens or an optical system designed to produce a virtual image for viewing by the eye or by another optical system;
- "front" or "rear" is determined by looking from the more distant conjugate.

WARNING

The following IPC groups are not **used** in the CPC **classification system scheme**. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the **following** CPC groups:

**G02B 11/00 - G02B 11/34** covered by **G02B 9/00** and subgroups and **G02B 13/00** and subgroups

**Project: RP0503 (G02B)****U G02B 6/00**

G02B 6/0001

**Light guides**

- {specially adapted for lighting devices or systems (lighting or signalling on vehicles using light guides **B60Q 1/00**; lighting devices for vehicle dashboards **B60Q 3/10**; lighting devices for vehicle interior using light guides **B60Q 3/62**; lighting devices mounted on the vehicle rear part using light guides **F21S 48/2225** **F21S 43/235**; measuring arrangements having light conducting pointers **G01D 13/265**; illumination of liquid crystal displays **G02F 1/1336**; illuminated signs **G09F 13/00**)}

## Project: N/A (G02F)

G02F

DEVICES OR ARRANGEMENTS, THE OPTICAL OPERATION OF WHICH IS MODIFIED BY CHANGING THE OPTICAL PROPERTIES OF THE MEDIUM OF THE DEVICES OR ARRANGEMENTS FOR THE CONTROL OF THE INTENSITY, COLOUR, PHASE, POLARISATION OR DIRECTION OF LIGHT, e.g. SWITCHING, GATING, MODULATING OR DEMODULATING; TECHNIQUES OR PROCEDURES FOR THE OPERATION THEREOF; FREQUENCY-CHANGING; NON-LINEAR OPTICS; OPTICAL LOGIC ELEMENTS; OPTICAL ANALOGUE/DIGITAL CONVERTERS (optical transfer means between sensing member and indicating or recording part in connection with measuring [G01D 5/26](#); devices in which mathematical operations are carried out with optical elements [G06E 3/00](#), {[G06E 3/001](#)} ; electrical signal transmission systems using optical means to convert the input signal [G08C 19/36](#); information-recording by electric or magnetic means and reproducing by sensing optical properties [G11B 11/00](#); static stores using optical elements [G11C 13/04](#); transmission systems employing electromagnetic waves other than radio waves, e.g. light, infra-red radiation, [H04B 10/00](#); optical multiplex systems [H04J 14/00](#); pictorial communication, e.g. television [H04N](#))

WARNING

The following IPC ~~group is~~ groups are not ~~used~~ in the CPC scheme.

~~The subject matter for these IPC groups is classified in the following CPC groups:~~

Subject matter covered by these groups is classified in the following CPC groups:

[G02F 1/13357](#)

covered by

[G02F 1/1336](#) and subgroups

U G02F 2202/00

G02F 2202/20

Materials and properties

• ~~LiNbO<sub>3</sub>~~ ~~LiNbO<sub>3</sub>~~, ~~LiTaO<sub>3</sub>~~ ~~LiTaO<sub>3</sub>~~

## Project: N/A (G03B)

G03B 2215/00

{Special procedures for taking photographs; Apparatus therefor}

## Project: N/A (G03C)

G03C

PHOTOSENSITIVE MATERIALS FOR PHOTOGRAPHIC PURPOSES (for photomechanical purposes [G03F](#)); PHOTOGRAPHIC PROCESSES, e.g. CINE, X-RAY, COLOUR, STEREO-PHOTOGRAPHIC PROCESSES; AUXILIARY PROCESSES IN PHOTOGRAPHY (photographic processes characterised by the use or manipulation of apparatus classifiable per se in subclass [G03B](#), see [G03B](#); photomechanical production of textured or patterned surfaces [G03F](#); electrophotography, magnetography [G03G](#))

NOTE

In this subclass, the following expressions are used with the meanings indicated :

- "photosensitive compositions" covers photosensitive substances, e.g. silverhalides, and, if applicable, binders or additives;
- "photosensitive materials" covers the photosensitive compositions, e.g. emulsions, the bases carrying them, and, if applicable, auxiliary layers.

WARNING

The following IPC ~~group is~~ groups are not ~~used~~ in the CPC scheme.

~~The subject matter for these IPC groups is classified in the following CPC groups:~~

Subject matter covered by this group is classified in the following CPC group:

G03C 9/08

covered by

[G03F 7/0037](#)

## Project: N/A (G03F)

G03F

**PHOTOMECHANICAL PRODUCTION OF TEXTURED OR PATTERNED SURFACES, e.g. FOR PRINTING, FOR PROCESSING OF SEMICONDUCTOR DEVICES; MATERIALS THEREFOR; ORIGINALS THEREFOR; APPARATUS SPECIALLY ADAPTED THEREFOR; (phototypographic composing devices [B41B](#); photosensitive materials or processes for photographic purposes [G03C](#); electrophotography, sensitive layers or processes therefor [G03G](#))**

### NOTE

In this subclass, the following terms or expressions are used with the meanings indicated :

- "photosensitive" means not only sensitive to electro- magnetic radiation but also to corpuscular radiation;
- "photosensitive compositions" covers photosensitive substances, e.g. quinonediazides, and, if applicable, binders or additives;
- "photosensitive materials" covers the photosensitive compositions, e.g. photoresists, the bases carrying them and, if applicable, auxiliary layers.

### WARNING

The following IPC groups are not **used** in the CPC **system** **scheme**. **Subject** **The subject** matter **covered by** **for** these **IPC** groups is classified in the following CPC groups:

[G03F 3/08](#)

covered by

[H04N 1/46](#)

[G03F 7/207](#)

covered by

[G03F 7/20](#)

[G03F 7/23](#)

covered by

[G03F 7/22](#)

[G03F 9/02](#)

covered by

[G03F 9/00](#)

## Project: N/A (G04F)

G04F

**TIME-INTERVAL MEASURING (measuring pulse characteristics [G01R](#), e.g. [G01R 29/02](#); in radar or like systems [G01S](#); masers [H01S 1/00](#); generation of oscillations [H03B](#); generation or counting of pulses, frequency dividing, analogue/digital conversion [H03K](#) {time fuzes [F42C 9/00](#)})**

### NOTE

This subclass **covers**:

- apparatus for measuring-off predetermined time intervals;
- apparatus for producing such intervals as timing standards, e.g. metronomes;
- apparatus for measuring unknown intervals, e.g. precision systems for short time interval measurement.

### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** **The subject** matter **covered by** **for** these **IPC** groups is classified in the following CPC groups:

[G04F 10/08](#)

covered by

[G04F 5/16](#)

## Project: N/A (G05B)

**U** **G05B 2219/00**

**Program-control systems**

**U** **G05B 2219/20**

• Pc systems

**U** **G05B 2219/25**

• • Pc structure of the system

G05B 2219/25177

• • • Using fm **frequency** **frequency** modulation, fsk, biphase code

G05B 2219/25202

• • • Internet, tcp-ip, web server : see under **S05B219** **S05B219-40-40**

- U G05B 2219/30      • Nc systems
- U G05B 2219/37      • • Measurements
- G05B 2219/37352    • • • ~~Frequence~~Frequency

**Project: N/A (G05F)****G05F**

**SYSTEMS FOR REGULATING ELECTRIC OR MAGNETIC VARIABLES** (regulating the timing or recurrence frequency of pulses in radar or radio navigation systems [G01S](#); closed-loop systems for regulating non-electric variables by electric means [G05D](#); regulating power supply of digital computers [G06F 1/26](#); regulating electric power distribution networks [H02J](#); regulating the charging of batteries [H02J 7/00](#); regulation of the output of static converters, e.g. switching regulators [H02M](#); regulation of the output of electric generators [H02N](#), [H02P 9/00](#), [H03L](#); controlling transformers, reactors or choke coils [H02P 13/00](#); regulating frequency response, gain, maximum output, amplitude or bandwidth of amplifiers [H03G](#); regulating tuning of resonant circuits [H03J](#); regulating characteristics of transmission lines [H04B](#); electric control of X-ray apparatus [H05G 1/30](#))

NOTES

1. This subclass covers:
  - systems only;
  - use of hydraulic, pneumatic, mechanical, and electrical motors for varying electric characteristics of devices which restore the quantity regulated;
  - the combination of static converters and current or voltage regulators, if the invention resides in the combination.
2. This subclass does not cover elements per se, which are covered by the relevant subclasses.

WARNING

The following IPC groups are not ~~used~~ in the ~~internal~~CPC ~~classification~~ scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these ~~IPC~~ groups is classified in the following CPC groups:

|                           |            |                           |
|---------------------------|------------|---------------------------|
| <a href="#">G05F 3/28</a> | covered by | <a href="#">G05F 3/26</a> |
| <a href="#">G05F 5/02</a> | covered by | <a href="#">G05F 5/00</a> |
| <a href="#">G05F 5/04</a> | covered by | <a href="#">G05F 5/00</a> |
| <a href="#">G05F 5/06</a> | covered by | <a href="#">G05F 5/00</a> |
| <a href="#">G05F 5/08</a> | covered by | <a href="#">G05F 5/00</a> |

**Project: N/A (G06F)****G06F**

**ELECTRICAL DIGITAL DATA PROCESSING** (computers in which a part of the computation is effected hydraulically or pneumatically [G06D](#); optically [G06E](#); self-contained input or output peripheral equipment [G06K](#); impedance networks using digital techniques [H03H](#))

NOTE

In this subclass, the following terms or expressions are used with the meaning indicated:

- "handling" includes processing or transporting of data;
- "data processing equipment" means an association of an electric digital data processor classifiable under group [G06F 7/00](#), with one or more



arrangements classifiable under groups [G06F 1/00](#) - [G06F 5/00](#) and [G06F 9/00](#) - [G06F 13/00](#).

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|   |            |  |
|---|------------|--|
| <a href="#">G06F 3/18</a>                               | covered by | <a href="#">G06F 3/00</a> , <a href="#">G06K 11/00</a> |
| <a href="#">G06F 7/04</a>                               | covered by | <a href="#">G06F 7/02</a>                              |
| <a href="#">G06F 9/302</a> - <a href="#">G06F 9/318</a> | covered by | <a href="#">G06F 9/30</a>                              |
| <del>G06F 9/40</del> <b>G06F9/40</b>                    | covered by | <a href="#">G06F 9/4425</a> and subgroups              |
| <del>G06F 9/42</del> <b>G06F9/42</b>                    | covered by | <a href="#">G06F 9/4426</a> and subgroups              |
| <del>G06F 9/45</del> <b>G06F9/45</b>                    | covered by | <a href="#">G06F 8/41</a> and subgroups                |

#### Project: MP0161 (G06F)

**U G06F 11/00** **Error detection; Error correction; Monitoring (methods or arrangements for verifying the correctness of marking on a record carrier [G06K 5/00](#); in information storage based on relative movement between record carrier and transducer [G11B](#), e.g. [G11B 20/18](#); in static stores [G11C](#); coding, decoding or code conversion, for error detection or error correction, in general [H03M 13/00](#))**

#### NOTE

In this group the indexing codes of [G06F 1/00](#) - [G06F 15/00](#) are added

- U G06F 11/07      • Responding to the occurrence of a fault, e.g. fault tolerance
- U G06F 11/16      • • Error detection or correction of the data by redundancy in hardware
- U G06F 11/18      • • • using passive fault-masking of the redundant circuits {(error detection by comparing the output of redundant processing systems with continued operation after detection of the error [G06F 11/165](#))}
- M G06F 11/187    • • • • {~~Details of voting~~ *Voting techniques*}
- U G06F 11/20      • • • using active fault-masking, e.g. by switching out faulty elements or by switching in spare elements
- U G06F 11/202    • • • • {where processing functionality is redundant (redundant communication control functionality [G06F 11/2005](#), redundant storage control functionality [G06F 11/2089](#))}
- M G06F 11/2023   • • • • • {~~details of failing over~~ *Failover techniques*}
- M G06F 11/2041   • • • • • {with more than one *idle* spare processing *components* *component*}
- U G06F 11/2053   • • • • • {where persistent mass storage functionality or persistent mass storage control functionality is redundant (error detection or correction in information storage based on relative movement between record carrier and transducer [G11B 20/18](#))}
- U G06F 11/2056   • • • • • {by mirroring}
- U G06F 11/2071   • • • • • • {using a plurality of controllers}
- M G06F 11/2074   • • • • • • • {~~Details of asynchronous~~ *Asynchronous* techniques}
- M G06F 11/2076   • • • • • • • {~~Details of synchronous~~ *Synchronous* techniques}
- U G06F 11/2089   • • • • • • {Redundant storage control functionality}
- M G06F 11/2092   • • • • • • • {~~Details~~ *Techniques* of failing over between control units}
- U G06F 11/30      • Monitoring
- U G06F 11/3065   • • {Monitoring arrangements determined by the means or processing involved in reporting the monitored data (error or fault reporting or logging [G06F 11/0766](#))}

- M G06F 11/3086      • • • {where the reporting involves the use of self describing data formats, **e.g.i.e.** metadata, markup languages, human readable formats}

**Project: RP0486 (G06F)**

- M G06F 19/00      Digital computing or data processing equipment or methods, specially adapted for specific applications (~~G06F 17/00 takes precedence~~; **specially adapted for specific functions G06F 17/00**; data processing systems or methods specially adapted for administrative, commercial, financial, managerial, supervisory or forecasting purposes **G06Q**; **healthcare informatics G16H**)

**NOTE**

This group only covers specific applications related to the fields of healthcare or life sciences, e.g. bioinformatics ([G09F 19/10](#)), medical informatics ([G06F 19/30](#)), or chemoinformatics ([G06F 19/70](#)).

- F G06F 19/30  
(Frozen)      • {Medical informatics, i.e. computer-based analysis or dissemination of patient or disease data (bioinformatics [G06F 19/10](#); measuring for diagnostic purposes [A61B 5/00](#); recognising patterns in biomedical signals [G06K 9/00496](#); data processing systems or methods specially adapted for administrative or managerial aspects of healthcare or welfare [G06Q 50/22](#))}

**WARNING**

*Group G06F 19/30 is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups G16H 10/00 – G16H 80/00.*

*Groups G06F 19/30 and G16H 10/00 – G16H 80/00 should be considered in order to perform a complete search.*

- F G06F 19/32  
(Frozen)      • • {Medical data management, e.g. systems or protocols for archival or communication of medical images, computerised patient records or computerised general medical references (information retrieval or databases per se [G06F 17/30](#); data security aspects [G06F 21/00](#))}

**WARNING**

*Group G06F 19/32 is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups G16H 10/00 – G16H 80/00.*

*Groups G06F 19/32 and G16H 10/00 – G16H 80/00 should be considered in order to perform a complete search.*

- F G06F 19/321  
(Frozen)      • • • {Management of medical image data, e.g. communication or archiving systems such as picture archiving and communication systems [PACS] or related medical protocols such as digital imaging and communications in medicine protocol [DICOM]; Editing of medical image data, e.g. adding diagnosis information (image data processing in general [G06T](#), image data processing related to 3D objects [G06F 17/00](#); biomedical image inspection [G06T 7/0012](#))}

**WARNING**

*Group G06F 19/321 is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups G16H 30/00 – G16H 30/40.*

*Groups G06F 19/321 and G16H 30/00 – G16H 30/40 should be considered in order to perform a complete search.*

- D G06F 19/322      • • • {Management of patient personal data, e.g. patient records, conversion of records or privacy aspects  
<administratively transferred to [G16H 10/60](#)>

- D G06F 19/323 . . . {on a portable record carrier, e.g. CD, smartcard or RFID}  
<administratively transferred to [G16H 10/65](#)>
- F G06F 19/324  
(Frozen) . . . {Management of patient independent data, e.g. medical references in digital format}
- WARNING  
*Group G06F 19/324 is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups [G16H 70/00](#) and [G16H 70/60](#). Groups [G06F 19/324](#), [G16H 70/00](#), and [G16H 70/60](#) should be considered in order to perform a complete search.*
- F G06F 19/325  
(Frozen) . . . {Medical practices, e.g. general treatment protocols}
- WARNING  
*Group G06F 19/325 is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups [G16H 70/20](#) and [G16H 70/60](#). Groups [G06F 19/325](#), [G16H 70/20](#), and [G16H 70/60](#) should be considered in order to perform a complete search.*
- F G06F 19/326  
(Frozen) . . . {Medication information, e.g. drug reference databases}
- WARNING  
*Group G06F 19/326 is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups [G16H 70/40](#) and [G16H 70/60](#). Groups [G06F 19/326](#), [G16H 70/40](#), and [G16H 70/60](#) should be considered in order to perform a complete search.*
- D G06F 19/327 . . . {Management of hospital data, e.g. scheduling of medical staff or operation rooms, measuring the quality or efficiency of medical staff}  
<administratively transferred to [G16H 40/20](#)>
- F G06F 19/328  
(Frozen) . . . {Health insurance management, e.g. payments or protection against fraud}
- WARNING  
*Group G06F 19/328 is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups [G06Q 10/10](#) and [G06Q 40/08](#). Groups [G06F 19/328](#), [G06Q 10/10](#) and [G06Q 40/08](#) should be considered in order to perform a complete search.*
- F G06F 19/34  
(Frozen) . . . {Computer-assisted medical diagnosis or treatment, e.g. computerised prescription or delivery of medication or diets, computerised local control of medical devices, medical expert systems or telemedicine}
- WARNING  
*Group G06F 19/34 is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups [G16H 10/00](#) – [G16H 80/00](#). Groups [G06F 19/34](#) and [G16H 10/00](#) – [G16H 80/00](#) should . Groups [G06F 19/34](#) and [G16H 10/00](#) – [G16H 80/00](#) should be considered in order to perform a complete search.*
- D G06F 19/3406 . . . {Local monitoring or local control of medical devices, e.g. configuration parameters, graphical user interfaces [GUI] or dedicated hardware interfaces}  
<administratively transferred to [G16H 40/63](#)>
- D G06F 19/3412 . . . {Medical equipment management, e.g. updates or maintenance}  
<administratively transferred to [G16H 40/40](#)>

|   |                          |  |
|---|--------------------------|--|
| F | G06F 19/3418<br>(Frozen) | <ul style="list-style-type: none"> <li>• • • {Telemedicine, e.g. remote diagnosis, remote control of instruments or remote monitoring of patient carried devices}</li> </ul> <p><u>WARNING</u><br/>Group <i>G06F 19/3418</i> is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups <i>G16H 40/40</i>, <i>G16H 40/60</i>, <i>G16H 40/67</i>. Groups <i>G06F 19/3418</i>, <i>G16H 40/40</i>, <i>G16H 40/60</i>, and <i>G16H 40/67</i> should be considered in order to perform a complete search.</p>   |
| D | G06F 19/3425             | <ul style="list-style-type: none"> <li>• • • {Consulting other medical practitioners, e.g. cooperation, by teleconferencing}</li> </ul> <p>&lt;administratively transferred to <a href="#">G16H 80/00</a>&gt;</p>  |
| D | G06F 19/3431             | <ul style="list-style-type: none"> <li>• • • {Calculating a health index for the patient, e.g. for risk assessment}</li> </ul> <p>&lt;administratively transferred to <a href="#">G16H 50/30</a>&gt;</p>   |
| D | G06F 19/3437             | <ul style="list-style-type: none"> <li>• • • {Medical simulation or modelling, e.g. simulating the evolution of medical disorders (computer-aided design using simulation G06F 17/5009; biomedical image modelling G06T 17/00)}</li> </ul> <p>&lt;administratively transferred to <a href="#">G16H 50/50</a>&gt;</p>   |
| D | G06F 19/3443             | <ul style="list-style-type: none"> <li>• • • {Medical data mining, e.g. in previous cases of different patients (pattern recognition in general G06K 9/62)}</li> </ul> <p>&lt;administratively transferred to <a href="#">G16H 50/70</a>&gt;</p>   |
| D | G06F 19/345              | <ul style="list-style-type: none"> <li>• • • {Medical expert systems, neural networks or other automated diagnosis (computer systems utilising knowledge based models G06N 5/00; neural networks per se G06N 3/02)}</li> </ul> <p>&lt;administratively transferred to <a href="#">G16H 50/20</a>&gt;</p>   |
| F | G06F 19/3456<br>(Frozen) | <ul style="list-style-type: none"> <li>• • • {Computer-assisted prescription or delivery of medication, e.g. prescription filling or compliance checking}</li> </ul> <p><u>WARNING</u><br/>Group <i>G06F 19/3456</i> is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups <i>G16H 20/10</i>, <i>G16H 20/60</i>, <i>G16H 20/70</i>, and <i>G16H 20/90</i>. All groups listed in this Warning should be considered in order to perform a complete search.</p>  |
| F | G06F 19/3462<br>(Frozen) | <ul style="list-style-type: none"> <li>• • • {Computer-assisted distribution of medication from dispensers, i.e. making sure that medication is correctly delivered to patients (medication containers <a href="#">A61J 1/00</a>; dispensers activated by money or the like <a href="#">G07F</a>)}</li> </ul> <p><u>WARNING</u><br/>Group <i>G06F 19/3462</i> is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups <i>G16H 20/13</i>, <i>G16H 20/60</i>, <i>G16H 20/70</i>, and <i>G16H 20/90</i>. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| F | G06F 19/3468<br>(Frozen) | <ul style="list-style-type: none"> <li>• • • {Computer-assisted delivery of medication via infusion or injection (infusion devices per se <a href="#">A61M 5/14</a>)}</li> </ul> <p><u>WARNING</u><br/>Group <i>G06F 19/3468</i> is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups <i>G16H 20/17</i>, <i>G16H 20/60</i>, <i>G16H 20/70</i>, and <i>G16H 20/90</i>. All groups listed in this Warning should be considered in order to perform a complete search.</p>  |

- F G06F 19/3475  
(Frozen)
- • {Computer-assisted prescription or delivery of diets, e.g. prescription filling or compliance checking}
- WARNING**  
Group *G06F 19/3475* is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups *G16H 20/60*, *G16H 20/70* and *G16H 20/90*. Groups *G06F 19/3475*, *G16H 20/60*, *G16H 20/70* and *G16H 20/90* should be considered in order to perform a complete search.
- F G06F 19/3481  
(Frozen)
- • {Computer-assisted prescription or delivery of treatment by physical action, e.g. surgery or physical exercise (surgical instruments, devices or methods [A61B 17/00](#); apparatuses for physical training [A63B](#))}
- WARNING**  
Group *G06F 19/3481* is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups *G16H 20/30*, *G16H 20/40*, *G16H 20/70* and *G16H 20/90*. Groups *G06F 19/3481*, *G16H 20/30*, *G16H 20/40*, *G16H 20/70* and *G16H 20/90* should be considered in order to perform a complete search.
- D G06F 19/3487
- • {Medical report generation}  
<administratively transferred to [G16H 15/00](#)>
- D G06F 19/3493
- • {Computer-assisted epidemiological alert systems, e.g. bioterrorism or flu alerts}  
<administratively transferred to [G16H 50/80](#)>
- F G06F 19/36  
(Frozen)
- • {Computer-assisted acquisition of medical data, e.g. computerised clinical trials or questionnaires (measuring analogue medical signals [A61B 5/00](#))}
- WARNING**  
Group *G06F 19/36* is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups *G16H 10/00* – *G16H 10/40*. Groups *G06F 19/36* and *G16H 10/00* – *G16H 10/40* should be considered in order to perform a complete search.
- D G06F 19/363
- • {Manual data input, e.g. electronic questionnaires or clinical trials}  
<administratively transferred to [G16H 10/20](#)>
- D G06F 19/366
- • {Acquisition of data related to laboratory tests, e.g. special identifiers for examination containers (investigating biological material *G01N 33/48*)}  
<administratively transferred to [G16H 10/40](#)>

## Project: RP0486 (G06K)

## G06K 9/00

Methods or arrangements for reading or recognising printed or written characters or for recognising patterns, e.g. fingerprints (processing or analysis of tracks of nuclear particles [G01T 5/02](#); {information retrieval [G06F 17/30](#); ~~medical diagnosis G06F 19/34~~; recognition of molecular sequences [G06F 19/70](#); radio frequency identification [G06K 7/00](#); recognition of barcodes and similar code images [G06K 7/10](#); computer systems based on specific computational models [G06N](#); image analysis, inspection, positioning or tracking [G06T 7/00](#); recognition of acoustic speech signals [G10L 15/00](#); acoustic speaker identification [G10L 17/00](#))}

## NOTES

- In this group, the following term is used with the meaning indicated:
  - "recognising" includes several functions such as extracting features, clustering, classifying or matching.
- IPC subgroups [G06K 9/20](#), [G06K 9/36](#), [G06K 9/62](#) and [G06K 9/74](#) refer to methods or arrangements that can be applied to a pattern independently of its



nature or to that are applied to specific patterns not included in the subgroups in the range [G06K 9/00006](#) - [G06K 9/00852](#). The CPC subgroups in the range [G06K 9/00006](#) - [G06K 9/00852](#) refer to the same methods or arrangements when applied or specially adapted to the specific patterns to which these subgroups relate.

3. The present group does not cover the use of recognised patterns in specific applications, e.g. the use of traced gestures recognised as commands to be input to a computer is covered by the groups under [G06F 3/00](#)

## Project: N/A (G06M)

### G06M

**COUNTING MECHANISMS; COUNTING OF OBJECTS NOT OTHERWISE PROVIDED FOR** (counting by measuring volume or weight of articles to be counted [G01F](#), [G01G](#); computers [G06C](#) - [G06J](#); counting electric pulses [H03K](#); counting characters, words or messages in switching networks for transmission of digital information [H04L 12/08](#))

#### NOTE

This subclass covers:

- stepping or continuously-moving mechanical counters operated through one or more inputs applied to the lowest order mechanically or electrically;
- counting systems involving applications of either mechanical, electrical, or electronic counters.

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

[G06M 15/00](#) covered by

## Project: RP0486 (G06Q)

### U G06Q 10/00

#### Administration; Management

### M G06Q 10/10

- Office automation, e.g. computer aided management of electronic mail or groupware (electronic mail protocols [H04L 29/06](#) {; arrangements for user-to-user messaging in packet-switching networks, e.g. e-mail or instant messages, [H04L 41/00](#)}); Time management, e.g. calendars, reminders, meetings or time accounting {(organizing, planning, scheduling or allocating time [G06Q 10/06](#))}

#### WARNING

*Group [G06Q 10/10](#) is incomplete pending reclassification of documents from group [G06F 19/328](#).*

*Groups [G06Q 10/10](#) and [G06F 19/328](#) should be considered in order to perform a complete search.*

### U G06Q 40/00

#### Finance; Insurance; Tax strategies; Processing of corporate or income taxes

### M G06Q 40/08

- Insurance, e.g. risk analysis or pensions {(processing of insurance policies or claims [G06Q 10/10](#))}

#### WARNING

*Group [G06Q 40/08](#) is incomplete pending reclassification of documents from group [G06F 19/328](#).*

*Groups [G06Q 40/08](#) and [G06F 19/328](#) should be considered in order to perform a complete search.*

### M G06Q 50/00

**Systems or methods specially adapted for a-specific business sector** *sectors*, e.g. utilities or tourism (*healthcare informatics [G16H](#)*)



- |   |            |   |
|---|------------|---|
| U | G06Q 50/10 | • Services  |
| C | G06Q 50/22 | • • <del>Health care, e.g. hospitals;</del> Social work |

WARNING

Group G06Q 50/22 is impacted by reclassification into groups G06Q 50/22 and G16H 10/00 – G16H 80/00.

*Groups G06Q 50/22 and G16H 10/00 – G16H 80/00 should be considered in order to perform a complete search.*

- F G06Q 50/24 (Frozen) . . . Patient record management (processing of medical or biological data for scientific purposes [G06F 19/00](#))

**WARNING**

*Group G06Q 50/24 is no longer used for the classification of documents as of January 1, 2018. The content of this group is being reclassified into groups G16H 10/00 – G16H 80/00.*

*Groups G06Q 50/24 and G16H 10/00 – G16H 80/00 should be considered in order to perform a complete search.*

**Project: N/A (G06T)**

**G06T**

## IMAGE DATA PROCESSING OR GENERATION, IN GENERAL

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~*The subject* matter ~~covered by~~*for* these *IPC* groups is classified in the following CPC groups:

G06T 1/40

covered by

G06T 1/20

**Project: MP0164 (G06T)**

- |   |           |   |
|---|-----------|---|
| U | G06T 5/00 | Image enhancement or restoration, e.g. from bit-mapped to bit-mapped creating a similar image |
|---|-----------|---|

- |   |            |   |
|---|------------|---|
| M | G06T 5/006 | <ul style="list-style-type: none"> <li>- {Geometric correction (detecting, correcting, reducing or removing artefacts resulting only from the lens unit, e.g. flare, shading, vignetting or "cos4" <a href="#">H04N 5/3572</a>; <del>correction of chromatic aberrations adapted to be used in an image pickup device containing an electronic image sensor H04N 9/045; correction of chromatic aberrations adapted to be used in an image pickup device containing an electronic image sensor H04N 9/045</del>}</li> </ul> |
|---|------------|---|

**Project: N/A (G07C)**

- |   |           |   |
|---|-----------|---|
| U | G07C 1/00 | Registering, indicating or recording the time of events or elapsed time, e.g. time-recorders for work people (registering or indicating the working of machines or vehicles <a href="#">G07C 3/00</a> , <a href="#">G07C 5/00</a> ) |
|---|-----------|---|

NOTE

Subgroups [G07C 1/20](#) - [G07C 1/32](#) take precedence over subgroups [G07C 1/02](#) - [G07C 1/18](#)

- G07C 1/10
- together with the recording, indicating or registering of other data, e.g. of signs of ~~identity~~ identity (together with the recording of a continuously-varying variable G01D or the appropriate other subclass of G01, dependent on the variable)

**Project: N/A (G07D)****G07D****HANDLING OF COINS OR OF PAPER CURRENCY OR SIMILAR VALUABLE PAPERS, e.g. TESTING, SORTING BY DENOMINATIONS, COUNTING, DISPENSING, CHANGING OR DEPOSITING**NOTES

1. In this subclass, the following terms or expressions are used with the meaning indicated:

- "coins" also covers tokens of similar nature;
- "paper currency or similar valuable papers" covers banknotes, bills, cheques, vouchers, securities, bonds or the like.

2. This subclass covers handling of "coins" or "paper currency" insofar as they carry distinctive value features representative of money or the like.



Informative references:

- sorting in general [B07C](#)
- handling paper sheets in general [B65H](#)
- counting by weighing [G01G](#)
- counting of objects in general, i.e. without discriminating of denominations, [G06M](#)

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:  
[G07D 13/00](#) covered by [G07D 11/00](#) and subgroup.

**Project: N/A (G08B)**

- |                            |  |
|----------------------------|--|
| <b>U</b> <b>G08B 21/00</b> | <b>Alarms responsive to a single specified undesired or abnormal operating condition and not elsewhere provided for {(alarms on gas pipes <a href="#">F17D 3/01</a>)}</b>  |
| <b>U</b> G08B 21/02        | • Alarms for ensuring the safety of persons  |
| <b>U</b> G08B 21/0202      | • • {Child monitoring systems using a transmitter-receiver system carried by the parent and the child}   |
| <b>U</b> G08B 21/0205      | • • • {Specific application combined with child monitoring using a transmitter-receiver system}  |
| G08B 21/0208               | • • • • {Combination with audio or video communication, e.g. combination with  "baby phone"  function} |

**Project: RP0486 (G08B)**

- |                     |   |
|---------------------|---|
| <b>U</b> G08B 21/18 | • Status alarms ( <a href="#">G08B 21/02</a> takes precedence)  |
| <b>U</b> G08B 21/24 | • • Reminder alarms, e.g. anti-loss alarms  |
| G08B 21/245         | • • • {Reminder of hygiene compliance policies, e.g. of washing hands<br><i>(measuring quality of medical staff.)</i> <del>(measuring quality of medical staff;</del><br><del>G06F 19/327)}</del> |

Project: N/A (G09G)

G09G

ARRANGEMENTS OR CIRCUITS FOR CONTROL OF INDICATING DEVICES USING STATIC MEANS TO PRESENT VARIABLE INFORMATION (lighting in general [F21](#); arrangements for displaying electric variables or waveforms [G01R 3/00](#); devices or arrangements for the control of light beams [G02F 1/00](#); indicating of time by visual means [G04B 19/00](#), [G04C 17/00](#), [G04G 9/00](#); arrangements for transferring data between computers and peripheral equipment [G06F 3/00](#); visible signalling arrangements or devices [G08B 5/00](#); traffic control systems [G08G](#); display, advertising, signs [G09F](#), e.g. static indicating arrangements comprising an association of a number of separate sources or light control cells [G09F 9/00](#); static indicating arrangements comprising integral associations of a number of light sources [H01J](#), [H01K](#), [H01L](#), [H05B 33/12](#); circuits in pulse counters for indicating the result [H03K 21/18](#); coding, decoding or code conversion, in general [H03M](#); reproducing a picture or pattern using electric signals representing parts thereof and produced by scanning an original [H04N](#))

#### NOTES

1. This subclass covers indicator consoles, i.e. arrangements or circuits for processing control signals to achieve the display, e.g. for the calling up, reception, storage, regeneration, coding, decoding, addressing of control signals.
2. This subclass does not cover the structural details of the indicating devices, such as panels or tubes per se, or assemblies of individual light sources, which are covered by the relevant subclasses, e.g. [H01J](#), [H01K](#), [H01L](#), [G02F](#), [G09F](#), [H05B](#).
3. Contrary to subclass [H04N](#), in which are classified display devices capable of representing continuous brightness value scales, this subclass is limited to devices using only a discrete number of brightness values, e.g. visible/non-visible.
4. The visual effect may be produced by a luminescent screen scanned by an electron beam, directly by controlled light sources, by projection of light, from controlled light sources onto characters, symbols, or elements thereof drawn on a support, or by electric, magnetic, or acoustic control of the parameters of light rays from an independent source.

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these **IPC** groups is classified in the following CPC groups:

|                            |            |   |
|----------------------------|------------|---|
| <a href="#">G09G 5/32</a>  | covered by | <a href="#">G09G 5/42</a>                               |
| <a href="#">G09G 5/37</a>  | covered by | <a href="#">G09G 5/39</a>                               |
| <a href="#">G09G 5/373</a> | covered by | <a href="#">G09G 5/39</a>                               |
| <a href="#">G09G 5/377</a> | covered by | <a href="#">G09G 5/39</a>                               |
| <a href="#">G09G 5/38</a>  | covered by | <a href="#">G09G 5/42</a>                               |
| <a href="#">G09G 5/397</a> | covered by | <a href="#">G09G 5/395</a> , <a href="#">G09G 5/399</a> |

## Project: RP0159 (G10K)

M G10K

**SOUND-PRODUCING DEVICES** (sound-producing toys [A63H 5/00](#); **musical instruments or parts thereof, see the relevant subclass, e.g. G10D**); **METHODS OR DEVICES FOR PROTECTING AGAINST, OR FOR DAMPING, NOISE OR OTHER ACOUSTIC WAVES IN GENERAL**; **ACOUSTICS NOT OTHERWISE PROVIDED FOR** (~~systems using the reflection or reradiation of acoustic waves G01S 15/00; generating seismic energy G01V 1/02; signalling or calling arrangements, alarm arrangements G08B; piezo-electric electrostrictive or magnetostrictive elements in general H01L 41/00; transmission systems using infrasonic, sonic, or ultrasonic waves H04B 11/00; loudspeakers, microphones, gramophone pick-ups or like acoustic electromechanical transducers H04R~~)

NOTES

1. This subclass covers arrangements for generating mechanical vibrations in fluids.
2. This subclass covers also the production of sounds which may not be audible to human beings but which are audible to animals.
3. In this subclass, the following terms are used with the meanings indicated:
  - "acoustics" and "sound" cover the technical field dealing with mechanical vibrations at all infrasonic -, sonic - and ultrasonic frequencies. However, generation or transmission of mechanical waves, in general, is covered by subclass [B06B](#), subject to the exception specified in Note (1) above.

M G10K 11/00

**Methods or devices for transmitting, conducting or directing sound in general; Methods or devices for protecting against, or for damping, noise or other acoustic waves in general** (~~{protective devices for the ears A61F 11/06}~~); ~~sound insulation for vehicles B60R 13/08; sound insulation for aircraft B64C 1/40; sound insulating materials, see the relevant places, e.g. C04B 26/00 - C04B 38/00; reduction of noise on permanent way E01B 19/00; absorption of air-transmitted noise from road or railway traffic E01F 8/00; noise insulation, absorption or reflection in buildings E04B 1/74; room acoustics E04B 1/99; sound insulation in floors E04F 15/20; gas-flow silencers or exhaust apparatus for machines or engines in general, for internal-combustion engines F01N; intake silencers for internal-combustion engines F02M 35/00; suppression of undesired vibrations F16F 7/00 - G10K 15/00; preventing noise in valves F16K 47/02; noise absorbers in pipes F16L 55/02; arrangements for suppressing noise in direct-contact trickle coolers F28C 1/10; silencers for weapons F41~~)

M G10K 11/16

- Methods or devices for protecting against, or ~~damping of~~ *for damping, noise or other* acoustic waves, ~~e.g. sound in general~~ ([G10K 11/36](#) takes precedence)

NOTE

This group does not cover protecting against, or damping of, acoustic waves adapted for particular applications, which are covered by the subclasses for these applications, provided that there is a specific provision for this aspect.

U G10K 11/175

- • using interference effects; Masking sound

C G10K 11/178

- • by electro-acoustically regenerating the original acoustic waves in anti-phase

NOTE

*{When classifying in any of the groups G10K 11/1781 - G10K 11/17861, classification is also made in at least one subgroup of G10K 11/1787.}*

WARNING

*Group G10K 11/178 is impacted by reclassification into groups G10K 11/1781 - G10K 11/17885.*

*All groups listed in this Warning should be considered in order to perform a complete search.*

- N G10K 11/1781 . . . . {characterised by the analysis of input or output signals, e.g. frequency range, modes, transfer functions}
- WARNING  
Groups [G10K 11/1781](#), [G10K 11/17813](#), [G10K 11/17815](#), [G10K 11/17817](#), [G10K 11/17819](#), [G10K 11/17821](#), [G10K 11/17823](#), [G10K 11/17825](#), [G10K 11/17827](#) are incomplete pending reclassification of documents from group [G10K 11/178](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N G10K 11/17813 . . . . {characterised by the analysis of the acoustic paths, e.g. estimating, calibrating or testing of transfer functions or cross-terms}
- N G10K 11/17815 . . . . . {between the reference signals and the error signals, i.e. primary path}
- N G10K 11/17817 . . . . . {between the output signals and the error signals, i.e. secondary path}
- N G10K 11/17819 . . . . . {between the output signals and the reference signals, e.g. to prevent howling}
- D G10K 11/1782 . . . . {using single input}  
<administratively transferred to [G10K 11/178](#)>
- N G10K 11/17821 . . . . . {characterised by the analysis of the input signals only}
- N G10K 11/17823 . . . . . {Reference signals, e.g. ambient acoustic environment}
- N G10K 11/17825 . . . . . {Error signals}
- N G10K 11/17827 . . . . . {Desired external signals, e.g. pass-through audio such as music or speech}
- N G10K 11/1783 . . . . {handling or detecting of non-standard events or conditions, e.g. changing modes under specific operating conditions}
- WARNING  
Groups [G10K 11/1783](#), [G10K 11/17833](#), [G10K 11/17835](#) and [G10K 11/17837](#) are incomplete pending reclassification of documents from group [G10K 11/178](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N G10K 11/17833 . . . . . {by using a self-diagnostic function or a malfunction prevention function, e.g. detecting abnormal output levels}
- N G10K 11/17835 . . . . . {using detection of abnormal input signals}
- N G10K 11/17837 . . . . . {by retaining part of the ambient acoustic environment, e.g. speech or alarm signals that the user needs to hear}
- D G10K 11/1784 . . . . {using multiple inputs; single output}  
<administratively transferred to [G10K 11/178](#)>
- N G10K 11/1785 . . . . {Methods, e.g. algorithms; Devices ([G10K 11/1781](#), [G10K 11/1783](#) take precedence)}
- WARNING  
Groups [G10K 11/1785](#), [G10K 11/17853](#), [G10K 11/17854](#), [G10K 11/17855](#), [G10K 11/17857](#) and [G10K 11/17861](#) are incomplete pending reclassification of documents from group [G10K 11/178](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N G10K 11/17853 . . . . . {of the filter, e.g. leakage tuning}

- N G10K 11/17854 . . . . . {the filter being an adaptive filter}
- N G10K 11/17855 . . . . . {for improving speed or power requirements}
- N G10K 11/17857 . . . . . {Geometric disposition, e.g. placement of microphones}
- D G10K 11/1786 . . . . . {using multiple inputs; multiple outputs}  
<administratively transferred to [G10K 11/178](#)>
- N G10K 11/17861 . . . . . {using additional means for damping sound, e.g. using sound absorbing panels}
- N G10K 11/1787 . . . . . {General system configurations}

WARNING

Groups [G10K 11/1787](#), [G10K 11/17873](#), [G10K 11/17875](#), [G10K 11/17879](#), [G10K 11/17881](#), [G10K 11/17883](#) and [G10K 11/17885](#) are incomplete pending reclassification of documents from group [G10K 11/178](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G10K 11/17873 . . . . . {using a reference signal without an error signal, e.g. pure feedforward}
- N G10K 11/17875 . . . . . {using an error signal without a reference signal, e.g. pure feedback}
- N G10K 11/17879 . . . . . {using both a reference signal and an error signal}
- D G10K 11/1788 . . . . . {Structural details}  
<administratively transferred to [G10K 11/178](#)>
- N G10K 11/17881 . . . . . {the reference signal being an acoustic signal, e.g. recorded with a microphone}
- N G10K 11/17883 . . . . . {the reference signal being derived from a machine operating condition, e.g. engine RPM or vehicle speed}
- N G10K 11/17885 . . . . . {additionally using a desired external signal, e.g. pass-through audio such as music or speech}

NOTE

{When classifying in this group, classification is also made in the other appropriate groups under [G10K 11/1787](#).}

**Project: N/A (G10K)****G10K 2200/00**

**{Details of methods or devices for transmitting, conducting or directing sound in general}**



## Project: N/A (G11B)

## G11B

**INFORMATION STORAGE BASED ON RELATIVE MOVEMENT BETWEEN RECORD CARRIER AND TRANSDUCER** ({producing carriers of sound records for needle playback [B29C 39/00](#)}; recording measured values in a way that does not require playback through a transducer [G01D](#); photosensitive materials or processes for photographic purposes [G03C](#); electrography, electrophotography, magnetography [G03G](#); recording or playback apparatus using mechanically marked tape, e.g. punched paper tape, or using unit records, e.g. punched or magnetically marked cards, [G06K](#); transferring data from one type of record carrier to another [G06K 1/18](#); printing of data from record carriers [G06K 3/00](#); arrangements for producing a permanent visual presentation of the output data [G06K 15/00](#); arrangements or circuits for control of indicating devices using static means to present variable information [G09G](#); coding, decoding or code conversion, in general [H03M](#); circuits for coupling output of reproducer to radio receiver [H04B 1/20](#); circuits {or arrangements} specially adapted for {pictorial or} television signal recording {[H04N 1/21](#)}, [H04N 5/76](#), [H04N 9/79](#); loudspeakers, microphones, gramophone pick-ups or like acoustic electromechanical transducers or circuits therefor [H04R](#))

NOTES1. This subclass covers :

- recording or playback of information by relative movement between a record track and a transducer, the transducer directly producing, or being directly actuated by, modulation in the track being recorded or played-back, and the extent of modulation corresponding to the signal being recorded or played-back;
- apparatus and machines for recording or playback, and parts thereof such as heads;
- record carriers for use with such apparatus and machines;
- associated working of other apparatus with such apparatus and machines;
- {relative positioning or movement of transducers and record carriers before, during or after transducing operation, e.g. for accessing record carriers or parts thereof, or for track change, selection or acquisition or for track following or for accessing parts of tracks;}
- {driving or moving of heads or record carriers or both heads and record carriers for increasing, maintaining or decreasing the relative speed before, during or after transducing operation}

## 2. In this subclass, the following terms or expressions are used with the meanings indicated :

- "head" includes any means for converting sinusoidal or non-sinusoidal electric wave-forms into variations of the physical condition of at least the adjacent surface of the record carrier, or vice versa;
- "record carrier" means a body, such as a cylinder, disc, card, tape, or wire, capable of permanently holding information, which can be read-off by a sensing element movable relatively to the record carrier.

3. Documents concerning relative positioning or movement of transducers and record carriers are classified in groups [G11B 3/00](#) - [G11B 7/00](#) and [G11B 21/00](#) when only the transducer is controlled and in groups [G11B 15/00](#), [G11B 17/00](#) and [G11B 19/00](#) when only the record carrier is controlled. When both record carrier and head are controlled, the documents are classified in [G11B 15/1808](#), [G11B 15/1816](#), [G11B 19/00](#) and [G11B 27/002](#).

When a plurality of record carriers are controlled, the documents are classified in [G11B 15/68](#), [G11B 17/08](#), [G11B 17/22](#) and [G11B 27/002](#).

4. By "access" is meant an operation including a relative movement for positioning between record carrier and head before, during or after transducing; this operation including "seek", "select", "change", "acquire" and "follow"

functions for at least a part of a track on at least one record carrier. By "programmed access" is meant a sequence of access operations the result of the sequence being to acquire a wanted sequence of parts of tracks or a wanted sequence of tracks. Relative movement between head and record carrier also covers the movement of a coupling beam such as a light beam between the head and a stationary record carrier.

5. "Movement of the head" also covers any virtual movement or any physical movement such as obtained by switching between successive transducing parts of the head or by moving the transducing zone of the head, i.e. by "scanning". If different transducing parts of the head are switchable, the number of transducing parts should be much smaller than the number of individual storage areas of the record carrier.

6. Attention is drawn to the notes of subclass [G11C](#).

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|   |            |  |
|---|------------|--|
| <a href="#">G11B 5/65</a>                               | covered by | <a href="#">G11B 5/64</a> - <a href="#">G11B 5/656</a> |
| <a href="#">G11B 5/667</a>                              | covered by | <a href="#">G11B 5/66</a>                              |
| <a href="#">G11B 5/673</a>                              | covered by | <a href="#">G11B 5/66</a>                              |
| <del>G11B7/16</del>                                     | covered by | <a href="#">G11B 7/135</a>                             |
| <del>G11B7/18</del>                                     | covered by | <a href="#">G11B 7/135</a>                             |
| <a href="#">G11B 7/30</a>                               | covered by | <a href="#">G11B 7/00</a>                              |
| <a href="#">G11B 9/12</a> - <a href="#">G11B 9/14</a>   | covered by | <a href="#">G11B 9/00</a>                              |
| <a href="#">G11B 11/24</a> - <a href="#">G11B 11/26</a> | covered by | <a href="#">G11B 11/00</a>                             |
| <a href="#">G11B 13/08</a>                              | covered by | <a href="#">G11B</a>                                   |

#### Project: MP0270 (G11B)

- U G11B 5/00** **Recording by magnetisation or demagnetisation of a record carrier; Reproducing by magnetic means; Record carriers therefor ([G11B 11/00](#) {and [G11B 13/00](#)} take precedence)**

#### NOTE

Subgroups [G11B 5/02](#) - [G11B 5/86](#) take precedence over subgroups [G11B 5/004](#) - [G11B 5/016](#)

- U G11B 5/127 . Structure or manufacture of heads, e.g. inductive
- U G11B 5/31 . . using thin films {([G11B 5/1274](#), [G11B 5/1278](#), [G11B 5/1874](#), [G11B 5/1875](#), [G11B 5/33](#), [G11B 5/49](#) take precedence; magnetic thin film structures [H01F 10/00](#))}
- U G11B 5/3109 . . . {Details ([G11B 5/3103](#) takes precedence)}
- U G11B 5/313 . . . . {Disposition of layers}
- U G11B 5/3143 . . . . . {including additional layers for improving the electromagnetic transducing properties of the basic structure, e.g. for flux coupling, guiding or shielding ([G11B 5/3116](#), [G11B 5/312](#) take precedence)}
- M G11B 5/3159 . . . . . {~~supraconductive~~*superconductive* layers}

#### Project: N/A (G11B)

- U G11B 9/00** **Recording or reproducing using a method not covered by one of the main groups [G11B 3/00](#) - [G11B 7/00](#); Record carriers therefor ([G11B 11/00](#) takes precedence {driving or moving of heads [G11B 21/02](#)})**
- U G11B 9/06 . using record carriers having variable electrical capacitance; Record carriers therefor ([G11B 9/02](#) takes precedence)

- U G11B 9/061
  - {Record carriers characterised by their structure or form or by the selection of the material; Apparatus or processes specially adapted for the manufacture of record carriers (processes involving a single technical art and for which provision exists elsewhere, see the relevant class, e.g. [B05D](#), [F16N](#), [C08L](#))}
- U G11B 9/063
  - • {characterised by the selection of the material}
- G11B 9/065
  - • • {Additional layers for ~~lubrification~~[lubrication](#), wear protection or elimination of electrostatic charges of the interface between record carrier and head ([G11B 9/066](#), [G11B 9/067](#) and [G11B 9/068](#) take precedence)}

**Project: N/A (G11C)****G11C**

**STATIC STORES (information storage based on relative movement between record carrier and transducer [G11B](#); semiconductor devices for storage [H01L](#), e.g. [H01L 27/108](#) - [H01L 27/11597](#); pulse technique in general [H03K](#), e.g. electronic switches [H03K 17/00](#))**

**NOTES**

1. This subclass covers devices or arrangements for storage of digital or analogue information in which no relative movement takes place between an information storage element and a transducer; which incorporate a selecting-device for writing-in or reading-out the information into or from the store
2. This subclass does not cover elements not adapted for storage and not provided with such means as referred to in Note (3) below, which elements are classified in the appropriate subclass, e.g. of [H01](#), [H03K](#).
3. In this subclass, the following terms are used with the meaning indicated:
  - "storage element" is an element which can hold at least one item of information and is provided with means for writing-in or reading-out this information;
  - "memory" is a device, including storage elements, which can hold information to be extracted when desired.

**WARNING**

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ [The subject](#) matter ~~covered by~~ [for](#) these [IPC](#) groups is classified in the following CPC groups:

|                              |            |  |
|------------------------------|------------|--|
| <a href="#">G11C 8/02</a>    | covered by | <a href="#">G11C 8/00</a> , <a href="#">H03K 17/00</a> |
| <a href="#">G11C 11/4193</a> | covered by | <a href="#">G11C 11/00</a>                             |
| <a href="#">G11C 11/4195</a> | covered by | <a href="#">G11C 11/00</a>                             |
| <a href="#">G11C 11/4197</a> | covered by | <a href="#">G11C 11/00</a>                             |

**Project: MP0270 (G11C)**

- U G11C 11/00
  - Digital stores characterised by the use of particular electric or magnetic storage elements; Storage elements therefor ([G11C 14/00](#) - [G11C 21/00](#) take precedence)**
- U G11C 11/21
  - using electric elements
- M G11C 11/44
  - • using ~~super-conductive~~[superconductive](#) elements, e.g. cryotron ~~{pulse generators using such elements H03K 3/38; counters H03K 23/001}~~
- U G11C 19/00
  - Digital stores in which the information is moved stepwise, e.g. shift register (counting chains [H03K 23/00](#) ){stack stores, push-down stores (linear pulse counters [H03K 23/54](#), pulse distributors [H03K 5/15](#), methods and arrangements for shifting data [G06F 5/01](#))}**
- M G11C 19/32
  - using ~~super-conductive~~[superconductive](#) elements

**Project: RP0486 (G16)****N G16****INFORMATION AND COMMUNICATION TECHNOLOGY [ICT] SPECIALLY ADAPTED FOR SPECIFIC APPLICATION FIELDS**NOTES

1. This subclass does not cover:
  - a. pattern recognition, which is covered by group [G06K 9/00](#);
  - b. digital computing or data processing systems or methods specially adapted for administrative, commercial, financial, managerial, supervisory or forecasting purposes, which are covered by subclass [G06Q](#);
  - c. image data processing or generation, which is covered by subclass [G06T](#).
2. In this subclass, the following terms or expressions are used with the meaning indicated:
  - a. ICT [information and communication technology] also covers IT [information technology]; means
  - b. "ICT specially adapted for" also covers the expression "digital computing or data processing systems or methods specially adapted for", which is used in group [G06F 19/00](#) and in subclass [G06Q](#).

**Project: RP0486 (G16H)****N G16H****HEALTHCARE INFORMATICS, i.e. INFORMATION AND COMMUNICATION TECHNOLOGY [ICT] SPECIALLY ADAPTED FOR THE HANDLING OR PROCESSING OF MEDICAL OR HEALTHCARE DATA**NOTES

1. This subclass covers cross-sectional aspects of computer, information or communication science with medical or healthcare science, where the focus is clearly placed on digital computing or data processing systems or methods, which are specially adapted for medical or healthcare science.
2. This subclass does not cover:
  - a. medical equipment, medical methods, methods of diagnosis, methods of treatment or therapy, clinical care or surgical procedures per se, which are covered by the relevant subclasses of [A61](#);
  - b. signal processing or signal transmission associated to diagnostic measurements, e.g. signal waveform analysis, which are covered by group [A61B 5/00](#).
3. In order to determine whether a technical subject relating to medical or healthcare science is classified in this subclass or in the relevant subclasses of [A61](#), the following should be observed:
  - a. to classify a technical subject in this subclass it is required that the essential technical features of the subject focus onto digital computing or data processing systems or methods;
  - b. if the technical subject focuses onto aspects of medical science, e.g. physiological signals or medical conditions, or if the subject involves a significant interaction with the patient, e.g. details of a diagnostic measurement, then classification shall be directed to the appropriate subclasses of class [A61](#);
  - c. the mere presence of "a computer" or "a flowchart" in relation to medical devices or procedures is not a key element for classifying in this subclass. In this case classification shall rather be directed to the appropriate subclasses covering those medical devices or procedures.

- N G16H 10/00** **ICT specially adapted for the handling or processing of patient-related medical or healthcare data (for medical reports [G16H 15/00](#); for therapies or health-improving plans [G16H 20/00](#); for the handling or processing of medical images [G16H 30/00](#))**
- WARNING  
Group [G16H 10/00](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/36](#), [G06Q 50/22](#), and [G06Q 50/24](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 10/20** **• for electronic clinical trials or questionnaires**
- WARNING  
Group [G16H 10/20](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/36](#), [G06Q 50/22](#), and [G06Q 50/24](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 10/40** **• for data related to laboratory analysis, e.g. patient specimen analysis**
- WARNING  
Group [G16H 10/40](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/36](#), [G06Q 50/22](#), and [G06Q 50/24](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 10/60** **• for patient-specific data, e.g. for electronic patient records**
- WARNING  
Group [G16H 10/60](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06Q 50/22](#), and [G06Q 50/24](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 10/65** **• • stored on portable record carriers, e.g. on smartcards, RFID tags or CD**
- WARNING  
Group [G16H 10/65](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06Q 50/22](#), and [G06Q 50/24](#).  
All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 15/00** **ICT specially adapted for medical reports, e.g. generation or transmission thereof**
- WARNING  
Group [G16H 15/00](#) is incomplete pending reclassification of documents from groups [G06F 19/00](#), [G06F 19/30](#), [G06F 19/32](#), [G06Q 50/22](#), [G06Q 50/24](#).  
Groups [G06F 19/00](#), [G06F 19/30](#), [G06F 19/32](#), [G06Q 50/22](#), [G06Q 50/24](#) and [G16H 15/00](#) should and [G16H 15/00](#) should be considered in order to perform a complete search.

- N G16H 20/00** **ICT specially adapted for therapies or health-improving plans, e.g. for handling prescriptions, for steering therapy or for monitoring patient compliance**
- WARNING  
Group [G16H 20/00](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06Q 50/22](#), and [G06Q 50/24](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 20/10** **relating to drugs or medications, e.g. for ensuring correct administration to patients**
- WARNING  
Group [G16H 20/10](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/3456](#), [G06Q 50/22](#), and [G06Q 50/24](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 20/13** **delivered from dispensers**
- WARNING  
Group [G16H 20/13](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/3462](#), [G06Q 50/22](#), and [G06Q 50/24](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 20/17** **delivered via infusion or injection**
- WARNING  
Group [G16H 20/17](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/3468](#), [G06Q 50/22](#), and [G06Q 50/24](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 20/30** **relating to physical therapies or activities, e.g. physiotherapy, acupressure or exercising**
- WARNING  
Group [G16H 20/30](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/3481](#), [G06Q 50/22](#), and [G06Q 50/24](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 20/40** **relating to mechanical, radiation or invasive therapies, e.g. surgery, laser therapy, dialysis or acupuncture**
- WARNING  
Group [G16H 20/40](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/3481](#), [G06Q 50/22](#), and [G06Q 50/24](#). All groups listed in this Warning should be considered in order to perform a complete search.



- N G16H 20/60
- relating to nutrition control, e.g. diets
- WARNING
- Group [G16H 20/60](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/3456](#), [G06F 19/3462](#), [G06F 19/3468](#), [G06F 19/3475](#), [G06Q 50/22](#), and [G06Q 50/24](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 20/70
- relating to mental therapies, e.g. psychological therapy or autogenous training
- WARNING
- Group [G16H 20/70](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/3456](#), [G06F 19/3462](#), [G06F 19/3468](#), [G06F 19/3475](#), [G06F 19/3481](#), [G06Q 50/22](#), and [G06Q 50/24](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 20/90
- relating to alternative medicines, e.g. homeopathy or oriental medicines
- WARNING
- Group [G16H 20/90](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/3456](#), [G06F 19/3462](#), [G06F 19/3468](#), [G06F 19/3475](#), [G06F 19/3481](#), [G06Q 50/22](#), and [G06Q 50/24](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 30/00
- ICT specially adapted for the handling or processing of medical images (computerised tomography [A61B 6/03](#))**
- WARNING
- Groups [G16H 30/00](#) – [G16H 30/40](#) are incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/321](#), [G06Q 50/22](#), [G06Q 50/24](#). Groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/321](#), [G06Q 50/22](#), [G06Q 50/24](#) and [G16H 30/00](#) – [G16H 30/40](#) should be considered in order to perform a complete search.
- N G16H 30/20
- for handling medical images, e.g. DICOM, HL7 or PACS
- N G16H 30/40
- for processing medical images, e.g. editing
- N G16H 40/00
- ICT specially adapted for the management or administration of healthcare resources or facilities; ICT specially adapted for the management or operation of medical equipment or devices**
- WARNING
- Group [G16H 40/00](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06Q 50/22](#), and [G06Q 50/24](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 40/20
- for the management or administration of healthcare resources or facilities, e.g. managing hospital staff or surgery rooms
- WARNING
- Group [G16H 40/20](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06Q 50/22](#), and [G06Q 50/24](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N G16H 40/40
- for the management of medical equipment or devices, e.g. scheduling maintenance or upgrades
- WARNING
- Group [G16H 40/40](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/3418](#), [G06Q 50/22](#), and [G06Q 50/24](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 40/60
- for the operation of medical equipment or devices
- NOTES
1. This group covers ICT specially adapted for the operation of medical equipment or devices, or of their interfaces, i.e. aspects of the operation where the focus is on the processing of medical or healthcare data which results in contextual, content-related or structural transformation of said data.
  2. This group does not cover the operation of medical equipment or devices, or of their interfaces, without contextual, content-related or structural transformation of medical or healthcare data, which is covered by the relevant groups of class [A61](#).
- WARNING
- Group [G16H 40/60](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/3418](#), [G06Q 50/22](#), and [G06Q 50/24](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 40/63
- • for local operation
- WARNING
- Group [G16H 40/63](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06Q 50/22](#), and [G06Q 50/24](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 40/67
- • for remote operation
- WARNING
- Group [G16H 40/67](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06F 19/3418](#), [G06Q 50/22](#), and [G06Q 50/24](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N G16H 50/00
- ICT specially adapted for medical diagnosis, medical simulation or medical data mining; ICT specially adapted for detecting, monitoring or modelling epidemics or pandemics**
- WARNING
- Groups [G16H 50/00](#) - [G16H 50/80](#) are incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06Q 50/22](#), [G06Q 50/24](#).
- Groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06Q 50/22](#), [G06Q 50/24](#) and [G16H 50/00](#) – [G16H 50/80](#) should be considered in order to perform a complete search.
- N G16H 50/20
- for computer-aided diagnosis, e.g. based on medical expert systems

- N G16H 50/30      • for calculating health indices; for individual health risk assessment
- N G16H 50/50      • for simulation or modelling of medical disorders
- N G16H 50/70      • for mining of medical data, e.g. analysing previous cases of other patients
- N G16H 50/80      • for detecting, monitoring or modelling epidemics or pandemics, e.g. flu

**N G16H 70/00      *ICT specially adapted for the handling or processing of medical references***

WARNING

Group [G16H 70/00](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/324](#), [G06F 19/34](#), [G06Q 50/22](#), and [G06Q 50/24](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G16H 70/20      • relating to practices or guidelines

WARNING

Group [G16H 70/20](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/325](#), [G06F 19/34](#), [G06Q 50/22](#), and [G06Q 50/24](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G16H 70/40      • relating to drugs, e.g. their side effects or intended usage

WARNING

Group [G16H 70/40](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/326](#), [G06F 19/34](#), [G06Q 50/22](#), and [G06Q 50/24](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G16H 70/60      • relating to pathologies

WARNING

Group [G16H 70/60](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/324](#), [G06F 19/325](#), [G06F 19/326](#), [G06F 19/34](#), [G06Q 50/22](#), and [G06Q 50/24](#).

All groups listed in this Warning should be considered in order to perform a complete search.

**N G16H 80/00      *ICT specially adapted for facilitating communication between medical practitioners or patients, e.g. for collaborative diagnosis, therapy or health monitoring***

WARNING

Group [G16H 80/00](#) is incomplete pending reclassification of documents from groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06Q 50/22](#), [G06Q 50/24](#).

Groups [G06F 19/30](#), [G06F 19/32](#), [G06F 19/34](#), [G06Q 50/22](#), [G06Q 50/24](#) and [G16H 80/00](#) should and [G16H 80/00](#) should be considered in order to perform a complete search.

**Project: MP0398 (G21C)**

- M G21C      **NUCLEAR REACTORS (~~analogue computers therefor G06G 7/54~~; fusion reactors, hybrid fission-fusion reactors [G21B](#); nuclear explosives [G21J](#))**

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. *The subject matter for these IPC groups is classified in the following CPC groups:*

|            |            |                                      |
|------------|------------|--------------------------------------|
| G21C 1/01  | covered by | all other groups of G21C             |
| G21C 19/33 | covered by | all other subgroups of<br>G21C 19/34 |

**M G21C 1/00**

**Reactors** *Reactor types*

- U G21C 1/02
  - Fast fission reactors, i.e. reactors not using a moderator {; Metal cooled reactors; Fast breeders}
- M G21C 1/022
  - {~~Characterised~~ *characterised* by the ~~concept and design or~~ properties of the core}
- U G21C 1/04
  - Thermal reactors {; Epithermal reactors}
- U G21C 1/06
  - • Heterogeneous reactors, i.e. in which fuel and moderator are separated
- U G21C 1/08
  - • • moderator being highly pressurised, e.g. boiling water reactor, integral super-heat reactor, pressurised water reactor ([G21C 1/22](#) takes precedence)
- U G21C 1/10
  - • • • moderator and coolant being different or separated
- M G21C 1/12
  - • • • • moderator being solid, e.g. Magnox reactor {*or* gas-graphite reactor}
- U G21C 1/14
  - • • moderator being substantially not pressurised, e.g. swimming-pool reactor ([G21C 1/22](#) takes precedence)
- M G21C 1/16
  - • • • moderator and coolant being different or separated, e.g. sodium-graphite reactor {, sodium-heavy water reactor, *or* organic coolant-heavy water reactor}
- U G21C 1/18
  - • • • • coolant being pressurised
- M G21C 1/20
  - • • • • • moderator being liquid, e.g. pressure-tube reactor ~~{also the construction of the pressure-tubes}~~
- M G21C 1/30
  - Subcritical reactors {; Experimental reactors ~~with exception of other than~~ swimming-pool reactors or zero-energy reactors}
- M G21C 1/303
  - {Experimental *and or* irradiation arrangements inside the reactor (irradiation loops [G21C 1/306](#); ~~material testing by neutrons G01N 23/005~~)}

**Project: N/A (G21C)**

**U G21C 7/00**

**Control of nuclear reaction**

- U G21C 7/06
  - by application of neutron-absorbing material, i.e. material with absorption cross-section very much in excess of reflection cross-section
- U G21C 7/08
  - • by displacement of solid control elements, e.g. control rods
- G21C 7/20
  - • • Disposition of shock-absorbing devices (shock-absorbers in general [F16F](#)) {~~Braking arrangements~~; *Braking arrangements*}

**U G21C 11/00**

**Shielding structurally associated with the reactor**

- G21C 11/02
  - Biological shielding (in general [G21F](#)) {~~Neutron or gamma shielding~~; *Neutron or gamma shielding*}

**Project: N/A (G21K)**

**G21K**

**TECHNIQUES FOR HANDLING PARTICLES OR IONISING RADIATION NOT OTHERWISE PROVIDED FOR; IRRADIATION DEVICES; GAMMA RAY OR X-RAY MICROSCOPES**

**NOTE**

In this subclass, the following term is used with the meaning indicated:

"particle" means a molecular, atomic or subatomic particle

#### WARNING

The following IPC ~~group is~~ *groups are* not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered this group for these IPC groups~~ is classified in the following CPC ~~group~~ *groups*:

[G21K 3/00](#)

covered by

[G21K 1/10](#)

#### Project: N/A (H01H)

H01H

**ELECTRIC SWITCHES; RELAYS; SELECTORS; EMERGENCY PROTECTIVE DEVICES** (contact cables [H01B 7/10](#); overvoltage protection resistors, resistive arresters [H01C 7/12](#), [H01C 8/04](#); electrolytic self-interrupters [H01G 9/18](#); switching devices of the waveguide type [H01P](#); devices for interrupted current collection [H01R 39/00](#); overvoltage arresters using spark gaps [H01T 4/00](#); emergency protective circuit arrangements [H02H](#); switching by electronic means without contact-making [H03K 17/00](#))

#### NOTES

1.

Attention is drawn to the Notes following the titles of class [B81](#) and subclass [B81B](#) relating to "microstructural devices" and microstructural systems"

2. This subclass covers (in groups [H01H 69/00](#) - [H01H 87/00](#)) devices for the protection of electric lines or electric machines or apparatus in the event of undesired change from normal electric working conditions, the electrical condition serving directly as the input to the device.

3. This subclass does not cover bases, casings, or covers accommodating two or more switching devices or for accommodating a switching device as well as another electric component, e.g. bus-bar, line connector. Those bases, casings or covers are covered by group [H02B 1/26](#).

4. In this subclass, the following terms or expressions are used with the meanings indicated :

- "relay" means a switching device having contacts which are operated from electric inputs which supply, directly or indirectly, all the mechanical energy necessary to cause both the closure and the opening of the contacts;
- "driving mechanism" refers to the means by which an operating force applied to the switch is transmitted to the moving contact or contacts;
- "operating" is used in a broader sense than "actuating" which is reserved for those parts not touched by hand to effect switching;
- "acting" or "action" means a self-induced movement of parts at one stage of the switching.

These connotations apply to all parts of the verbs "to operate", "to actuate" and "to act" and to words derived therefrom, e.g. to "actuation".

5. In this subclass, details are classified as follows :

- details of an unspecified type of switching device, or disclosed as applicable to two or more kinds of switching devices designated by the terms or expressions "switches", "relays", "selector switches", and "emergency protective devices", are classified in groups [H01H 1/00](#) - [H01H 9/00](#);
- details of an unspecified type of switch, or disclosed as applicable to two or more types of switches as defined by groups [H01H 13/00](#) - [H01H 43/00](#) and sub-groups [H01H 35/02](#), [H01H 35/06](#), [H01H 35/14](#), [H01H 35/18](#), [H01H 35/24](#) and [H01H 35/42](#), all hereinafter called basic types, are classified in groups [H01H 1/00](#) - [H01H 9/00](#);
- details of an unspecified type of relay, or disclosed as applicable to two or more types of relays as defined by groups [H01H 51/00](#) - [H01H 61/00](#), hereinafter called basic types are classified in [H01H 45/00](#);

- details of an unspecified protective device, or applicable to two or more types of protective devices as defined by groups [H01H 73/00](#) - [H01H 83/00](#), hereinafter called basic types, are classified in [H01H 71/00](#).
- However, details only described with reference to, or clearly only applicable to, switching devices of a single basic type, are classified in the group appropriate to switching devices of that basic type, e.g. [H01H 19/02](#), [H01H 75/04](#);
- mechanical structural details of control members of switches or of keyboards such as keys, push-buttons, levers or other mechanisms for transferring the force to the activated elements are classified in this subclass, even when they are used for controlling electronic switches.

However, mechanical details directly producing electronic effects are classified in group [H03K 17/94](#).

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:-

|   |            |                            |
|---|------------|----------------------------|
| <a href="#">H01H 13/708-H01H 13/718</a> | covered by |                            |
| <a href="#">H01H 33/575</a>             | covered by | <a href="#">H01H 33/56</a> |
| <a href="#">H01H 33/65</a>              | covered by |                            |
| <a href="#">H01H 33/825</a>             | covered by | <a href="#">H01H 33/82</a> |
| <a href="#">H01H 33/835</a>             | covered by | <a href="#">H01H 33/83</a> |
| <a href="#">H01H 33/867</a>             | covered by | <a href="#">H01H 33/86</a> |
| <a href="#">H01H 33/873</a>             | covered by | <a href="#">H01H 33/86</a> |
| <a href="#">H01H 33/915</a>             | covered by | <a href="#">H01H 33/91</a> |
| <a href="#">H01H 33/985</a>             | covered by | <a href="#">H01H 33/98</a> |
| <a href="#">H01H 33/99</a>              | covered by | <a href="#">H01H 33/98</a> |

#### Project: MP0270 (H01J)

- |   |              |  |
|---|--------------|--|
| U | H01J 37/00   | Discharge tubes with provision for introducing objects or material to be exposed to the discharge, e.g. for the purpose of examination or processing thereof ( <a href="#">H01J 33/00</a> , <a href="#">H01J 40/00</a> , <a href="#">H01J 41/00</a> , <a href="#">H01J 47/00</a> , <a href="#">H01J 49/00</a> take precedence; {scanning-probe techniques or apparatus <a href="#">G01Q</a> } ; contactless testing of electronic circuits using electron beams <a href="#">G01R 31/305</a> ; {particle accelerators <a href="#">H05H</a> }) |
| U | H01J 37/02   | • Details  |
| U | H01J 37/04   | • • Arrangements of electrodes and associated parts for generating or controlling the discharge, e.g. electron-optical arrangement, ion-optical arrangement {(electron or ion-optical systems for localised treatment of materials <a href="#">H01J 37/3007</a> ; discharge control means in gas filled discharge tubes <a href="#">H01J 37/32009</a> )}   |
| U | H01J 37/10   | • • • Lenses   |
| U | H01J 37/14   | • • • • magnetic   |
| U | H01J 37/141  | • • • • • Electromagnetic lenses   |
| M | H01J 37/1416 | • • • • • {with <del>supra-conducting</del> <i>superconducting</i> coils}  |



Project: N/A (H01L)

H01L

**SEMICONDUCTOR DEVICES; ELECTRIC SOLID STATE DEVICES NOT OTHERWISE PROVIDED FOR (use of semiconductor devices for measuring [G01](#); resistors in general [H01C](#); magnets, inductors {in general} , transformers [H01F](#); capacitors in general [H01G](#); electrolytic devices [H01G 9/00](#); batteries, accumulators [H01M](#); waveguides, resonators or lines of the waveguide type [H01P](#); line connectors, current collectors [H01R](#); stimulated emission devices [H01S](#); electromechanical resonators [H03H](#); loudspeakers, microphones, gramophone pick-ups or like acoustic electromechanical transducers [H04R](#); electric light sources in general [H05B](#); printed circuits, hybrid circuits, casings or constructional details of electric apparatus, manufacture of assemblages of electrical components [H05K](#); use of semiconductor devices in circuits having a particular application, see the subclass for the application)**

#### NOTES

1. This subclass covers:

- electric solid state devices which are not covered by any other subclass and details thereof, and includes: semiconductor devices adapted for rectifying, amplifying, oscillating or switching; semiconductor devices sensitive to radiation; electric solid state devices using thermoelectric, superconductive, piezo-electric, electrostrictive, magnetostrictive, galvano-magnetic or bulk negative resistance effects and integrated circuit devices;
- photoresistors, magnetic field dependent resistors, field effect resistors, capacitors with potential-jump barrier, resistors with potential-jump barrier or surface barrier, incoherent light emitting diodes and thin-film or thick-film circuits;
- processes and apparatus adapted for the manufacture or treatment of such devices, except where such processes relate to single-step processes for which provision exists elsewhere.

2. In this subclass, the following terms or expressions are used with the meaning indicated:

- "wafer" means a slice of semiconductor or crystalline substrate material, which can be modified by impurity diffusion (doping), ion implantation or epitaxy, and whose active surface can be processed into arrays of discrete components or integrated circuits;
- "solid state body" means the body of material within which, or at the surface of which, the physical effects characteristic of the device occur. In thermoelectric devices, it includes all materials in the current path. Regions in or on the body of the device (other than the solid state body itself), which exert an influence on the solid state body electrically, are considered to be "electrodes" whether or not an external electrical connection is made thereto. An electrode may include several portions and the term includes metallic regions which exert influence on the solid state body through an insulating region (e.g. capacitive coupling) and inductive coupling arrangements to the body. The dielectric region in a capacitive arrangement is regarded as part of the electrode. In arrangements including several portions, only those portions which exert an influence on the solid state body by virtue of their shape, size, or disposition or the material of which they are formed are considered to be part of the electrode. The other portions are considered to be "arrangements for conducting electric current to or from the solid state body" or "interconnections between solid state components formed in or on a common substrate", i . e. leads;
- "device" means an electric circuit element; where an electric circuit element is one of a plurality of elements formed in or on a common substrate it is referred to as a "component";

- "complete device" is a device in its fully assembled state which may or may not require further treatment, e.g. electroforming, before it is ready for use but which does not require the addition of further structural units;
- "parts" includes all structural units which are included in a complete device;
- "container" is an enclosure forming part of the complete device and is essentially a solid construction in which the body of the device is placed, or which is formed around the body without forming an intimate layer thereon. An enclosure which consists of one or more layers formed on the body and in intimate contact therewith is referred to as an "encapsulation";
- "integrated circuit" is a device where all components, e.g. diodes, resistors, are built up on a common substrate and form the device including interconnections between the components;
- "assembly" of a device is the building up of the device from its component constructional units and includes the provision of fillings in containers.

3. In this subclass, both the process or apparatus for the manufacture or treatment of a device and the device itself are classified, whenever both of these are described sufficiently to be of interest.

4. Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the periodic table of chemical elements the IPC refers. In this subclass, the Periodic System used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.

#### WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by~~ **for** these **IPC** groups is classified in the following CPC groups:

|  |            |  |
|--|------------|--|
| <a href="#">H01L 21/301</a>            | covered by | <a href="#">H01L 21/30</a>             |
| <a href="#">H01L 21/328</a>            | covered by | <a href="#">H01L 29/66075</a>          |
| <a href="#">H01L 21/329</a>            | covered by | <a href="#">H01L 29/66083</a>          |
| <a href="#">H01L 21/33</a>             | covered by | <a href="#">H01L 29/66227</a>          |
| <a href="#">H01L 21/331</a>            | covered by | <a href="#">H01L 29/66234</a>          |
| <a href="#">H01L 21/332</a>            | covered by | <a href="#">H01L 29/66363</a>          |
| <a href="#">H01L 21/334</a>            | covered by | <a href="#">H01L 29/66075</a>          |
| <a href="#">H01L 21/335</a>            | covered by | <a href="#">H01L 29/66409</a>          |
| <a href="#">H01L 21/336</a>            | covered by | <a href="#">H01L 29/66477</a>          |
| <a href="#">H01L 21/337</a>            | covered by | <a href="#">H01L 29/66893</a>          |
| <a href="#">H01L 21/338</a>            | covered by | <a href="#">H01L 29/66848</a>          |
| <a href="#">H01L 21/339</a>            | covered by | <a href="#">H01L 29/66946</a>          |
| <a href="#">H01L 21/36-H01L 21/368</a> | covered by |  |
| <a href="#">H01L 21/58</a>             | covered by | <a href="#">H01L 24/80</a>             |
| <a href="#">H01L 21/60</a>             | covered by | <a href="#">H01L 24/80</a>             |
| <a href="#">H01L 21/66</a>             | covered by | <a href="#">H01L 22/00</a>             |
| <a href="#">H01L 21/603</a>            | covered by | <a href="#">H01L 24/80</a>             |
| <a href="#">H01L 21/607</a>            | covered by | <a href="#">H01L 24/80</a>             |
| <a href="#">H01L 21/8242</a>           | covered by | <a href="#">H01L 27/10844</a>          |
| <a href="#">H01L 21/8244</a>           | covered by | <a href="#">H01L 27/11</a>             |
| <a href="#">H01L 21/8246</a>           | covered by | <a href="#">H01L 27/112</a>            |
| <a href="#">H01L 21/98</a>             | covered by | <a href="#">H01L 25/50</a>             |
| <a href="#">H01L 29/38</a>             | covered by | <a href="#">H01L 29/04-H01L 29/365</a> |
| <a href="#">H01L 29/96</a>             | covered by | <a href="#">H01L 29/68-H01L 29/945</a> |
| <a href="#">H01L 51/30</a>             | covered by | <a href="#">H01L 51/0032</a>           |
| <a href="#">H01L 51/40</a>             | covered by | <a href="#">H01L 51/0001</a>           |
| <a href="#">H01L 51/46</a>             | covered by | <a href="#">H01L 51/0032</a>           |
| <a href="#">H01L 51/48</a>             | covered by | <a href="#">H01L 51/0001</a>           |

[H01L 51/54](#)

covered by

[H01L 51/0032](#)

**Project: MP0270 (H01L)**

- U H01L 21/00** Processes or apparatus adapted for the manufacture or treatment of semiconductor or solid state devices or of parts thereof ({testing or measuring during manufacture or treatment, or reliability measurements [H01L 22/00](#); multistep manufacturing processes for passive two-terminal components without a potential-jump or surface barrier for integrated circuits [H01L 28/00](#); } processes or apparatus peculiar to the manufacture or treatment of devices provided for in groups [H01L 31/00](#) - [H01L 51/00](#) or of parts thereof, see these groups; single-step processes covered by other subclasses, see the relevant subclasses, e.g. [C23C](#), [C30B](#); photomechanical production of textured or patterned surfaces, materials or originals therefor, apparatus specially adapted therefor, in general [G03F](#))
- U H01L 21/02** . Manufacture or treatment of semiconductor devices or of parts thereof
- U H01L 21/04** . . the devices having at least one potential-jump barrier or surface barrier, e.g. PN junction, depletion layer, carrier concentration layer {(multistep processes specially adapted for the manufacture of said devices [H01L 29/66007](#), [H01L 29/401](#); details of semiconductor bodies [H01L 29/02](#))}
- U H01L 21/18** . . . the devices having semiconductor bodies comprising elements of Group IV of the Periodic System or  $A_{III}B_V$  compounds with or without impurities, e.g. doping materials {([H01L 21/041](#) - [H01L 21/0425](#), [H01L 21/045](#) - [H01L 21/048](#) take precedence)}
- NOTE**  
This group covers also processes and apparatus which, by using the appropriate technology, are clearly suitable for manufacture or treatment of devices whose bodies comprise elements of Group IV of the Periodic System or  $A_{III}B_V$  compounds, even if the material used is not explicitly specified.
- U H01L 21/30** . . . . Treatment of semiconductor bodies using processes or apparatus not provided for in groups [H01L 21/20](#) - [H01L 21/26](#) (manufacture of electrodes thereon [H01L 21/28](#))
- U H01L 21/31** . . . . . to form insulating layers thereon, e.g. for masking or by using photolithographic techniques (layers forming electrodes [H01L 21/28](#); encapsulating layers [H01L 21/56](#)); After treatment of these layers
- U H01L 21/3205** . . . . . Deposition of non-insulating-, e.g. conductive- or resistive-, layers on insulating layers; After-treatment of these layers (manufacture of electrodes [H01L 21/28](#))
- M H01L 21/32058** . . . . . {Deposition of ~~supra-conductive~~<sup>superconductive</sup> layers}

**Project: RP0505 (H01L)**

- U H01L 21/67
- Apparatus specially adapted for handling semiconductor or electric solid state devices during manufacture or treatment thereof; Apparatus specially adapted for handling wafers during manufacture or treatment of semiconductor or electric solid state devices or components {; Apparatus not specifically provided for elsewhere (processes *per se* [H01L 21/30](#), [H01L 21/46](#), [H01L 23/00](#); simple temporary support means, e.g. using adhesives, electric or magnetic means [H01L 21/68](#), [H01L 21/302](#); apparatus for manufacturing arrangements for connecting or disconnecting semiconductor or solid-state bodies and for methods related thereto [H01L 24/74](#);)}

**NOTE**

In this subgroup the term substrate designates a semiconductor or electric solid state device or component, or a wafer

- U H01L 21/683
- • for supporting or gripping (for conveying [H01L 21/677](#), for positioning, orientation or alignment [H01L 21/68](#))
- U H01L 21/6835
- • • {using temporarily an auxiliary support}

**NOTE**

[H01L 21/6835](#), details of the apparatus are to be further indexed using the indexing codes chosen from [H01L 2221/68304](#) and subgroups

- H01L 21/6836
- • • • {Wafer tapes, e.g. grinding or dicing support tapes (adhesive tapes in general [C09J 7/02](#) [C09J 7/20](#))}

**Project: MP0270 (H01L)**

- U H01L 21/70
- Manufacture or treatment of devices consisting of a plurality of solid state components formed in or on a common substrate or of parts thereof; Manufacture of integrated circuit devices or of parts thereof ({multistep manufacturing processes of assemblies consisting of a plurality of individual semiconductor or other solid state devices [H01L 25/00](#); } manufacture of assemblies consisting of preformed electrical components [H05K 3/00](#), [H05K 13/00](#))
- U H01L 21/71
- • Manufacture of specific parts of devices defined in group [H01L 21/70](#) ({[H01L 21/0405](#), [H01L 21/0445](#)} , [H01L 21/28](#), [H01L 21/44](#), [H01L 21/48](#) take precedence)
- U H01L 21/768
- • • Applying interconnections to be used for carrying current between separate components within a device {comprising conductors and dielectrics}

**NOTE**

Groups [H01L 21/768](#) - [H01L 21/76898](#) cover multi-step processes for manufacturing interconnections. Information peculiar to single-step processes should also be classified in the corresponding group, e.g.

- cleaning [H01L 21/02041](#)
- etching [H01L 21/311](#), [H01L 21/3213](#)
- masking [H01L 21/027](#), [H01L 21/033](#), [H01L 21/31144](#), [H01L 21/32139](#)
- planarizing [H01L 21/3105](#), [H01L 21/321](#)

- U H01L 21/76838
- • • • {characterised by the formation and the after-treatment of the conductors (etching for patterning the conductors [H01L 21/3213](#))}

**NOTE**

When the interconnect is also used as the conductor part of a conductor insulator semiconductor electrode (gate level interconnections), documents are classified in the relevant electrode manufacture groups, e.g. [H01L 21/28026](#)

- U H01L 21/76886 . . . . {Modifying permanently or temporarily the pattern or the conductivity of conductive members, e.g. formation of alloys, reduction of contact resistances}
- M H01L 21/76891 . . . . . {by using ~~supraconducting~~<sup>superconducting</sup> materials}

**Project: N/A (H01L)**

- U H01L 2224/00 **Indexing scheme for arrangements for connecting or disconnecting semiconductor or solid-state bodies and methods related thereto as covered by [H01L 24/00](#)**
- U H01L 2224/74 . Apparatus for manufacturing arrangements for connecting or disconnecting semiconductor or solid-state bodies and for methods related thereto
- H01L 2224/7999 . . {for disconnecting}
- U H01L 2224/80 . Methods for connecting semiconductor or other solid state bodies using means for bonding being attached to, or being formed on, the surface to be connected
- U H01L 2224/85 . . using a wire connector
- U H01L 2224/85009 . . . Pre-treatment of the connector or the bonding area
- U H01L 2224/8503 . . . . Reshaping, e.g. forming the ball or the wedge of the wire connector
- H01L 2224/85035 . . . . . by heating means, e.g. "free-air-ball"
- H01L 2224/85051 . . . . Forming additional members, e.g. for "wedge-on-ball", "ball-on-wedge", "ball-on-ball" connections
- U H01L 2224/8512 . . . Aligning
- U H01L 2224/85121 . . . . Active alignment, i.e. by apparatus steering, e.g. optical alignment using marks or sensors
- H01L 2224/85132 . . . . . using marks formed outside the semiconductor or solid-state body, i.e. "off-chip"
- U H01L 2224/85909 . . . Post-treatment of the connector or wire bonding area
- U H01L 2224/8593 . . . . Reshaping, e.g. for severing the wire, modifying the wedge or ball or the loop shape
- H01L 2224/85947 . . . . . by mechanical means, e.g. "pull-and-cut", pressing, stamping

**Project: N/A (H01M)**

- U H01M 4/00 **Electrodes (electrodes for electrolytic processes [C25](#), {electrodes for hybrid or electric double capacitor [H01G 11/22](#)})**
- U H01M 4/02 . Electrodes composed of or comprising active material
- U H01M 4/14 . . Electrodes for lead-acid accumulators
- U H01M 4/16 . . . Processes of manufacture
- H01M 4/18 . . . . of ~~Planté~~<sup>Planté</sup> electrodes

**Project: MP0270 (H01Q)**

- U H01Q 1/00 **Details of, or arrangements associated with, aerials (arrangements for varying orientation of directional pattern [H01Q 3/00](#))**

NOTES

1. This group covers only:
  - structural details or features of aerials not dependent on electric operation;
  - structural details or features applicable to more than one type of aerial or aerial element.
2. Structural details or features described with reference to, or clearly applicable only to, aerials or aerial elements of a particular type are classified in the group appropriate to that type.

- U H01Q 1/36      • Structural form of radiating elements, e.g. cone, spiral, umbrella; {Particular materials used therewith}(H01Q 1/08, H01Q 1/14 take precedence)
- M H01Q 1/364      • • {using a particular conducting material, e.g. ~~supraconductor~~superconductor}

**Project: RP0496 (H01R)**

- U H01R 4/00      **Electrically-conductive connections between two or more conductive members in direct contact and means for effecting or maintaining such contact (details of disengageable contacts of two-part coupling devices H01R 13/00; two-part coupling devices H01R 12/70, H01R 24/00 - H01R 33/00; flexible or turnable line connectors H01R 35/00; non rotary current collectors H01R 41/00)**
- M H01R 4/24      • ~~Needle-point, slotted plate, or analogous~~ **Connections using** contact members penetrating ~~or cutting~~ insulation or cable strands ~~{{for multiphase cables H01R 9/031; for coaxial cables H01R 9/053; for flat cables H01R 12/67}}~~
- C H01R 4/2404      • • ~~{having at least one tooth~~ **the contact members having teeth, prongprongs, pinpins or needleneedles** penetrating the insulation ~~{penetration into a wire end in axial direction H01R 4/5033}}~~  

**WARNING**  
 Group H01R 4/2404 is impacted by reclassification into groups H01R 4/2406 and H01R 4/2407.  
 Groups H01R 4/2404, H01R 4/2406 and H01R 4/2407 should be considered in order to perform a complete search.
- N H01R 4/2406      • • • having needles or pins  

**WARNING**  
 Group H01R 4/2406 is incomplete pending reclassification of documents from groups H01R 4/2404, H01R 4/2408 and H01R 4/2412.  
 Groups H01R 4/2404, H01R 4/2406, H01R 4/2408 and H01R 4/2412 should be considered in order to perform a complete search.
- N H01R 4/2407      • • • having saw-tooth projections  

**WARNING**  
 Group H01R 4/2407 is incomplete pending reclassification of documents from group H01R 4/2404, H01R 4/2408 and H01R 4/2412.  
 Groups H01R 4/2404, H01R 4/2407, H01R 4/2408 and H01R 4/2412 should be considered in order to perform a complete search.
- C H01R 4/2408      • • • ~~{actuated by means of at least one-clamping screw-screws(clamped connection using a screw H01R 4/30)}~~  

**WARNING**  
 Group H01R 4/2408 is impacted by reclassification into groups H01R 4/2406 and H01R 4/2407.  
 Groups H01R 4/2406, H01R 4/2407 and H01R 4/2408 should be considered in order to perform a complete search.
- C H01R 4/2412      • • • ~~{actuated by means of an insulating cam-insulated cams or wedge}wedges~~  

**WARNING**  
 Group H01R 4/2412 is impacted by reclassification into groups H01R 4/2406 and H01R 4/2407.  
 Groups H01R 4/2406, H01R 4/2407 and H01R 4/2412 should be considered in order to perform a complete search.
- M H01R 4/2416      • • ~~{the contact members~~ having insulation-cutting edges, e.g. ~~of~~ tuning fork type, ~~slotted plate type, wire type}~~



- M H01R 4/242 . . . {the contact ~~member~~members being plates having a single slotted plate}slot
- M H01R 4/2425 . . . {flat plate; Flat plates, e.g. multi-layered flat plate}plates
- M H01R 4/2429 . . . {mounted in an insulating base}
- M H01R 4/2433 . . . {one part of the base being movable to push the cable into the slot}
- M H01R 4/2437 . . . {curved plate}Curved plates
- M H01R 4/2441 . . . {being tube-shaped with a single slot}
- M H01R 4/2445 . . . {the contact member being provided with members having additional means acting on the insulation or the wire, e.g. a second additional insulation penetrating means, strain relief means, or wire cutting knife}knives
- C H01R 4/245 . . . {with at least the additional means having two or more slotted flat portions}
- WARNING**  
Group H01R 4/245 is impacted by reclassification into groups H01R 4/2452 and H01R 4/2456.  
Groups H01R 4/245, H01R 4/2452 and H01R 4/2456 should be considered in order to perform a complete search.
- N H01R 4/2452 . . . . in serial configuration, e.g. opposing folded slots
- WARNING**  
Group H01R 4/2452 is incomplete pending reclassification of documents from group H01R 4/245.  
Groups H01R 4/245 and H01R 4/2452 should be considered in order to perform a complete search.
- C H01R 4/2454 . . . . {being linked in such forming a way as to form a U-shape, the branches of which are slotted} with slotted branches
- WARNING**  
Group H01R 4/2454 is impacted by reclassification into group H01R 4/2455.  
Groups H01R 4/2454 and H01R 4/2455 should be considered in order to perform a complete search.
- N H01R 4/2455 . . . . forming a slotted bight
- WARNING**  
Group H01R 4/2455 is incomplete pending reclassification of documents from group H01R 4/2454.  
Groups H01R 4/2454 and H01R 4/2455 should be considered in order to perform a complete search.
- N H01R 4/2456 . . . . in parallel configuration
- WARNING**  
Group H01R 4/2456 is incomplete pending reclassification of documents from group H01R 4/245.  
Groups H01R 4/245 and H01R 4/2456 should be considered in order to perform a complete search.
- M H01R 4/2458 . . . {the contact member having members being in a slotted tubular configuration, e.g. slotted tube-end}
- M H01R 4/2462 . . . {the contact member having members being in a slotted bent configuration, e.g. slotted bight}
- M H01R 4/2466 . . . {the contact membermembers having a channel-shaped part, the opposite sidewalls of which comprise insulation-cutting means}

- M H01R 4/247
  - • {~~the contact members~~ penetrating ~~the~~ insulation ~~being actuated~~ by ~~means of a spring, e.g. a coil spring~~} ~~springs~~
- M H01R 4/2475
  - • {~~the contact members~~ penetrating ~~the~~ insulation ~~being actuated~~ by ~~means of screw screws, nutnuts or bolt~~} ~~bolts~~
- M H01R 4/2479
  - • • {penetrating ~~the~~ area under the ~~head of the screw~~} ~~screw head~~
- M H01R 4/2483
  - • • {penetrating ~~the~~ area under the ~~tip of the screw~~} ~~screw tip~~
- M H01R 4/2487
  - • • {penetrating by means of the ~~thread of the screw~~} ~~screw thread~~
- M H01R 4/2491
  - • {~~the contact members~~ penetrating ~~the~~ insulation ~~by means of a being actuated by~~ conductive ~~camcams~~ or ~~wedge~~} ~~wedges~~
- M H01R 4/2495
  - • {Insulation penetration combined with permanent deformation of ~~the~~ contact member, e.g. crimping}

## Project: N/A (H01S)

## H01S

## DEVICES USING STIMULATED EMISSION

## NOTE

This subclass covers:

- devices for the generation or amplification, by using stimulated emission, of coherent electromagnetic waves or other forms of wave energy;
- such functions as modulating, demodulating, controlling, or stabilising such waves.

## WARNING

The following IPC groups are not ~~used~~ in the CPC scheme.

~~Subject~~ ~~The subject~~ matter ~~covered by for~~ these ~~IPC~~ groups is classified in the following CPC groups:

~~H01S 3/098~~

covered by

~~H01S 3/08018, H01S 3/11~~  
and s.gr.

## Project: N/A (H02H)

## H02H 3/00

Emergency protective circuit arrangements for automatic disconnection directly responsive to an undesired change from normal electric working condition with or without subsequent reconnection (specially adapted for specific types of electric machines or apparatus or for sectionalised protection of cable or line systems ~~H02H 7/00~~; systems for change-over to standby supply ~~H02J 9/00~~ )~~{integrated protection (for motors H02H 7/0822)}~~; ~~integrated protection (for motors H02H 7/0822)}~~

## Project: MP0270 (H02H)

## U H02H 7/00

Emergency protective circuit arrangements specially adapted for specific types of electric machines or apparatus or for sectionalised protection of cable or line systems, and effecting automatic switching in the event of an undesired change from normal working conditions (structural association of protective devices with specific machines or apparatus and their protection without automatic disconnection, see the relevant subclass for the machine or apparatus)

## M H02H 7/001

- {for ~~supra-conducting~~ ~~superconducting~~ apparatus, e.g. coils, lines, machines}

## U H02H 9/00

Emergency protective circuit arrangements for limiting excess current or voltage without disconnection (structural association of protective devices with specific machines or apparatus, see the relevant subclass for the machine or apparatus)

## U H02H 9/02

- responsive to excess current {(current limitation for voltage regulators ~~G05F 1/573~~; disconnection after limiting ~~H02H 3/025~~)}

M H02H 9/023

- {Current limitation using ~~supraconducting~~*superconducting* elements}

**Project: N/A (H02J)****H02J**

**CIRCUIT ARRANGEMENTS OR SYSTEMS FOR SUPPLYING OR DISTRIBUTING ELECTRIC POWER; SYSTEMS FOR STORING ELECTRIC ENERGY** (for digital computers [G06F 1/18](#); circuits or apparatus for the conversion of electric power, arrangements for control or regulation of such circuits or apparatus [H02M](#); interrelated control of several motors, control of a prime-mover/generator combination [H02P](#); control of high-frequency power [H03L](#); additional use of power line or power network for transmission of information [H04B](#))

NOTES1. This subclass covers:

- ac or dc mains or distribution networks;
- circuit arrangements for battery supplies, including charging or control thereof, or coordinated supply from two or more sources of any kind;
- circuit arrangements or systems for wireless supply or distribution of electric power.

2. This subclass does not cover:

- control of a single motor, generator or dynamo-electric converter, of the types covered by subclass [H01F](#) or [H02K](#), which is covered by subclass [H02P](#);
- control of a single motor or generator, of the types covered by subclass [H02N](#), which is covered by that subclass.

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~*The subject* matter ~~covered by~~*for* these *IPC* groups is classified in the following CPC groups:

[H02J 7/10](#)

covered by

[H02J 7/0072](#)**Project: N/A (H02M)****H02M**

**APPARATUS FOR CONVERSION BETWEEN AC AND AC, BETWEEN AC AND DC, OR BETWEEN DC AND DC, AND FOR USE WITH MAINS OR SIMILAR POWER SUPPLY SYSTEMS; CONVERSION OF DC OR AC INPUT POWER INTO SURGE OUTPUT POWER; CONTROL OR REGULATION THEREOF** (systems for regulating electric or magnetic variables in general, e.g. using transformers, reactors or choke coils, combination of such systems with static converters [G05F](#); {digital function or clock generators} for digital computers [G06F 1/00](#), {[G06F 1/025](#), [G06F 1/04](#)}; transformers [H01F](#); connection or control of one converter with regard to conjoint operation with a similar or other source of supply [H02J](#); dynamo-electric converters [H02K 47/00](#); controlling transformers, reactors or choke coils, control or regulation of electric motors, generators or dynamo-electric converters [H02P](#); pulse generators [H03K](#); {static converters specially adapted for igniting or operating discharge lamps [H05B 41/28](#)})

NOTES

1. This subclass covers only circuits or apparatus for the conversion of electric power, or arrangements for control or regulation of such circuits or apparatus. The electrotechnical elements employed are dealt within the appropriate subclasses, e.g. inductors, transformers [H01F](#), capacitors, electrolytic rectifiers [H01G](#), mercury rectifying or other discharge tubes [H01J](#), semiconductor devices [H01L](#), impedance networks or resonant circuit not primarily concerned with the transfer of electric power [H03H](#).
2. In this subclass, the following term is used with the meaning indicated:

- "conversion", in respect of an electric variable, e.g. voltage or current, means the change of one or more of the parameters of the variable, e.g. amplitude, frequency, phase, polarity.

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:-

|                           |            |                           |
|---------------------------|------------|---------------------------|
| <a href="#">H02M 9/00</a> | covered by | <a href="#">H03K 3/53</a> |
| <a href="#">H02M 9/02</a> | covered by | <a href="#">H03K 3/53</a> |
| <a href="#">H02M 9/04</a> | covered by | <a href="#">H03K 3/53</a> |
| <a href="#">H02M 9/06</a> | covered by | <a href="#">H03K 3/53</a> |

#### Project: N/A (H02P)

##### H02P

#### **CONTROL OR REGULATION OF ELECTRIC MOTORS, ELECTRIC GENERATORS OR DYNAMO-ELECTRIC CONVERTERS; CONTROLLING TRANSFORMERS, REACTORS OR CHOKE COILS**

##### NOTES

1. This subclass covers arrangements for starting, regulating, electronically commutating, braking, or otherwise controlling motors, generators, dynamo-electric converters, clutches, brakes, gears, transformers, reactors or choke coils, of the types classified in the relevant subclasses, e.g. [H01F](#), [H02K](#).
2. This subclass does not cover similar arrangements for the apparatus of the types classified in subclass [H02N](#), which arrangements are covered by that subclass.
3. In this subclass, the following terms or expressions are used with the meanings indicated:
  - **"control"** means influencing a variable in any way, e.g. changing its direction or its value (including changing it to or from zero), maintaining it constant or limiting its range of variation;
  - **"regulation"** means maintaining a variable at a desired value, or within a desired range of values, by comparison of the actual value with the desired value.
4. In this subclass, it is desirable to add the indexing codes of groups [H02P 2101/00](#) and [H02P 2103/00](#)

#### Project: MP0270 (H03B)

##### M H03B 15/00

Generation of oscillations using galvano-magnetic devices, e.g. Hall-effect devices, or using ~~super-conductivity~~ *superconductivity* effects (~~galvano-magnetic devices per se H01L 43/00~~)

**Project: N/A (H03C)****H03C**

**MODULATION** (measuring, testing [G01R](#); masers, lasers [H01S](#); modulators specially adapted for use in the amplifiers [H03F 3/38](#); modulating pulses [H03K 7/00](#); so-called modulators capable only of a switching between predetermined states of amplitude, frequency or phase [H03K 17/00](#), [H04L](#); coding, decoding or code conversion, in general [H03M](#); synchronous modulators specially adapted for colour television [H04N 9/65](#))

NOTES

1. This subclass covers only modulation, keying, or interruption of sinusoidal oscillations or electromagnetic waves, the modulating signal having any desired waveform.

2. In this subclass, circuits usable both as modulator and demodulator are classified in the group dealing with the type of modulator involved.

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:-

[H03C 1/38](#) - [H03C 1/44](#) covered by [H03C 1/36](#)

**Project: MP0394 (H03C)****U H03C 7/00**

**Modulating electromagnetic waves (modulating light [G02F 1/00](#); for generating oscillations [H03B](#), [H03K](#))**

**M H03C 7/02**

• in transmission line, waveguide, cavity resonator; or radiation field of ~~aerial~~ *antenna*

**Project: N/A (H03F)****H03F**

**AMPLIFIERS** (measuring, testing [G01R](#); optical parametric amplifiers [G02F](#); circuit arrangement with secondary emission tubes [H01J 43/30](#); masers, lasers [H01S](#); control of amplification [H03G](#); coupling arrangements independent of the nature of the amplifiers, voltage dividers [H03H](#); amplifiers capable only of dealing with pulses [H03K](#); repeater circuits in transmission lines [H04B 3/36](#), [H04B 3/58](#); application of speech amplifiers in telephonic communication [H04M 1/60](#), [H04M 3/40](#))

NOTE

This subclass covers:

- linear amplification, there being linear relationship between the amplitudes of input and output, and the output having substantially the same waveform as the input;
- dielectric amplifiers, magnetic amplifiers, and parametric amplifiers when used as oscillators or frequency-changers;
- constructions of active elements of dielectric amplifiers and parametric amplifiers if no provision exists elsewhere.

WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

[H03F 1/44](#) covered by [H03F 1/42](#)

[H03F 1/46](#) covered by [H03F 1/42](#)

[H03F 3/18](#) covered by [H03F 3/00](#)

[H03F 3/32](#) covered by [H03F 3/30](#)

[H03F 7/06](#) covered by [H03F 7/00](#)

**Project: N/A (H03K)****H03K**

**PULSE TECHNIQUE** (measuring pulse characteristics [G01R](#); mechanical counters having an electrical input [G06M](#); information storage devices in general [G11](#); sample-and-hold arrangements in electric analogue stores [G11C 27/02](#); construction of switches involving contact making and breaking for generation of pulses, e.g. by using a moving magnet, [H01H](#); static conversion of electric power [H02M](#); generation of oscillations by circuits employing active elements which operate in a non-switching manner [H03B](#); modulating sinusoidal oscillations with pulses [H03C](#), [H04L](#); discriminator circuits involving pulse counting [H03D](#); automatic control of generators [H03L](#); starting, synchronisation or stabilisation of generators where the type of generator is irrelevant or unspecified [H03L](#); coding, decoding or code conversion in general [H03M](#))

NOTES

1. This subclass covers:

- methods, circuits, devices, or apparatus using active elements operating in a discontinuous or switching manner for generating, counting, amplifying, shaping, modulating, demodulating, or otherwise manipulating signals;
- electronic switching not involving contact-making and braking;
- logic circuits handling electric pulses.

2. In this subclass, the following expression is used with the meaning indicated:

- "active element" exercises control over the conversion of input energy into an oscillation or a discontinuous flow of energy.

3. In this subclass, where the claims of a patent document are not limited to a specific circuit element, the document is classified at least according to the elements used in the described embodiment.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:-

[H03K 17/695](#) covered by [H03K 17/687](#)

**Project: N/A (H03M)****H03M**

**CODING; DECODING; CODE CONVERSION IN GENERAL** (using fluidic means [F15C 4/00](#); optical analogue/digital converters [G02F 7/00](#); coding, decoding or code conversion, specially adapted for particular applications, see the relevant subclasses, e.g. [G01D](#), [G01R](#), [G06F](#), [G06T](#), [G09G](#), [G10L](#), [G11B](#), [G11C](#), [H04B](#), [H04L](#), [H04M](#), [H04N](#); ciphering or deciphering for cryptography or other purposes involving the need for secrecy [G09C](#))

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject matter covered by for* these *IPC* groups is classified in the following CPC groups:

|                           |            |   |
|---------------------------|------------|---|
| <a href="#">H03M 7/32</a> | covered by | <a href="#">H03M 7/3004</a> , <a href="#">H03M 7/3048</a> |
| <a href="#">H03M 7/34</a> | covered by | <a href="#">H03M 7/3004</a> , <a href="#">H03M 7/3051</a> |
| <a href="#">H03M 7/36</a> | covered by | <a href="#">H03M 7/3004</a> , <a href="#">H03M 7/3044</a> |
| <a href="#">H03M 7/38</a> | covered by | <a href="#">H03M 7/3004</a> , <a href="#">H03M 7/3046</a> |
| <a href="#">H03M 7/44</a> | covered by |   |



**Project: MP0394 (H04B)**

- U H04B 1/00 Details of transmission systems, not covered by a single one of groups [H04B 3/00](#) - [H04B 13/00](#); Details of transmission systems not characterised by the medium used for transmission (tuning resonant circuits [H03J](#))

NOTE

In this group, group [H04B 1/0003](#) takes precedence over groups

[H04B 1/005](#) - [H04B 1/76](#)

- U H04B 1/06 • Receivers (control of amplification [H03G](#); television receivers [H04N 5/44](#), [H04N 5/64](#))
- U H04B 1/16 • • Circuits {(demodulators [H03D](#))}
- M H04B 1/18 • • • Input circuits, e.g. for coupling to an [aerialantenna](#) or a transmission line (~~input circuits for amplifiers in general H03F~~; coupling networks between [aerialsantennas](#) or lines and receivers independent of the nature of the receiver [H03H](#))

**Project: RP0490 (H04B)**

- U H04B 1/69 • Spread spectrum techniques
- U H04B 1/707 • • using direct sequence modulation
- U H04B 1/7097 • • • Interference-related aspects
- U H04B 1/711 • • • • the interference being multi-path interference
- M H04B 1/7115 • • • • • Constructive combining of multi-path signals, i.e. RAKE receivers

WARNING

*Group H04B 1/7115 is incomplete pending reclassification of documents from group H04B 7/02.*

*Groups H04B 7/02 and H04B 1/7115 should be considered in order to perform a complete search.*

**Project: MP0394 (H04B)**

- M H04B 1/72 • Circuits or components for simulating [aerialsantennas](#), e.g. dummy [aerialantennas](#)(~~dissipative waveguide terminations H01P 1/26~~)

WARNING

contains no documents, see [H03H](#), e.g. [H03H 7/38](#), [H03H 11/28](#)

**Project: RP0490 (H04B)**

- U H04B 7/00 Radio transmission systems, i.e. using radiation field ([H04B 10/00](#), [H04B 15/00](#) take precedence)
- C H04B 7/02 • Diversity systems; Multi-antenna ~~systems~~[system](#), i.e. transmission or reception using multiple antennas ([RAKE receivers H04B 1/7115](#))

WARNING

*Group H04B 7/02 is impacted by reclassification into group H04B 1/7115.*

*Groups H04B 7/02 and H04B 1/7115 should be considered in order to perform a complete search.*

**Project: RP0340 (H04B)**

- U H04B 2201/00 Indexing scheme relating to details of transmission systems not covered by a single group of [H04B 3/00](#) - [H04B 13/00](#)
- U H04B 2201/69 • Orthogonal indexing scheme relating to spread spectrum techniques in general

- U H04B 2201/713      • • Frequency hopping
- D H04B 2201/71392      • • • Asymmetric systems  
                                 <administratively transferred to [H04B 2201/7133](#)>

**Project: N/A (H04H)****H04H****BROADCAST COMMUNICATION (multiplex communication [H04J](#); pictorial communication aspects of broadcast systems [H04N](#))**NOTES

1. In this subclass, the following terms or expressions are used with the meaning indicated:

- "broadcast" is simultaneous distribution of identical signals to plural receiving stations. The term "broadcast" does not include distribution to receiving stations which is controlled by requests or responses from the receiving stations;
- "broadcast information" covers all kinds of information distributed by broadcast systems;
- "broadcast-related information" is information required by services provided via broadcast systems, other than broadcast information;
- "broadcast time" is a time when particular broadcast information exists and is available;
- "broadcast channel" is a channel via which broadcast information is distributed, e.g. carrier waves, time slots, cables or wireless broadcast service areas;
- "broadcast space" is either a set of broadcast channels in which particular broadcast information exists and is available or a geographical area determined by the set of broadcast channels;
- "broadcast space-time" is space-time determined by broadcast space and broadcast time in which particular broadcast information exists and is available;
- "broadcast system" is a system which consists of transmitter, transponder and receiver for broadcast;
- "broadcast-related system" is a system which is directly affected by generation, broadcast, reception or use of broadcast information;
- "broadcast service" is a service directly provided by a broadcast system, i.e. distribution service of broadcast information;
- "broadcast-related service" is a service provided by broadcast-related systems;
- "A with a direct linkage to B" means that A directly affects B or that A is directly affected by B.

2. In this subclass, multi-aspect classification is applied, so that subject matter characterised by aspects covered by more than one of its groups, which is considered to represent information of interest for search, may also be classified in each of those groups.

**H04H 2201/00****{Aspects of broadcast communication}**

- H04H 2201/10      • {characterised by the type of broadcast system}
- H04H 2201/11      • • {digital multimedia broadcasting [DMB]}
- H04H 2201/12      • • {digital radio mondiale [DRM]}
- H04H 2201/13      • • {radio data system/radio broadcast data system [RDS/RBDS]}
- H04H 2201/14      • • {direct broadcast satellite [DBS]}
- H04H 2201/15      • • {system for wireless information forwarding and teledistribution [SWIFT]}
- H04H 2201/16      • • {digital video broadcasting - handhelds [DVB-H]}
- H04H 2201/17      • • {in band adjacent channel [IBAC]}
- H04H 2201/18      • • {in band on channel [IBOC]}

- H04H 2201/183 . . . {FM digital or hybrid}
- H04H 2201/186 . . . {AM digital or hybrid}
- H04H 2201/19 . . {digital satellite radio [DSR]}
- H04H 2201/20 . . {digital audio broadcasting [DAB]}
- H04H 2201/30 . {characterised by the use of a return channel, e.g. for collecting users' opinions, for returning broadcast space/time information or for requesting data}
- H04H 2201/33 . . {via the broadcast channel}
- H04H 2201/37 . . {via a different channel}
- H04H 2201/40 . {characterised in that additional data relating to the broadcast data are available via a different channel than the broadcast channel}
- H04H 2201/50 . {characterised by the use of watermarks}
- H04H 2201/60 . {characterised in that the receiver comprises more than one tuner}
- H04H 2201/70 . {characterised in that receivers can be addressed}
- H04H 2201/80 . {characterised in that motion picture association of America [MPAA] ratings are used}
- H04H 2201/90 . {characterised by the use of signatures}

**Project: N/A (H04K)**

- H04K 2203/00 {Jamming of communication; Countermeasures}**
- H04K 2203/10 . {Jamming or countermeasure used for a particular application}
- H04K 2203/12 . . {for acoustic communication}
- H04K 2203/14 . . {for the transfer of light or images, e.g. for video-surveillance, for television or from a computer screen}
- H04K 2203/16 . . {for telephony}
- H04K 2203/18 . . {for wireless local area networks or WLAN}
- H04K 2203/20 . . {for contactless carriers, e.g. RFID carriers (record carriers with integrated circuit chips including means for preventing undesired reading or writing from or to record carriers by hindering electromagnetic reading or writing [G06K 19/07318](#); arrangements for sensing record carriers including arrangements for protecting the interrogation against piracy attacks [G06K 7/10257](#))}
- H04K 2203/22 . . {for communication related to vehicles}
- H04K 2203/24 . . {for communication related to weapons}
- H04K 2203/30 . {Jamming or countermeasure characterized by the infrastructure components}
- H04K 2203/32 . . {including a particular configuration of antennas}
- H04K 2203/34 . . {involving multiple cooperating jammers}
- H04K 2203/36 . . {including means for exchanging jamming data between transmitter and receiver, e.g. in forward or backward direction}

## Project: N/A (H04L)

## H04L

TRANSMISSION OF DIGITAL INFORMATION, e.g. TELEGRAPHIC COMMUNICATION (typewriters [B41J](#); order telegraphs, fire or police telegraphs [G08B](#); visual telegraphy [G08B](#), [G08C](#); teleautographic systems [G08C](#); ciphering or deciphering apparatus per se [G09C](#); coding, decoding or code conversion, in general [H03M](#); arrangements common to telegraphic and telephonic communication [H04M](#); selecting [H04Q](#))

NOTE

This subclass covers transmission of signals having been supplied in digital form and includes data transmission, telegraphic communication and methods or arrangements for monitoring.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** *The subject* matter **covered by** *for* these *IPC* groups is classified in the following CPC groups:

|                                       |            |   |
|---------------------------------------|------------|---|
| <a href="#">H04L 9/18</a>             | covered by | <a href="#">H04L 9/065</a>  |
| <a href="#">H04L 9/20</a>             | covered by | <a href="#">H04L 9/0656</a>   |
| <a href="#">H04L 9/22</a>             | covered by | <a href="#">H04L 9/0662</a>   |
| <a href="#">H04L 9/24</a>             | covered by | <a href="#">H04L 9/0662</a>   |
| <a href="#">H04L 9/26</a>             | covered by | <a href="#">H04L 9/0668</a>   |
| <a href="#">H04L 9/28</a>             | covered by | <a href="#">H04L 9/002</a> , <a href="#">H04L 9/008</a> ,<br><a href="#">H04L 9/06</a> , <a href="#">H04L 9/08</a> ,<br><a href="#">H04L 9/30</a> , <a href="#">H04L 9/32</a>   |
| <a href="#">H04L 12/20</a>            | covered by | <a href="#">H04L 29/00</a>  |
| <a href="#">H04L 12/24</a>            | covered by | <a href="#">H04L 41/00</a>  |
| <a href="#">H04L 12/26</a>            | covered by | <a href="#">H04L 43/00</a>  |
| <a href="#">H04L 12/58</a>            | covered by | <a href="#">H04L 51/00</a>  |
| <a href="#">H04L 12/60-H04L 12/62</a> | covered by | <a href="#">H04L 12/54</a>  |
| <a href="#">H04L 12/70</a>            | covered by | <a href="#">H04L 47/00</a>  |
| <a href="#">H04L 12/701</a>           | covered by | <a href="#">H04L 45/00</a>  |
| <a href="#">H04L 12/703</a>           | covered by | <a href="#">H04L 45/28</a>  |
| <a href="#">H04L 12/705</a>           | covered by | <a href="#">H04L 45/18</a>  |
| <a href="#">H04L 12/707</a>           | covered by | <a href="#">H04L 45/22</a> , <a href="#">H04L 45/24</a>   |
| <a href="#">H04L 12/709</a>           | covered by |   |
| <a href="#">H04L 12/711</a>           | covered by |   |
| <a href="#">H04L 12/713</a>           | covered by | <a href="#">H04L 45/586</a>   |
| <a href="#">H04L 12/715</a>           | covered by | <a href="#">H04L 45/04</a> , <a href="#">H04L 45/46</a> ,<br><a href="#">H04L 45/64</a>   |
| <a href="#">H04L 12/717</a>           | covered by | <a href="#">H04L 45/42</a>  |
| <a href="#">H04L 12/721</a>           | covered by | <a href="#">H04L 45/06</a> , <a href="#">H04L 45/12</a> ,<br><a href="#">H04L 45/123</a> , <a href="#">H04L 45/124</a> ,<br><a href="#">H04L 45/127</a> , <a href="#">H04L 45/14</a> ,<br><a href="#">H04L 45/26</a> , <a href="#">H04L 45/32</a> ,<br><a href="#">H04L 45/34</a> , <a href="#">H04L 45/36</a> ,<br><a href="#">H04L 45/38</a> , <a href="#">H04L 45/40</a> ,<br><a href="#">H04L 45/44</a> , <a href="#">H04L 45/566</a> ,<br><a href="#">H04L 45/62</a> , <a href="#">H04L 45/66</a> ,<br><a href="#">H04L 45/68</a> , <a href="#">H04L 45/70</a> ,<br><a href="#">H04L 45/72</a> |
| <a href="#">H04L 12/723</a>           | covered by | <a href="#">H04L 45/50-H04L 45/507</a>  |
| <a href="#">H04L 12/725</a>           | covered by | <a href="#">H04L 45/30-H04L 45/308</a>  |
| <a href="#">H04L 12/727</a>           | covered by |   |
| <a href="#">H04L 12/729</a>           | covered by | <a href="#">H04L 45/125</a>   |

|             |            |   |
|-------------|------------|---|
| H04L 12/733 | covered by | <a href="#">H04L 45/122</a> , <a href="#">H04L 45/126</a> ,<br><a href="#">H04L 45/20</a>   |
| H04L 12/735 | covered by | <a href="#">H04L 45/128</a> - <a href="#">H04L 45/1287</a>  |
| H04L 12/741 | covered by |   |
| H04L 12/743 | covered by | <a href="#">H04L 45/7453</a> , <a href="#">H04L 45/7457</a>   |
| H04L 12/745 | covered by | <a href="#">H04L 45/748</a>   |
| H04L 12/747 | covered by | <a href="#">H04L 45/742</a>   |
| H04L 12/749 | covered by | <a href="#">H04L 45/741</a>   |
| H04L 12/751 | covered by |   |
| H04L 12/753 | covered by | <a href="#">H04L 45/48</a>  |
| H04L 12/755 | covered by | <a href="#">H04L 45/021</a>   |
| H04L 12/757 | covered by | <a href="#">H04L 45/023</a>   |
| H04L 12/759 | covered by | <a href="#">H04L 45/023</a>   |
| H04L 12/761 | covered by | <a href="#">H04L 45/16</a>  |
| H04L 12/763 | covered by |   |
| H04L 12/771 | covered by | <a href="#">H04L 45/56</a> , <a href="#">H04L 45/563</a>  |
| H04L 12/773 | covered by | <a href="#">H04L 45/60</a>  |
| H04L 12/775 | covered by | <a href="#">H04L 45/58</a> , <a href="#">H04L 45/583</a>  |
| H04L 12/781 | covered by | <a href="#">H04L 45/52</a>  |
| H04L 12/801 | covered by | <a href="#">H04L 47/10</a> , <a href="#">H04L 47/11</a> ,<br><a href="#">H04L 47/115</a> , <a href="#">H04L 47/12</a> ,<br><a href="#">H04L 47/127</a> , <a href="#">H04L 47/13</a> -<br><a href="#">H04L 47/196</a> , <a href="#">H04L 47/29</a> ,<br><a href="#">H04L 47/33</a> , <a href="#">H04L 47/34</a> ,<br><a href="#">H04L 47/35</a> , <a href="#">H04L 47/37</a> ,<br><a href="#">H04L 47/39</a> |
| H04L 12/803 | covered by | <a href="#">H04L 47/122</a> , <a href="#">H04L 47/125</a>   |
| H04L 12/805 | covered by | <a href="#">H04L 47/36</a> , <a href="#">H04L 47/365</a>  |
| H04L 12/807 | covered by | <a href="#">H04L 47/27</a>  |
| H04L 12/811 | covered by | <a href="#">H04L 47/38</a>  |
| H04L 12/813 | covered by | <a href="#">H04L 47/20</a>  |
| H04L 12/815 | covered by | <a href="#">H04L 47/22</a> , <a href="#">H04L 47/225</a> ,<br><a href="#">H04L 47/23</a>  |
| H04L 12/819 | covered by | <a href="#">H04L 47/21</a> , <a href="#">H04L 47/215</a>  |
| H04L 12/823 | covered by | <a href="#">H04L 47/32</a> - <a href="#">H04L 47/326</a>  |
| H04L 12/825 | covered by | <a href="#">H04L 47/25</a> - <a href="#">H04L 47/266</a>  |
| H04L 12/827 | covered by |   |
| H04L 12/829 | covered by |   |
| H04L 12/833 | covered by | <a href="#">H04L 47/2458</a> , <a href="#">H04L 47/31</a>   |
| H04L 12/835 | covered by | <a href="#">H04L 47/30</a>  |
| H04L 12/841 | covered by | <a href="#">H04L 47/28</a> - <a href="#">H04L 47/286</a>  |
| H04L 12/851 | covered by | <a href="#">H04L 47/24</a> , <a href="#">H04L 47/2408</a> ,<br><a href="#">H04L 47/2425</a> ,<br><a href="#">H04L 47/2433</a> , <a href="#">H04L 47/245</a> ,<br><a href="#">H04L 47/2483</a>   |
| H04L 12/853 | covered by | <a href="#">H04L 47/2416</a>  |
| H04L 12/855 | covered by | <a href="#">H04L 47/2466</a>  |
| H04L 12/857 | covered by | <a href="#">H04L 47/2491</a>  |
| H04L 12/859 | covered by | <a href="#">H04L 47/2475</a>  |
| H04L 12/861 | covered by |   |

|                             |            |   |
|-----------------------------|------------|---|
| <a href="#">H04L 12/863</a> | covered by | <a href="#">H04L 47/50</a> , <a href="#">H04L 47/54</a> ,<br><a href="#">H04L 47/62-H04L 47/627</a> ,<br><a href="#">H04L 47/628</a> , <a href="#">H04L 47/6285</a> ,<br><a href="#">H04L 47/6295</a>   |
| <a href="#">H04L 12/865</a> | covered by | <a href="#">H04L 47/6275</a>  |
| <a href="#">H04L 12/867</a> | covered by | <a href="#">H04L 47/629</a>   |
| <a href="#">H04L 12/869</a> | covered by | <a href="#">H04L 47/58</a> , <a href="#">H04L 47/60</a>   |
| <a href="#">H04L 12/873</a> | covered by | <a href="#">H04L 47/52</a> , <a href="#">H04L 47/521</a> ,<br><a href="#">H04L 47/522</a> , <a href="#">H04L 47/524</a> ,<br><a href="#">H04L 47/527</a> , <a href="#">H04L 47/528</a>  |
| <a href="#">H04L 12/875</a> | covered by | <a href="#">H04L 47/56-H04L 47/568</a>  |
| <a href="#">H04L 12/877</a> | covered by | <a href="#">H04L 47/525</a>   |
| <a href="#">H04L 12/879</a> | covered by | <a href="#">H04L 49/901</a> , <a href="#">H04L 49/9026</a>  |
| <a href="#">H04L 12/883</a> | covered by |   |
| <a href="#">H04L 12/885</a> | covered by |   |
| <a href="#">H04L 12/891</a> | covered by | <a href="#">H04L 47/41</a>  |
| <a href="#">H04L 12/893</a> | covered by |   |
| <a href="#">H04L 12/901</a> | covered by |   |
| <a href="#">H04L 12/903</a> | covered by |   |
| <a href="#">H04L 12/905</a> | covered by |   |
| <a href="#">H04L 12/911</a> | covered by | <a href="#">H04L 47/70-H04L 47/748</a> ,<br><a href="#">H04L 47/78</a> , <a href="#">H04L 47/781</a> ,<br><a href="#">H04L 47/782</a> , <a href="#">H04L 47/783</a> ,<br><a href="#">H04L 47/788</a> , <a href="#">H04L 47/82-</a><br><a href="#">H04L 47/829</a> |
| <a href="#">H04L 12/913</a> | covered by | <a href="#">H04L 47/724</a>   |
| <a href="#">H04L 12/915</a> | covered by | <a href="#">H04L 47/785</a> , <a href="#">H04L 47/787</a> ,<br><a href="#">H04L 47/787</a>  |
| <a href="#">H04L 12/917</a> | covered by | <a href="#">H04L 47/76</a>  |
| <a href="#">H04L 12/919</a> | covered by | <a href="#">H04L 47/765</a> , <a href="#">H04L 47/767</a>   |
| <a href="#">H04L 12/923</a> | covered by | <a href="#">H04L 47/762</a>   |
| <a href="#">H04L 12/925</a> | covered by | <a href="#">H04L 47/722</a>   |
| <a href="#">H04L 12/927</a> | covered by | <a href="#">H04L 47/80-H04L 47/808</a>  |
| <a href="#">H04L 12/931</a> | covered by |   |
| <a href="#">H04L 12/933</a> | covered by | <a href="#">H04L 49/10-H04L 49/1592</a>   |
| <a href="#">H04L 12/935</a> | covered by | <a href="#">H04L 49/30-H04L 49/3009</a>   |
| <a href="#">H04L 12/937</a> | covered by | <a href="#">H04L 49/253-H04L 49/255</a>   |
| <a href="#">H04L 12/939</a> | covered by | <a href="#">H04L 49/55-H04L 49/557</a>  |
| <a href="#">H04L 12/943</a> | covered by |   |
| <a href="#">H04L 12/945</a> | covered by |   |
| <a href="#">H04L 12/947</a> | covered by | <a href="#">H04L 49/25</a> , <a href="#">H04L 49/251</a> ,<br><a href="#">H04L 49/252</a> , <a href="#">H04L 49/256</a> ,<br><a href="#">H04L 49/257</a> , <a href="#">H04L 49/258</a>  |
| <a href="#">H04L 12/951</a> | covered by |   |
| <a href="#">H04L 12/953</a> | covered by |   |
| <a href="#">H04L 25/04</a>  | covered by | <a href="#">H04L 25/03</a>  |
| <a href="#">H04L 25/17</a>  | covered by | <a href="#">H03H</a>  |
| <a href="#">H04L 25/18</a>  | covered by | <a href="#">H04L 25/027</a>   |
| <a href="#">H04L 25/28</a>  | covered by | <a href="#">H04L 25/0268</a>  |
| <a href="#">H04L 25/30</a>  | covered by | <a href="#">H04L 25/061</a>   |
| <a href="#">H04L 25/32</a>  | covered by | <a href="#">H04L 25/49</a>  |
| <a href="#">H04L 25/34</a>  | covered by | <a href="#">H04L 25/4917</a>  |



|                            |            |                             |
|----------------------------|------------|-----------------------------|
| <a href="#">H04L 25/48</a> | covered by | <a href="#">H04L 25/49</a>  |
| <a href="#">H04L 25/52</a> | covered by | <a href="#">H04L 25/20</a>  |
| <a href="#">H04L 25/54</a> | covered by | <a href="#">H04L 25/20</a>  |
| <a href="#">H04L 25/56</a> | covered by | <a href="#">H04L 25/202</a> |
| <a href="#">H04L 25/58</a> | covered by | <a href="#">H04L 25/20</a>  |
| <a href="#">H04L 25/60</a> | covered by | <a href="#">H04L 25/207</a> |
| <a href="#">H04L 25/62</a> | covered by | <a href="#">H04L 25/205</a> |
| <a href="#">H04L 25/64</a> | covered by | <a href="#">H04L 25/245</a> |
| <a href="#">H04L 25/66</a> | covered by | <a href="#">H04L 25/247</a> |

## Project: MP0176 (H04L)

### U H04L 65/00

**{Network arrangements or protocols for real-time communications (computer conference [H04L 12/1813](#); real time or near real time messaging in message switching systems, e.g. instant messaging [H04L 51/04](#); network applications in general [H04L 67/00](#); systems providing special services to telephonic subscribers [H04M 3/42](#); interconnection arrangements between switching centres for working between exchanges having different types of switching equipment where the types of switching equipment comprise PSTN/ISDN equipment and equipment of networks other than PSTN/ISDN [H04M 7/1205](#); television systems [H04N 7/00](#); selective video distribution [H04N 21/00](#))}**

#### NOTES

##### 1. {This group covers:

- only communications which fulfill the following two conditions:
  - i. they are based on packet data;
  - ii. there is real-time or pseudo-real-time temporal association between source and destination, or source and network, or destination and network;
- provided that the above two conditions are met, this group covers arrangements relating to
  - a. the transmission of the multimedia data itself,
  - b. the user-to-user, user-to-network, inter-network or intra-network signalling supporting:
    - b1. the establishment of a session for the subsequent transmission of the multimedia data, or
    - b2. the maintenance of the session or
    - b3. the application services available to the user during the session (unless explicitly excluded in certain cases).

}

##### 2. {This group does not cover:

- non-real-time multimedia file transfer, which is covered by group [H04L 67/06](#);
- multimedia store or forward messaging as in e-mail, MMS or the like, which is covered by group [H04L 51/00](#);
- analogue video streaming, as in analogue television systems, which is covered by group [H04N 7/00](#);
- selective distribution of MPEG elementary or transport streams, containing video and/or additional data, which is covered by group [H04N 21/00](#);
- bit streaming, i.e. not packet-based, such as in ISDN, which is covered by group [H04Q 11/0428](#);
- instant messaging, which is covered by group [H04L 51/04](#);
- any other multimodal data communications which do not meet the conditions of being packet-based and real-time or pseudo-real-time;
- flow control in packet switching networks, which is covered by group [H04L 47/10](#).

}

3. {In this group the following terms or expressions are used with the meaning indicated:

- H.323 means International Telecommunication Union Recommendation no. 323, series H, entitled "Packet-based multimedia communications systems"
- IP means Internet Protocol
- IMS means IP Multimedia Subsystem
- ISDN means Integrated Services Digital Network
- MGC means Media Gateway Control/Controller
- MGCP means Media Gateway Control Protocol
- MMS means Multimedia Messaging Service
- PBX means Private Branch Exchange
- PSTN means Public Switched Telephone Network
- QoS means Quality of Service
- RTP means Real Time Protocol
- RTCP means Real Time Control Protocol
- RTSP means Real Time Streaming Protocol.
- SIP means Session Initiation Protocol
- SPAM means unsolicited electronic mail
- SPIT means SPAM Prevention in IP Telephony

}

- U H04L 65/10 • {Signalling, control or architecture (data network management [H04L 41/00](#); data network testing or monitoring [H04L 43/00](#); admission control or resource reservation in packet switching networks [H04L 47/70](#); control signalling related to video distribution [H04N 21/63](#); selecting or control in telephonic networks [H04Q 3/00](#))}
- U H04L 65/1013 • • {Network architectures, gateways, control or user entities}
- U H04L 65/102 • • • {Gateways (arrangements for connecting between networks having differing types of switching systems, e.g. gateways [H04L 12/66](#))}
- U H04L 65/1033 • • • • {Signalling gateways}
- M H04L 65/104 • • • • • {[at](#) [in](#) the [edge network](#)}

## Project: N/A (H04L)

### H04L 2209/00

**{Additional information or applications relating to cryptographic mechanisms or cryptographic arrangements for secret or secure communication [H04L 9/00](#)}**

- H04L 2209/04 • {Masking or blinding}
- H04L 2209/043 • • {of tables, e.g. lookup, substitution or mapping}
- H04L 2209/046 • • {of operations, operands or results of the operations}
- H04L 2209/08 • {Randomization, e.g. dummy operations or using noise}
- H04L 2209/12 • {Details relating to cryptographic hardware or logic circuitry}
- H04L 2209/122 • • {Hardware reduction or efficient architectures}
- H04L 2209/125 • • {Parallelization or pipelining, e.g. for accelerating processing of cryptographic operations}
- H04L 2209/127 • • {Trusted platform modules [TPM]}
- H04L 2209/16 • {Obfuscation or hiding, e.g. involving white box}
- H04L 2209/20 • {Manipulating the length of blocks of bits, e.g. padding or block truncation}
- H04L 2209/24 • {Key scheduling, i.e. generating round keys or sub-keys for block encryption}
- H04L 2209/26 • {Testing cryptographic entity, e.g. testing integrity of encryption key or encryption algorithm}
- H04L 2209/30 • {Compression, e.g. Merkle-Damgard construction}

|               |  |
|---------------|--|
| H04L 2209/34  | • {Encoding or coding, e.g. Huffman coding or error correction}  |
| H04L 2209/38  | • {Chaining, e.g. hash chain or certificate chain}   |
| H04L 2209/42  | • {Anonymization, e.g. involving pseudonyms}   |
| H04L 2209/46  | • {Secure multiparty computation, e.g. millionaire problem}  |
| H04L 2209/463 | • • {Electronic voting}  |
| H04L 2209/466 | • • {Electronic auction}   |
| H04L 2209/50  | • {Oblivious transfer}   |
| H04L 2209/56  | • {Financial cryptography, e.g. electronic payment or e-cash}  |
| H04L 2209/60  | • {Digital content management, e.g. content distribution}  |
| H04L 2209/601 | • • {Broadcast encryption}   |
| H04L 2209/603 | • • {Digital right management [DRM]}   |
| H04L 2209/605 | • • {Copy protection}  |
| H04L 2209/606 | • • {Traitor tracing}  |
| H04L 2209/608 | • • {Watermarking}   |
| H04L 2209/64  | • {Self-signed certificates}   |
| H04L 2209/68  | • {Special signature format, e.g. XML format}  |
| H04L 2209/72  | • {Signcrypting, i.e. digital signing and encrypting simultaneously}   |
| H04L 2209/76  | • {Proxy, i.e. using intermediary entity to perform cryptographic operations (network architectures or network communication protocols using hop-by-hop encryption <a href="#">H04L 63/0464</a> )} |
| H04L 2209/80  | • {Wireless (network architectures or network communication protocols for wireless network security <a href="#">H04W 12/00</a> )}  |
| H04L 2209/805 | • • {Lightweight hardware, e.g. radio-frequency identification [RFID] or sensor}   |
| H04L 2209/84  | • {Vehicles}   |
| H04L 2209/88  | • {Medical equipments}   |

**Project: N/A (H04M)****H04M**

**TELEPHONIC COMMUNICATION** (counting mechanisms [G06M](#); circuits for controlling other apparatus via a telephone cable and not involving telephone switching apparatus [G08](#); reels or other take-up devices for cords [H02G 11/00](#); multiplex transmission between switching centres [H04J](#); selecting arrangements [H04Q](#); loudspeakers, microphones, gramophone pick-ups or like electromechanical transducers [H04R](#))

NOTES

1. This subclass covers :

- telephonic communication systems combined with other electrical systems;
- testing arrangements peculiar to telephonic communication systems.

2. In this subclass, the following terms or expressions are used with the meanings indicated :

- "subscriber" is a general term for terminal equipment, e.g. telephone for public use;
- "substation" means a subscriber or monitoring equipment which may connect a single subscriber to a line without choice as to subscriber;
- "satellite" is a type of exchange the operation of which depends upon control signals received from a supervisory exchange;
- "switching centres" includes exchanges and satellites.

WARNING

The following IPC groups are not **used** in the CPC scheme. **Subject** ~~The subject~~ matter ~~covered by for~~ these **IPC** groups **are is** classified in the following CPC groups:

|            |            |                             |
|------------|------------|-----------------------------|
| H04M 7/02  | covered by | <a href="#">H04Q 3/00</a>   |
| H04M 7/04  | covered by | <a href="#">H04Q 3/00</a>   |
| H04M 7/10  | covered by | <a href="#">H04Q 3/00</a>   |
| H04M 15/02 | covered by | <a href="#">H04M 15/888</a> |

## Project: N/A (H04N)

### H04N

**PICTORIAL COMMUNICATION, e.g. TELEVISION (measuring, testing [G01](#); systems for autographic writing, e.g. writing telegraphy, which involve following an outline [G08C 21/00](#)); information storage based on relative movement between record carrier and transducer [G11B](#); coding, decoding or code conversion, in general [H03M](#); broadcast distribution or the recording of use made thereof [H04H](#))**

### NOTES

#### 1. This subclass covers :

- {generation, recording or} transmission of pictures or their transient or permanent reproduction either locally or remotely {and the corresponding electronic image capture and reproduction process employing image representative electric signals,} by methods or arrangements {involving at least one of} the following steps:
  - a. the {electronic acquisition or} scanning of a picture {or scene} , i.e. resolving the whole picture-containing area into individual picture-elements and the derivation of picture-representative electric signals related thereto, simultaneously or in sequence {, e.g. by reading an electronic solid-state image sensor [SSIS] pickup device (e.g. CCD or CMOS image sensor) as electronic image sensor converting optical image information into said electrical signals;}
  - b. the reproduction of the whole picture-containing area {or scene} by the reproduction of individual picture-elements into which the picture is resolved by means of picture representative electric signals derived therefrom, simultaneously or in sequence by converting an electric image signal into light e.g. with an electronic spatial light modulator;
- { concerning cameras or projectors:
  - video cameras or TV cameras, e.g. in studios, CCTV cameras, surveillance cameras, camcorders; constructional or mechanical details related to such cameras even when not peculiar to the presence of an electronic image sensor [EIS] e.g. housings;
  - arrangements or methods for image capture using an EIS or image projection using an electronic spatial light modulator [ESLM], i.e.
    - i. sensor read-out;
    - ii. processing of electrical image signals from the EIS or provided to the ESLM for the generation of respective camera or projector control signals,
      - for controlling the EIS or its read-out for e.g. exposure, scene selection for auto focussing, or electronic image enhancement or processing of the image signals captured by the EIS, e.g. white balance, electronic motion blur correction, noise suppression [H04N 5/00](#),
      - for controlling the ESLM, e.g. control of the light source based on electronic image signal, light conditioning specially adapted for the ESLM, or
      - for controlling other camera functions, e.g. exposure, shaking by influencing optical parts of the camera (generation of control signals for focussing for optical elements [G02B 7/28](#); using such signals to control focus of particular apparatus, see the subclasses for the apparatus, e.g. [G03B](#), [G03F](#), [H04N](#));
- electronic image data storage (data storage in general [G11B](#), [G11C](#));

- in-camera image processing e.g. correction of lens distortion, defect pixel correction, noise suppression, removal of motion blur, improving of the dynamic range of the image, in-projector image processing, electronic image data manipulation, e.g. during display or projection (image processing per se [G06T](#));
  - electronic viewfinders e.g. control of image pickup devices based on information indicated by the electronic viewfinder displaying an image signal generated by the EIS ;
  - electrical or mechanical aspects of camera modules using electronic image sensors, as well as related constructional details as in webcams or mobile phones (see [H04M 1/0264](#) for mounting structure in mobile phones);
  - details of projectors peculiar to the use of an ESLM, e.g. dichroic or polarizing arrangements specially adapted for the ESLM (dichroic or polarizing arrangements in general [G02B](#), [G03B](#));
  - remote control of cameras or projectors peculiar to the EIS or the ESLM, e.g. affecting their operation, or based on a generated image signal;
  - adaptations peculiar to the use of a EIS or ESLM and/or the display, the transmission, recording or other use of electrical image data and related circuitry, e.g. mounting of EIS or ESLM, integrated cleaning system for the EIS, dust mapping, cooling of the EIS, controlling the operation of the EIS by external input signals;
  - systems or apparatus wherein the inventive contribution lies in the interaction between features covered in Notes 1 above, concerning cameras and projectors, when interacting with those covered in Note 1 of [G03B](#), e.g. switch-over between electronic motion-blur correction of electronic viewfinder during focussing and optical motion-blur correction of the lens during exposure, electronic motion blur correction of the electronic image sensor based on output signals of additional sensor, or interaction between mechanical shutter and electronic control of the charge accumulation period of the EIS;
- }
- (in group [H04N 1/00](#) ) systems for the transmission or the reproduction of arbitrarily composed pictures or patterns in which the local light variations composing a picture are not subject to variation with time, e.g. documents (both written and printed), maps, charts, photographs (other than cinematograph films);
  - circuits specially designed for dealing with pictorial communication signals, e.g. television signals, as distinct from merely signals of a particular frequency range.
2. This subclass does not cover :
- circuits or other parts of systems which form the subject of other subclasses, which are covered by the corresponding subclasses, e.g. [H03C](#), [H03F](#), [H03J](#), [H04B](#), [H04H](#);
  - systems in which legible alphanumeric or like character forms are analysed according to step (a) of Note (1) to derive an electric signal from which the character is recognised by comparison with stored information, which are covered by subclass [G06K](#);
  - systems for the direct photographic copying of an original picture in which an electric signal representative of the picture is derived according to the said step (a) of and employed to modify the operation of the system, e.g. to control exposure, which are covered by class [G03](#);
  - systems for the reproduction according to step (b) of Note (1) of pictures comprising alphanumeric or like character forms but involving the production of the equivalent of a signal which would be derived according to the abovementioned step (a), e.g. by cams, punched card or tape, coded control signal, or other means, which are covered by the subclass for the application, e.g. [G01D](#), [G06T](#), [H04L](#);

- systems for the reproduction to the above-mentioned step (b) of pictures comprising alphanumeric or like character forms and involving the generation according to the abovementioned step (a) of picture-representative electric signals from a pre-arranged assembly of such characters, or records thereof, forming an integral part of the systems, which are covered by the subclass for the application, e.g. [B41B](#), [G06K](#), subject to those applications which are covered by this subclass;
  - printing, duplication or marking methods, or materials or processes therefor, which are covered by the relevant subclasses, e.g. [B41C](#), [B41M](#), [G03C](#), [G03F](#), [G03G](#);
  - {apparatus or methods for taking photographs using light sensitive film for image capture, apparatus/methods for printing, for projecting or viewing images using film stock, photographic film or slides by optical means, e.g. mounting of optical elements, flashes, and their related controls, e.g. exposure, focus, (opto-)mechanical motion blur (anti-shake), cooling, beam shaping;}
  - {aspects of apparatus or methods for taking photographs using an electronic image sensor [EIS] for image capture, insofar as they correspond to those of said apparatus methods for taking photographs using light sensitive film, i.e. insofar as not peculiar to the presence of the EIS, e.g. mounting of optical elements or flashes not peculiar to the presence of the EIS, and their related controls insofar as they are not peculiar to the presence or use of the EIS, e.g. exposure, focus, (opto-)mechanical motion blur (anti-shake);}
  - {aspects of apparatus or methods for projecting or viewing images using an electronic spatial light modulator [ESLM], insofar as they correspond to those of said apparatus/ methods for projecting or viewing images using film stock, photographic film or slides, i.e. insofar as not peculiar to the presence of the ESLM, e.g. mounting of optical elements not peculiar to the presence of the ESLM, and their related controls not peculiar to the presence of the ESLM, e.g. cooling, beam shaping, optical keystone correction;}
  - {(opto-)mechanical image enhancement in printers or projectors, e.g. keystone correction;}
  - {optical viewfinders;}
  - {remote control of cameras and projectors insofar not peculiar to the EIS or ESLM, e.g. not affecting their operation, or being based on a generated image signal;}
  - { optical aspects of camera modules using electronic image sensors and related constructional details (optical elements or arrangements associated with solid state imager structures [H01L 27/14625](#) ); }
  - {constructional aspects of projectors, e.g. cooling, beam shaping, light integrating means not peculiar to the ESLM;}
3. In this subclass, the following expression is used with the meaning indicated: "television systems" means those systems for the {electronic generation} , transmission and reproduction of arbitrarily composed pictures in which the local light variations composing a picture may change with time, e.g. natural "live" scenes, {electronic} recordings of such scenes such as cinematograph films.
4. {In this subclass, as in subclass [G03B](#), the following terms are used with the meaning indicated:
- "camera": a device capturing image information represented by light patterns reflected or emitted from objects, and exposing a light sensitive film or a main electronic image sensor during a timed exposure, usually through a photographic lens, and producing an image on a light sensitive film or an electrical image information signal respectively;
  - "projector": a device displaying image information by projection of light patterns, usually through an optical lens, wherein the light patterns are generated by illuminating an image, e.g. film or slide, or by converting an



electric image signal into an optical signal using an electronic spatial light modulator;

- "electronic image sensor [EIS]": optoelectronic transducer, converting optical image information into an electrical signal susceptible of being processed, stored, transmitted or displayed;
- "additional sensor": a sensor, other than the main electronic image sensor, used for controlling a camera;
- "electronic spatial light modulator [ESLM]": optoelectronic transducer converting electric signals representing image information into optical image information.

}

#### WARNING

The following IPC groups are not ~~used~~ in the CPC scheme. ~~Subject~~ *The subject* matter ~~covered by~~ *for* these *IPC* groups is classified in the following CPC groups:

|  |            |  |
|--|------------|--|
| <del>H04N5/31</del>                    | covered by | <a href="#">G01S 7/52</a> , <a href="#">G01S 15/89</a> |
| <a href="#">H04N 5/761</a>             | covered by | <a href="#">H04N 5/782</a>                             |
| <a href="#">H04N 5/7613</a>            | covered by | <a href="#">H04N 5/782</a>                             |
| <a href="#">H04N 5/7617</a>            | covered by | <a href="#">H04N 5/782</a>                             |
| <a href="#">H04N 5/922</a>             | covered by | <a href="#">H04N 5/92</a>                              |
| <a href="#">H04N 5/924</a>             | covered by | <a href="#">H04N 5/92</a>                              |
| <a href="#">H04N 9/815</a>             | covered by | <a href="#">H04N 9/81</a>                              |
| <a href="#">H04N 11/24</a>             | covered by | <a href="#">H04N 11/002</a>                            |
| <del>H04N 15/00</del> <b>H04N15/00</b> | covered by | <a href="#">H04N 13/00</a>                             |

#### Project: MP0270 (H04Q)

- U H04Q 2213/00 Indexing scheme relating to selecting arrangements in general and for multiplex systems
- M H04Q 2213/304 • ~~Supra-conductors~~ *Superconductors*; ~~thermistors~~ *Thermistors*; ~~varistors~~ *Varistors*

#### Project: MP0164 (H04R)

- U H04R 25/00 Deaf-aid sets {providing an auditory perception; Electric tinnitus maskers providing an auditory perception}{constructions of transducers per se [H04R 9/00](#) - [H04R 23/00](#); {non-electric hearing aids [A61F 11/008](#); replacing direct auditory perception by another kind of perception [A61F 11/04](#); electrical stimulation of auditory nerves to promote the auditory function [A61N 1/36036](#)}; structural combination with spectacle frames [G02C 11/06](#); processing of speech signals [G10L 21/00](#)}

#### NOTE

Classification should be directed to groups [H04R 25/02](#), [H04R 25/04](#) or [H04R 25/50](#) and its subgroups, if and only if the technical subject in consideration cannot be classified elsewhere under the main group [H04R 25/00](#)

- M H04R 25/60 • {Mounting, ~~assembling~~ or interconnection of hearing aid parts, e.g. inside tips, ~~housing~~ or *housing*, to ossicles (*ear wax retarders*, e.g. *their mounting* [H04R 25/654](#))}; ~~Apparatus or processes therefor~~

#### Project: N/A (H04S)

- U H04S 2420/00 Techniques used stereophonic systems covered by [H04S](#) but not provided for in its groups (not used, see subgroups)
- H04S 2420/01 • Enhancing the perception of the sound image or of the spatial distribution using head related transfer functions [~~HRTF's~~ *HRTF's*] or equivalents thereof, e.g. interaural time difference [ITD] or interaural level difference [ILD]



- D H05B 33/0833 . . . {with control of the intensity of light emitted by the LEDs}  
WARNING  
 This group and its subgroups are no longer used for classification of new documents as from January 1st, 2010. The backlog is being continuously reclassified to the groups H05B 33/0806, H05B 33/0842, H05B 33/0884 and subgroups  
 <administratively transferred to [H05B 33/0842](#)>
- D H05B 33/0836 . . . {by means of a linear regulator}  
 <administratively transferred to [H05B 33/0812](#)>
- D H05B 33/0839 . . . {by means of a switching converter}  
 <administratively transferred to [H05B 33/0815](#)>
- M H05B 33/0842 . . . {with control ([H05B 33/0884](#) takes precedence)}  
WARNING  
 This group and its subgroups are not complete pending reorganisation; see also groups H05B 33/0833, H05B 33/0875 and respective subgroups
- D H05B 33/0875 . . . {with detection of abnormal operating conditions}  
WARNING  
 This group and its subgroups are no longer used for classification as from January 1st, 2010. The backlog is being continuously reclassified to the groups H05B 33/0806, H05B 33/0842, H05B 33/0884 and subgroups  
 <administratively transferred to [H05B 33/0884](#)>
- D H05B 33/0878 . . . {of the circuit arrangement}  
 <administratively transferred to [H05B 33/0887](#)>
- D H05B 33/0881 . . . {of the LEDs}  
 <administratively transferred to [H05B 33/089](#)>
- M H05B 33/0884 . . . {with monitoring or protection}  
WARNING  
 This group and its subgroups are not complete pending reorganisation; see also groups H05B 33/0833, H05B 33/0875 and respective subgroups
- M H05B 33/0896 . . . {for light emitting diodes (~~[LEDs]~~) comprising organic materials, e.g. polymer LEDs (~~[PLEDs]~~) or *organic LEDs* [OLEDs]}

## Project: N/A (H05G)

## H05G

X-RAY TECHNIQUE (apparatus for radiation diagnosis [A61B 6/00](#); X-ray therapy [A61N](#); testing by X-rays [G01N](#); apparatus for X-ray photography [G03B](#); filters, conversion screens, microscopes [G21K](#); X-ray tubes [H01J 35/00](#); TV systems having X-ray input [H04N 5/321](#))

WARNING

The following IPC ~~group is~~ *groups are* not ~~used~~ in the CPC scheme. *The subject matter for these IPC groups is classified in the following CPC groups:*

H05G 1/61

covered by

[H05G 1/60](#)

## Project: MP0394 (H05K)

## M H05K 9/00

Screening of apparatus or components against electric or magnetic fields (devices for absorbing radiation from an ~~aerial~~ *antenna* [H01Q 17/00](#) ~~;~~ **screening of semiconductor devices** [H01L 24/00](#), [H01L 23/58](#); **screening structurally associated with dynamo-electric machines** [H02K 11/00](#); **shielding against nuclear radiation** [G21F](#))

**Project: RP0511 (Y02)****M Y02****TECHNOLOGIES OR APPLICATIONS FOR MITIGATION OR ADAPTATION AGAINST CLIMATE CHANGE**NOTES

1. This class covers selected technologies, which control, reduce or prevent anthropogenic emissions of greenhouse gases [GHG], **as controlled by the in the framework of the Kyoto Protocol and the Paris Agreement, and also technologies which allow adapting to the adverse effects of climate change.**
2. If appropriate, a document can receive more than one indexing code of this class.

**Project: RP0511 (Y02A)****N Y02A****TECHNOLOGIES FOR ADAPTATION TO CLIMATE CHANGE**NOTE

*This subclass covers technologies for adaptation to climate change, i.e. technologies that allow adapting to the adverse effects of climate change in human, industrial (including agriculture and livestock) and economic activities.*

**N Y02A 10/00****at coastal zones; at river basins**

N Y02A 10/11

• Hard structures

N Y02A 10/12

• • Reservoirs; Polders

N Y02A 10/13

• • Dykes; Dams

N Y02A 10/14

• • Sea-walls, surge or tidal barriers

N Y02A 10/15

• • Self-contained breakwaters

N Y02A 10/16

• • Revetments of the shore

N Y02A 10/17

• • Groynes

N Y02A 10/18

• • Jetties or landing bridges

N Y02A 10/20

• Soft structures

N Y02A 10/21

• • Land claim or beach nourishment

N Y02A 10/22

• • Wetland restoration or creation

N Y02A 10/23

• • Dune restoration or creation

N Y02A 10/24

• • Cliff stabilization

N Y02A 10/25

• • Artificial seaweed

N Y02A 10/26

• • Artificial reefs

N Y02A 10/27

• • Restoration or protection of coral reefs

N Y02A 10/28

• • Sediment management

N Y02A 10/30

• Flood prevention; Flood management or accommodation; Storm water management

N Y02A 10/31

• • Permanently installed flood barriers

N Y02A 10/32

• • Temporarily installed flood barriers

N Y02A 10/33

• • Infiltration of water into the ground

N Y02A 10/34

• • Flood-proof sanitary latrines

N Y02A 10/35

• • Revetments for protection of river banks or dykes

N Y02A 10/36

• • Equalizing tanks in the sewage system for regulating the run-off

N Y02A 10/37

• • Bioswales

N Y02A 10/38

• • Changing the natural surface of ground to re-route water

|          |                   |   |
|----------|-------------------|---|
| N        | Y02A 10/383       | • • • Weirs   |
| N        | Y02A 10/386       | • • • Locks   |
| N        | Y02A 10/39        | • • Evacuation systems  |
| N        | Y02A 10/395       | • • Curb floodplain development for flood management                        |
| N        | Y02A 10/40        | • Monitoring; Forecasting; Planning   |
| N        | Y02A 10/41        | • • of coastal areas  |
| N        | Y02A 10/42        | • • Real-time flood forecasting   |
| N        | Y02A 10/44        | • • Disaster preparedness plans   |
| N        | Y02A 10/46        | • • Computerized flood control, risk assessment or mapping                  |
| N        | Y02A 10/48        | • • Hazard insurance  |
| <b>N</b> | <b>Y02A 20/00</b> | <b>Water conservation; Efficient water supply; Efficient water use</b>      |
| N        | Y02A 20/10        | • Relating to general water supply, e.g. municipal or domestic water supply |
| N        | Y02A 20/102       | • • Tanks   |
| N        | Y02A 20/104       | • • • for municipal applications  |
| N        | Y02A 20/106       | • • • for domestic applications   |
| N        | Y02A 20/108       | • • Rainwater harvesting  |
| N        | Y02A 20/109       | • • Obtaining drinking water from air humidity                              |
| N        | Y02A 20/112       | • • Obtaining drinking water from open water                                |
| N        | Y02A 20/114       | • • Water wells   |
| N        | Y02A 20/116       | • • • Vertical well filter pipes  |
| N        | Y02A 20/118       | • • • Borehole wells  |
| N        | Y02A 20/119       | • • • having horizontal or inclined filter pipes                            |
| N        | Y02A 20/12        | • • Multipurpose dams or barriers   |
| N        | Y02A 20/124       | • • Water desalination  |
| N        | Y02A 20/126       | • • • characterized by the method   |
| N        | Y02A 20/128       | • • • • Evaporation methods, e.g. distillation                              |
| N        | Y02A 20/129       | • • • • • using solar energy  |
| N        | Y02A 20/131       | • • • • Reverse-osmosis   |
| N        | Y02A 20/132       | • • • • Freezing  |
| N        | Y02A 20/134       | • • • • Electrodialysis   |
| N        | Y02A 20/138       | • • • powered by a renewable energy source                                  |
| N        | Y02A 20/141       | • • • • the source being wind power   |
| N        | Y02A 20/142       | • • • • the source being solar thermal or photovoltaics                     |
| N        | Y02A 20/144       | • • • • the source being wave energy  |
| N        | Y02A 20/146       | • • Use of grey water   |
| N        | Y02A 20/148       | • • • using household water from wash basins or showers                     |
| N        | Y02A 20/15        | • • Leakage reduction or detection in water storage or distribution         |
| N        | Y02A 20/152       | • • Water filtration  |
| N        | Y02A 20/154       | • • • of domestic water   |
| N        | Y02A 20/156       | • • • of municipal or industrial water                                      |
| N        | Y02A 20/16        | • • Water quality or standards enforcement                                  |
| N        | Y02A 20/18        | • • Solar- or wind-powered water pumping                                    |
| N        | Y02A 20/20        | • • Water pollution control technologies                                    |
| N        | Y02A 20/202       | • • • for households  |

|          |                   |   |
|----------|-------------------|---|
| N        | Y02A 20/204       | • • • Keeping clear the surface of open water from oil spills   |
| N        | Y02A 20/206       | • • • Monitoring water for contaminating materials  |
| N        | Y02A 20/208       | • • Off-grid powered water treatment  |
| N        | Y02A 20/211       | • • • Solar-powered water purification  |
| N        | Y02A 20/212       | • • • Solar-powered wastewater sewage treatment, e.g. spray evaporation   |
| N        | Y02A 20/214       | • • • Water treatment at point of use for potable water   |
| N        | Y02A 20/216       | • • • Wastewater treatment tanks  |
| N        | Y02A 20/218       | • • Water metering with adaptation potential, e.g. aiming at water saving, leakage detection or avoidance, fraud or theft detection       |
| N        | Y02A 20/22        | • • Pricing strategies aiming to limit water consumption or spillage, e.g. progressive pricing, fraud detection or fostering water saving |
| N        | Y02A 20/30        | • Relating to industrial water supply, e.g. used for cooling  |
| N        | Y02A 20/302       | • • Use of lower-grade water  |
| N        | Y02A 20/304       | • • Recirculation   |
| N        | Y02A 20/40        | • Water resources protection or enhancement   |
| N        | Y02A 20/402       | • • River restoration   |
| N        | Y02A 20/404       | • • Saltwater intrusion barriers  |
| N        | Y02A 20/406       | • • Aquifer recharge  |
| N        | Y02A 20/408       | • • Draining or infiltration of impermeable surfaces for groundwater enrichment   |
| N        | Y02A 20/411       | • • Water saving techniques at user level   |
| N        | Y02A 20/412       | • • • Reducing amount of water used by toilet flushing  |
| N        | Y02A 20/414       | • • • Water-saving for showers or bath tubs   |
| <b>N</b> | <b>Y02A 30/00</b> | <b>Adapting or protecting infrastructure or their operation</b>   |
| N        | Y02A 30/10        | • in energy generation or distribution  |
| N        | Y02A 30/12        | • • Weather forecasting for energy supply management  |
| N        | Y02A 30/14        | • • Extreme weather resilient electric power supply system, e.g. strengthening power lines or underground power cables                    |
| N        | Y02A 30/16        | • • Flood resilient electric equipment  |
| N        | Y02A 30/17        | • • • Generators  |
| N        | Y02A 30/18        | • • • • Uninterruptible power supply [UPS] systems; Backup generators   |
| N        | Y02A 30/19        | • • • Cabinets or switch boards   |
| N        | Y02A 30/20        | • in buildings, dwellings or related infrastructures  |
| N        | Y02A 30/21        | • • Floating houses   |
| N        | Y02A 30/22        | • • Rotary buildings  |
| N        | Y02A 30/23        | • • Elevated buildings  |
| N        | Y02A 30/24        | • • Structural elements or technologies for improving thermal insulation  |
| N        | Y02A 30/241       | • • • Thermal insulation technologies with adaptation potential   |
| N        | Y02A 30/242       | • • • • Slab shaped vacuum insulation   |
| N        | Y02A 30/243       | • • • • Slab shaped aerogel insulation  |
| N        | Y02A 30/244       | • • • • characterized by the use of locally available building materials  |
| N        | Y02A 30/245       | • • • • • of vegetal origin, e.g. thatching or straw  |
| N        | Y02A 30/246       | • • • • • of animal origin, e.g. wool or feathers   |
| N        | Y02A 30/247       | • • • • • using indigenous Earth materials, e.g. clay or stone  |
| N        | Y02A 30/248       | • • • • • Recycled materials, e.g. made of used tires, bumpers or newspapers  |
| N        | Y02A 30/249       | • • • Glazing   |



|          |                   |   |
|----------|-------------------|---|
| N        | Y02A 30/25        | • • • Vacuum glazing  |
| N        | Y02A 30/251       | • • • Aerogel glazing systems   |
| N        | Y02A 30/252       | • • • Wooden or plastic window or door frames with extra insulation   |
| N        | Y02A 30/253       | • • • Roofs with adaptation potential   |
| N        | Y02A 30/254       | • • • Roof garden systems   |
| N        | Y02A 30/255       | • • • Roof coverings with high solar reflectance  |
| N        | Y02A 30/256       | • • • Floors specially adapted for storing heat or cold   |
| N        | Y02A 30/257       | • • • Light dependent control systems for sun shading   |
| N        | Y02A 30/259       | • Passive climatisation   |
| N        | Y02A 30/26        | • • • using air flow into the conditioned premises or facilities  |
| N        | Y02A 30/261       | • • • by improving the thermodynamic properties of the premises or facilities   |
| N        | Y02A 30/27        | • Relating to heating, ventilation or air conditioning [HVAC] technologies  |
| N        | Y02A 30/272       | • • • using solar thermal energy  |
| N        | Y02A 30/274       | • • • using waste energy, e.g. from internal combustion engine  |
| N        | Y02A 30/276       | • • • of the sorption type  |
| N        | Y02A 30/277       | • • • Absorption based systems  |
| N        | Y02A 30/278       | • • • Adsorption based systems  |
| N        | Y02A 30/30        | • in transportation   |
| N        | Y02A 30/31        | • Relating to road transportation   |
| N        | Y02A 30/32        | • • Permeable parking lots  |
| N        | Y02A 30/33        | • • Ground surface material   |
| N        | Y02A 30/333       | • • • Warm-mix asphalt  |
| N        | Y02A 30/336       | • • • Engineered cementitious composite [ECC]   |
| N        | Y02A 30/34        | • Relating to waterways transportation  |
| N        | Y02A 30/35        | • • Storm resilient vessels   |
| N        | Y02A 30/36        | • • Active motion-dampening systems for ports   |
| N        | Y02A 30/38        | • Relating to railways transportation   |
| N        | Y02A 30/40        | • Relating to water supply or wastewater treatment  |
| N        | Y02A 30/45        | • Specially adapted pumping equipment e.g. for flood draining   |
| N        | Y02A 30/50        | • Resilient IT infrastructure   |
| N        | Y02A 30/60        | • Planning or developing urban green infrastructure   |
| N        | Y02A 30/62        | • • Integration of district energy or distributed or on-site energy generation, e.g. combined heat and power generation or solar energy, in city layout |
| N        | Y02A 30/64        | • • for reducing heat island effects, e.g. by minimizing paved surfaces or by planting trees  |
| N        | Y02A 30/68        | • Sloping ground terrains in public areas   |
| <b>N</b> | <b>Y02A 40/00</b> | <b>Adaptation technologies in agriculture, forestry, livestock or agroalimentary production</b>   |
| N        | Y02A 40/10        | • in agriculture  |
| N        | Y02A 40/11        | • Specially adapted for crops   |
| N        | Y02A 40/12        | • • Precision agriculture   |
| N        | Y02A 40/13        | • • Abiotic stress  |
| N        | Y02A 40/132       | • • • Plants tolerant to drought  |
| N        | Y02A 40/135       | • • • Plants tolerant to salinity   |
| N        | Y02A 40/138       | • • • Plants tolerant to heat   |

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|---|-------------|---|
| N | Y02A 40/14  | . . . with increased yield  |
| N | Y02A 40/143 | . . . . using agrochemicals   |
| N | Y02A 40/146 | . . . . Transgenic plants   |
| N | Y02A 40/15  | . . . Fungal symbiosis  |
| N | Y02A 40/16  | . . . Pest or insect control  |
| N | Y02A 40/162 | . . . . Genetically modified [GMO] plants resistant to insects  |
| N | Y02A 40/164 | . . . . Genetically modified [GMO] plants resistant to nematodes  |
| N | Y02A 40/166 | . . . . Ecological pest control, i.e. using competitors or parasites against crop pests   |
| N | Y02A 40/168 | . . . . Rainguards for rubber trees   |
| N | Y02A 40/17  | . . . Aeroponics seed potato production   |
| N | Y02A 40/18  | . . . Related to fertilizer management  |
| N | Y02A 40/19  | . . . . Integrated nutrient management, e.g. appropriate fertilizer use   |
| N | Y02A 40/20  | . . . . Sustainable fertilizers of biological origin  |
| N | Y02A 40/201 | . . . . . Fertilizers made from animal corpses or parts thereof   |
| N | Y02A 40/202 | . . . . . from fish or from fish-wastes   |
| N | Y02A 40/203 | . . . . . from meat-wastes or from other wastes of animal origin, e.g. skins, hair, hoofs, feathers, blood                                      |
| N | Y02A 40/204 | . . . . . Apparatus for their manufacture   |
| N | Y02A 40/205 | . . . . . Fertilizers from human or animal excrements, e.g. manure  |
| N | Y02A 40/206 | . . . . . Guano   |
| N | Y02A 40/207 | . . . . . from human fecal masses   |
| N | Y02A 40/208 | . . . . . Apparatus for the manufacture   |
| N | Y02A 40/209 | . . . . . Fertilizers made from waste originating from industrial processing of raw material of agricultural origin or derived products thereof |
| N | Y02A 40/21  | . . . . . Solid waste from mechanical processing of material, e.g. seed coats, olive pits, almond shells, fruit residue, rice hulls             |
| N | Y02A 40/211 | . . . . . Waste from chemical processing of material, e.g. distillation, roasting, cooking  |
| N | Y02A 40/212 | . . . . . Waste from biochemical processing of material, e.g. fermentation, breweries   |
| N | Y02A 40/213 | . . . . . Fertilizers from waste water, sewage sludge, sea slime, ooze or similar masses  |
| N | Y02A 40/214 | . . . . . Fertilizers from household or town refuse   |
| N | Y02A 40/215 | . . . . . Apparatus for the manufacture   |
| N | Y02A 40/216 | . . . . . Biological compost  |
| N | Y02A 40/22  | . . Improving land use; Improving water use or availability; Controlling erosion  |
| N | Y02A 40/221 | . . . Change land topography to improve water uptake or to reduce wind erosion  |
| N | Y02A 40/222 | . . . . by subdividing large fields   |
| N | Y02A 40/223 | . . . . Grass waterways maintenance   |
| N | Y02A 40/224 | . . . . by roughening land surface  |
| N | Y02A 40/225 | . . . . Windbreaks  |
| N | Y02A 40/226 | . . . Floating agriculture  |
| N | Y02A 40/227 | . . . Control of sand encroachment  |
| N | Y02A 40/228 | . . . Wetland restoration or protection   |
| N | Y02A 40/229 | . . . Biochar technologies  |

- N Y02A 40/23      *. . . Improving water use or availability; Controlling erosion*
- N Y02A 40/231      *. . . . in rain-fed agriculture*
- N Y02A 40/232      *. . . . . Soil conservation*
- N Y02A 40/233      *. . . . . Methods for working soils*
- N Y02A 40/234      *. . . . . Moss gardening*
- N Y02A 40/235      *. . . . in irrigated agriculture*
- N Y02A 40/236      *. . . . . Tillage conservation*
- N Y02A 40/237      *. . . . . Efficient irrigation techniques, e.g. drip irrigation, sprinkler or spray irrigation*
- N Y02A 40/238      *. . . . . Irrigation information systems*
- N Y02A 40/239      *. . . . . Lining of canals with plastic films*
- N Y02A 40/24      *. . . . . Concentrate irrigation in periods of peak growth*
- N Y02A 40/241      *. . . . . using brackish water*
- N Y02A 40/242      *. . . Limiting land conversion or deforestation*
- N Y02A 40/243      *. . . Afforestation or reforestation*
- N Y02A 40/25      *. . Greenhouse technology*
- N Y02A 40/252      *. . . Constructional details of greenhouses*
- N Y02A 40/254      *. . . . Dismountable or portable greenhouses; Greenhouses with sliding roofs*
- N Y02A 40/256      *. . . Lighting systems for greenhouses*
- N Y02A 40/258      *. . . Shading devices for greenhouses*
- N Y02A 40/26      *. . . . Lamellar or like blinds*
- N Y02A 40/262      *. . . . Inflatable structures*
- N Y02A 40/264      *. . . Devices or systems for heating, ventilating, regulating temperature, or watering*
- N Y02A 40/266      *. . . . Collecting solar energy*
- N Y02A 40/268      *. . . . Air-conditioning systems*
- N Y02A 40/27      *. . . . Watering arrangements*
- N Y02A 40/272      *. . . . . Efficient watering*
- N Y02A 40/274      *. . . . . Electric devices*
- N Y02A 40/28      *. . specially adapted for farming*
- N Y02A 40/282      *. . . Changing farming practices to conserve soil moisture or nutrients; Reduce run-off or control soil erosion*
- N Y02A 40/284      *. . . . Mulch stubble or straw*
- N Y02A 40/286      *. . . . Crops rotation*
- N Y02A 40/288      *. . . . Avoiding mono-cropping; Crop diversification*
- N Y02A 40/29      *. . . . using lower planting densities*
- N Y02A 40/292      *. . . . Terracing*
- N Y02A 40/294      *. . . . Agro-forestry, silviculture or mixed farming solutions*
- N Y02A 40/296      *. . . . Bushfire prevention; Prescribed fire, i.e. controlled burning to reduce fuel buildup*
- N Y02A 40/298      *. . . . Forest fire control*
- N Y02A 40/30      *. . . Timing of farming operations*
- N Y02A 40/302      *. . . . Advance sowing dates to offset moisture stress during warm periods*
- N Y02A 40/40      *. . Management of saline soils*
- N Y02A 40/50      *. . Evapotranspiration*

- N Y02A 40/51      • • specially adapted for storing agricultural or horticultural products
- N Y02A 40/52      • • • Racks for drying purposes
- N Y02A 40/53      • • • • Natural, e.g. solar drying
- N Y02A 40/55      • • • Silos for storing seeds or grain
- N Y02A 40/57      • • • Off-grid powered storage
- N Y02A 40/58      • • • • using renewable energies
- N Y02A 40/60      • Ecological corridors or buffer zones
- N Y02A 40/70      • in livestock or poultry
- N Y02A 40/72      • • Climate tolerant animal varieties, e.g. selective breeding
- N Y02A 40/73      • • • Providing additional fodder for cattle during the dry season, e.g. by using fodder banks
- N Y02A 40/74      • • • Optimising pasture management
- N Y02A 40/75      • • Environmental control in livestock or poultry housing, e.g. of temperature or humidity
- N Y02A 40/76      • • • using renewable energy
- N Y02A 40/78      • • Livestock or poultry disease management, wherein the disease is affected by climate change
- N Y02A 40/80      • in fisheries management
- N Y02A 40/81      • • Aquaculture, i.e. culture of aquatic animals
- N Y02A 40/812      • • • of fish
- N Y02A 40/814      • • • • Prevention or treatment of fish diseases
- N Y02A 40/816      • • • • Hatching, e.g. incubators
- N Y02A 40/818      • • • • Alternative feeds for fish aquaculture
- N Y02A 40/82      • • • of shellfish
- N Y02A 40/822      • • • • of bivalves, e.g. oysters or mussels
- N Y02A 40/824      • • • • of crustaceans, e.g. lobsters or shrimps
- N Y02A 40/826      • • • Floating cultivation devices, e.g. rafts or floating fish-farms
- N Y02A 40/828      • • • • Connecting or mooring devices therefor
- N Y02A 40/83      • • • Artificial fishing banks or reefs
- N Y02A 40/832      • • • • made of tyres
- N Y02A 40/834      • • • • assembled of components
- N Y02A 40/836      • • • • floating
- N Y02A 40/838      • • • • of monolithic form, e.g. blocks
- N Y02A 40/84      • • • • Arrangements for sinking or mooring thereof
- N Y02A 40/845      • • • Feeding devices
- N Y02A 40/86      • • Information Technologies [IT] supporting fishing
- N Y02A 40/88      • • Seaweed farming; Management of sea grass beds
- N Y02A 40/90      • in food processing or handling
- N Y02A 40/92      • • in food processing
- N Y02A 40/922      • • • Technologies for reducing water consumption
- N Y02A 40/924      • • • using renewable energies
- N Y02A 40/926      • • • • Cooking stoves or furnaces using solar heat
- N Y02A 40/928      • • • • Cooking stoves using biomass
- N Y02A 40/94      • • relating to food conservation
- N Y02A 40/941      • • • using natural products

- N Y02A 40/942      . . . . using natural sugars
- N Y02A 40/943      . . . . using natural acids, e.g. vinegar, citric
- N Y02A 40/944      . . . . using vegetal oils
- N Y02A 40/945      . . . . Salt based conservation
- N Y02A 40/946      . . . . . using brine
- N Y02A 40/947      . . . Off-grid thermal processing
- N Y02A 40/948      . . . . Sun drying
- N Y02A 40/949      . . . . Food smoking
- N Y02A 40/95      . . . . of edible seeds
- N Y02A 40/96      . . relating to food management or storing
- N Y02A 40/961      . . . Biopackaging, e.g. packaging containers made from renewable materials, bioplastics or biodegradable materials
- N Y02A 40/962      . . . Wood Barrels
- N Y02A 40/963      . . . Off-grid food refrigeration
- N Y02A 40/964      . . . . Devices using naturally cold air or forced air convection
- N Y02A 40/965      . . . . Devices using heat pumps
- N Y02A 40/966      . . . . Powered by renewable energy sources
- N Y02A 40/967      . . . . using waste heat, e.g. from an internal combustion engine
- N Y02A 40/968      . . . . using ice
- N Y02A 50/00      in human health protection**
- N Y02A 50/10      . against extreme weather events
- N Y02A 50/12      . . Early warning systems for extreme weather events
- N Y02A 50/14      . . Storm shelters or storm cellars
- N Y02A 50/16      . . Landslide or mudflow monitoring or protecting systems
- N Y02A 50/20      . Air quality improvement or preservation
- N Y02A 50/21      . . Mechanical or electrostatic filtering in heating, ventilation or air conditioning [HVAC]
- N Y02A 50/22      . . Air sterilisation or disinfection
- N Y02A 50/23      . . Emission reduction or control
- N Y02A 50/232      . . . Catalytic converters
- N Y02A 50/2322      . . . . for exhaust after-treatment of internal combustion engines in vehicles
- N Y02A 50/2324      . . . . . Three way catalysts, i.e. for controlled oxidation or reduction of exhaust gases, e.g. stoichiometric equivalence ratio
- N Y02A 50/2325      . . . . . Selective Catalytic Reactors [SCR]
- N Y02A 50/2326      . . . . for industrial applications
- N Y02A 50/2327      . . . . . in chemical or petrochemical processes,
- N Y02A 50/2328      . . . . . Burners or incinerators e.g. of waste or waste gases
- N Y02A 50/234      . . . Physical or chemical processes, e.g. absorption, adsorption or filtering, characterised by the type of pollutant
- N Y02A 50/2341      . . . . Carbon monoxide [CO]
- N Y02A 50/2342      . . . . Carbon dioxide [CO<sub>2</sub>]
- N Y02A 50/2343      . . . . Lead [Pb]
- N Y02A 50/2344      . . . . Nitrogen oxides [NO<sub>x</sub>]
- N Y02A 50/2345      . . . . . Nitrogen dioxide [NO<sub>2</sub>]
- N Y02A 50/2346      . . . . Ammonia [NH<sub>3</sub>]

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|---|--------------|--|
| N | Y02A 50/2347 | . . . . Ground-level ozone   |
| N | Y02A 50/2348 | . . . . Sulfur oxides [SO <sub>x</sub> ]   |
| N | Y02A 50/2349 | . . . . Sulfur dioxide [SO <sub>2</sub> ]  |
| N | Y02A 50/235  | . . . . Volatile organic compounds [VOC]   |
| N | Y02A 50/2351 | . . . . Atmospheric particulate matter [PM], e.g. carbon smoke microparticles, smog, aerosol particles, dust                                       |
| N | Y02A 50/2352 | . . . . the particulate matter coming from a source on-board a vehicle, e.g. removed by diesel particulate filters [DPF]                           |
| N | Y02A 50/2353 | . . . . the particulate matter coming from stationary sources, e.g. power plants, steel mills, smelters, cement plants, refineries or incinerators |
| N | Y02A 50/2354 | . . . . Cyclones   |
| N | Y02A 50/2355 | . . . . Filters  |
| N | Y02A 50/2356 | . . . . Scrubbers, spray chambers, pack towers   |
| N | Y02A 50/2357 | . . . . Electrostatic precipitators  |
| N | Y02A 50/2358 | . . . Biological purification of waste gases   |
| N | Y02A 50/2359 | . . . with gas-solid contact   |
| N | Y02A 50/24   | . . Pollution monitoring   |
| N | Y02A 50/241  | . . specially adapted for public areas   |
| N | Y02A 50/242  | . . characterized by the pollutant   |
| N | Y02A 50/243  | . . . Carbon monoxide [CO]   |
| N | Y02A 50/244  | . . . Carbon dioxide [CO <sub>2</sub> ]  |
| N | Y02A 50/245  | . . . Nitrogen Oxides [NO <sub>x</sub> ]   |
| N | Y02A 50/246  | . . . Ammonia [NH <sub>3</sub> ]   |
| N | Y02A 50/247  | . . . Ozone [O <sub>3</sub> ]  |
| N | Y02A 50/248  | . . . Sulfur oxides [SO <sub>x</sub> ]   |
| N | Y02A 50/249  | . . . Volatile Organic Compounds [VOC]   |
| N | Y02A 50/25   | . . . Atmospheric particulate matter [PM] e.g. carbon smoke microparticles, smog, aerosol particles, dust  |
| N | Y02A 50/30   | . Against vector-borne diseases, e.g. mosquito-borne, fly-borne, tick-borne or waterborne diseases whose impact is exacerbated by climate change   |
| N | Y02A 50/31   | . . Vector control   |
| N | Y02A 50/32   | . . using natural substances as pesticides or insecticides, for fighting the disease vector  |
| N | Y02A 50/321  | . . . characterised by the vector  |
| N | Y02A 50/322  | . . . . Ticks  |
| N | Y02A 50/323  | . . . . Insects  |
| N | Y02A 50/324  | . . . . Stink bugs, bed bugs, kissing bugs or triatomine bugs  |
| N | Y02A 50/325  | . . . . Chigoe or jigger fleas, cat fleas, moorhen fleas or rat fleas  |
| N | Y02A 50/326  | . . . . Sand flies, black flies or Tsetse flies  |
| N | Y02A 50/327  | . . . . Mosquitos  |
| N | Y02A 50/328  | . . . . Aedes  |
| N | Y02A 50/329  | . . . . Culex  |
| N | Y02A 50/33   | . . . . Anopheles; Culiseta; Mansonia; Psorophora  |
| N | Y02A 50/331  | . . . . Snails of the genus Biomphalaria, Oncomelania or Bulinus   |
| N | Y02A 50/332  | . . . characterised by the natural substance   |



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| N | Y02A 50/333 | . . . . . Substances of botanical origin, e.g. essential oils, waxes, flowers, seeds, leafs or wood |
| N | Y02A 50/334 | . . . . . Plant oils, i.e. vegetable or essential oils  |
| N | Y02A 50/335 | . . . . . Canola oil  |
| N | Y02A 50/336 | . . . . . Castor oil  |
| N | Y02A 50/337 | . . . . . Catnip oil, e.g. nepetalactone  |
| N | Y02A 50/338 | . . . . . Cedar oil   |
| N | Y02A 50/339 | . . . . . Cinnamon oil  |
| N | Y02A 50/34  | . . . . . Citronella oil  |
| N | Y02A 50/341 | . . . . . Coconut oil   |
| N | Y02A 50/342 | . . . . . Eucalyptus oil  |
| N | Y02A 50/343 | . . . . . Lemon oil   |
| N | Y02A 50/344 | . . . . . Geranium oil  |
| N | Y02A 50/345 | . . . . . Mustard oil   |
| N | Y02A 50/346 | . . . . . Neem oil, e.g. Azadirachtin   |
| N | Y02A 50/347 | . . . . . Orange oil  |
| N | Y02A 50/348 | . . . . . Soybean oil   |
| N | Y02A 50/349 | . . . . . Camphor   |
| N | Y02A 50/35  | . . . . . Garlic  |
| N | Y02A 50/351 | . . . . . Pepper  |
| N | Y02A 50/352 | . . . . . Rotenone  |
| N | Y02A 50/353 | . . . . . Tobacco or nicotine   |
| N | Y02A 50/354 | . . . . . Pyrethrum, e.g. Chrysanthemum cinerariifolium   |
| N | Y02A 50/356 | . . . . . Fermented microbes, e.g. avermectins or spinosad  |
| N | Y02A 50/357 | . . . . . Substances of mineral origin  |
| N | Y02A 50/358 | . . . . . Sulfur  |
| N | Y02A 50/359 | . . . . . Kaolin; Diatomaceous earth  |
| N | Y02A 50/36  | . . . . . Natural soaps   |
| N | Y02A 50/37  | . . . Means for catching or killing the vector, e.g. traps or nets                                  |
| N | Y02A 50/371 | . . . . the vector being mosquitos  |
| N | Y02A 50/372 | . . . . Impregnated bed nets; Long-lasting insecticidal bed nets [LLINs]                            |
| N | Y02A 50/373 | . . . . the vector being flies  |
| N | Y02A 50/374 | . . . . the vector being stink bugs, kissing bugs, triatomine bugs or fleas                         |
| N | Y02A 50/375 | . . . . the vector being ticks  |
| N | Y02A 50/38  | . . Medical treatment of vector-borne diseases characterised by the agent                           |
| N | Y02A 50/381 | . . . the vector-borne disease being caused by a virus  |
| N | Y02A 50/382 | . . . . of the genus Alphavirus, i.e. Chikungunya   |
| N | Y02A 50/383 | . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera        |
| N | Y02A 50/384 | . . . . of the genus Flavivirus   |
| N | Y02A 50/385 | . . . . the disease being Dengue  |
| N | Y02A 50/386 | . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera        |
| N | Y02A 50/387 | . . . . the disease being Yellow fever, i.e. Ochropyra  |

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| N | Y02A 50/388 | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera   |
| N | Y02A 50/389 | . . . . . the disease being Japanese encephalitis  |
| N | Y02A 50/39  | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera   |
| N | Y02A 50/391 | . . . . . the disease being Zika   |
| N | Y02A 50/392 | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera   |
| N | Y02A 50/393 | . . . . . the disease being West Nile fever  |
| N | Y02A 50/394 | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera   |
| N | Y02A 50/395 | . . . . . the disease being Tick-borne encephalitis [TBE]  |
| N | Y02A 50/396 | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera   |
| N | Y02A 50/397 | . . . . of the genus <i>Nairovirus</i> , i.e. Congo-Crimean haemorrhagic fever or Rift valley fever or Hantaan haemorrhagic fever  |
| N | Y02A 50/398 | . . . the vector-borne disease being caused by a bacteria  |
| N | Y02A 50/399 | . . . . of the genus <i>Borrellia</i>  |
| N | Y02A 50/40  | . . . . . the bacteria being <i>Borrelia crocidurae</i> , <i>Borrelia duttoni</i> , <i>Borrelia hermsii</i> , <i>Borrelia hispanica</i> , <i>Borrelia miyamotoi</i> , <i>Borrelia parkeri</i> or <i>Borrelia turicatae</i> , i.e. relapsing fever or borreliosis |
| N | Y02A 50/401 | . . . . . the bacteria being <i>Borrelia burgdorferi</i> , i.e. Lyme disease or Lyme borreliosis   |
| N | Y02A 50/402 | . . . . of the genus <i>Rickettsia</i> , <i>Orientia</i> , <i>Ehrlichia</i> , <i>Neorickettsia</i> , <i>Neoehrlichia</i> or <i>Anaplasma</i> , i.e. Rickettsial diseases, e.g. spotted fever   |
| N | Y02A 50/403 | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera   |
| N | Y02A 50/404 | . . . . . the bacteria being <i>Francisella tularensis</i> , i.e. Tularemia  |
| N | Y02A 50/405 | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera   |
| N | Y02A 50/406 | . . . . . the bacteria being <i>Yersinia pestis</i> , i.e. Plague  |
| N | Y02A 50/407 | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera   |
| N | Y02A 50/408 | . . . the vector-borne disease being caused by a protozoa  |
| N | Y02A 50/409 | . . . . of the genus <i>Leishmania</i> i.e. Leishmaniasis, Sand-fly fever, phlebotomus fever, kala-azar, black fever or Dumdum fever   |
| N | Y02A 50/41  | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera   |
| N | Y02A 50/411 | . . . . of the genus <i>Plasmodium</i> , i.e. Malaria  |
| N | Y02A 50/412 | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera   |
| N | Y02A 50/413 | . . . . of the genus <i>Trypanosoma</i>  |
| N | Y02A 50/414 | . . . . . the protozoa being <i>Trypanosoma cruzi</i> i.e. Chagas disease or American trypanosomiasis  |
| N | Y02A 50/415 | . . . . . the protozoa being <i>Trypanosoma brucei gambiense</i> or <i>Trypanosoma brucei rhodesiense</i> , i.e. Human African trypanosomiasis or sleeping sickness  |
| N | Y02A 50/416 | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera   |

- N Y02A 50/417 . . . the vector-borne disease being caused by a helminth, i.e. Helmanthiasis
- N Y02A 50/418 . . . . of the phylum nematoda
- N Y02A 50/419 . . . . . the nematode being *Dracunculus medinensis* or Guinea worm, i.e. Dracunculiasis
- N Y02A 50/42 . . . . . the nematode being a filarial worm
- N Y02A 50/421 . . . . . the filarial worm being *Wuchereria bancrofti*, *brugia malayi* or *Brugia timor*, i.e. Lymphatic filariasis
- N Y02A 50/422 . . . . . the filarial worm being *Onchocerca volvulus*, i.e. Onchocerciasis or river blindness
- N Y02A 50/423 . . . . the helminth being a trematode flatworm of the genus *Schistosoma*, i.e. Schistosomiasis or bilharziasis
- N Y02A 50/45 . . Means for preventing water-borne diseases
- N Y02A 50/451 . . . Genetic or molecular screening of pathogens
- N Y02A 50/452 . . . Non water-based sanitation
- N Y02A 50/453 . . . . Pit latrines
- N Y02A 50/454 . . . . Dry closets e.g. incinerator closets
- N Y02A 50/455 . . . . . having means for adding powder, e.g. earth
- N Y02A 50/456 . . . . Chemical toilets
- N Y02A 50/46 . . Medical treatment of waterborne diseases characterized by the agent
- N Y02A 50/462 . . . The waterborne disease being caused by a virus
- N Y02A 50/463 . . . . the virus being the Hepatitis A virus [HAV]
- N Y02A 50/464 . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
- N Y02A 50/465 . . . . the virus being the poliovirus, i.e. Poliomyelitis or Polio
- N Y02A 50/466 . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
- N Y02A 50/467 . . . . of the genus Polyomavirus: JC virus or BK virus, i.e. Polyomavirus infection
- N Y02A 50/468 . . . The waterborne disease being caused by a bacteria
- N Y02A 50/469 . . . . the bacteria being *Clostridium botulinum*, i.e. Botulism
- N Y02A 50/47 . . . . the bacteria being *Campylobacter jejuni*, i.e. Campylobacteriosis
- N Y02A 50/471 . . . . the bacteria being *Vibrio cholerae*, i.e. Cholera
- N Y02A 50/472 . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
- N Y02A 50/473 . . . . the bacteria being *Escherichia coli*, i.e. *E. coli* Infection
- N Y02A 50/474 . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
- N Y02A 50/475 . . . . of the genus *Shigella*, i.e. Dysentery
- N Y02A 50/476 . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
- N Y02A 50/478 . . . . of the genus *Legionella*, i.e. Legionellosis or Legionnaires' disease
- N Y02A 50/479 . . . . of the genus *Leptospira*, i.e. Leptospirosis
- N Y02A 50/48 . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
- N Y02A 50/481 . . . . of the genus *Salmonella*, i.e. Salmonellosis
- N Y02A 50/482 . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera

|          |                   |   |
|----------|-------------------|---|
| N        | Y02A 50/483       | . . . . . the bacteria being <i>Salmonella typhi</i> , i.e. Typhoid fever   |
| N        | Y02A 50/484       | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera  |
| N        | Y02A 50/485       | . . . The waterborne disease being caused by a protozoa   |
| N        | Y02A 50/486       | . . . . the protozoan being <i>Entamoeba histolytica</i> , i.e. Amoebiasis  |
| N        | Y02A 50/487       | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera  |
| N        | Y02A 50/488       | . . . . the protozoan being <i>Cryptosporidium parvum</i> , i.e. Cryptosporidiosis  |
| N        | Y02A 50/489       | . . . . . the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera  |
| N        | Y02A 50/49        | . . . . the protozoan being <i>Cyclospora cayetanensis</i> , i.e. Cyclosporiasis  |
| N        | Y02A 50/491       | . . . . the protozoan being <i>Giardia lamblia</i> or <i>Giardia intestinalis</i> , i.e. Giardiasis   |
| N        | Y02A 50/492       | . . . . of the phylum Microsporidia, i.e. Microsporidiosis  |
| N        | Y02A 50/50        | . . Chemical or biological analysis of biological material for identifying the disease, e.g. blood or urine testing, rapid diagnostic tests [RTDs] or immunological testing |
| N        | Y02A 50/51        | . . . the disease being Chikungunya fever   |
| N        | Y02A 50/52        | . . . the disease being Cholera   |
| N        | Y02A 50/53        | . . . the disease being Dengue fever  |
| N        | Y02A 50/54        | . . . the disease being Hepatitis A   |
| N        | Y02A 50/55        | . . . the disease being Leishmaniasis, Sand-fly fever, phlebotomus fever, kala-azar, black fever or Dumdum fever  |
| N        | Y02A 50/56        | . . . the disease being Leptospirosis   |
| N        | Y02A 50/57        | . . . the disease being Lyme disease or Lyme borreliosis  |
| N        | Y02A 50/58        | . . . the disease being Malaria   |
| N        | Y02A 50/59        | . . . the disease being Typhus or typhoid fever   |
| N        | Y02A 50/60        | . . . the disease being Yellow fever or Ochropyra   |
| <b>N</b> | <b>Y02A 90/00</b> | <b>Technologies having an indirect contribution to adaptation to climate change</b>   |
| N        | Y02A 90/10        | . Information and communication technologies [ICT] supporting adaptation to climate change.   |
| N        | Y02A 90/12        | . . Specially adapted for meteorology, e.g. weather forecasting, climate modelling  |
| N        | Y02A 90/13        | . . . Monitoring or forecasting for establishing the amount of global warming   |
| N        | Y02A 90/14        | . . . Real-time meteorological measuring  |
| N        | Y02A 90/15        | . . . Weather or climate specific geographic information systems [GIS], databases or models   |
| N        | Y02A 90/16        | . . . Climate simulation; Climate scenario development  |
| N        | Y02A 90/17        | . . . Weather surveillance systems using the reflection or reradiation of electromagnetic waves   |
| N        | Y02A 90/18        | . . . . Radar-based   |
| N        | Y02A 90/19        | . . . . Based on light detection and ranging [LIDAR] systems  |
| N        | Y02A 90/20        | . . specially adapted for the handling or processing of medical or healthcare data, relating to climate change  |
| N        | Y02A 90/22        | . . . for administrative, organizational or management aspects influenced by climate change adaptation  |

- N Y02A 90/24      • • • *for detecting, monitoring or modelling of medical or healthcare patterns in geographical or climatic regions, e.g. epidemics or pandemics*
- N Y02A 90/26      • • • *for diagnosis or treatment, for medical simulation or for handling medical devices*
- N Y02A 90/30      • *Assessment of water resources*
- N Y02A 90/32      • • *based on topography, e.g. mapping, location, large scale investigation of water resources or satellite or aerial imagery*
- N Y02A 90/34      • • *Hydrogeology; Hydrogeophysics*
- N Y02A 90/342      • • • *by measuring electric resistivity*
- N Y02A 90/344      • • • *by measuring magnetic field strength*
- N Y02A 90/36      • • *Seismic methods or vibration analysis*
- N Y02A 90/40      • *Monitoring or fighting invasive species*

**Project: RP0512 (Y02B)**

- D Y02B 60/00      **Information and communication technologies [ICT] aiming at the reduction of own energy use**  
                                  <administratively transferred to [Y02D 10/00](#)>
- D Y02B 60/10      • Energy efficient computing  
                                  <administratively transferred to [Y02D 10/00](#)>
- D Y02B 60/12      • • Reducing energy-consumption at the single machine level, e.g. processors, personal computers, peripherals, power supply  
                                  <administratively transferred to [Y02D 10/10](#)>
- D Y02B 60/1203      • • • involving a plurality of components  
                                  <administratively transferred to [Y02D 10/11](#)>
- D Y02B 60/1207      • • • acting upon the main processing unit  
                                  <administratively transferred to [Y02D 10/12](#)>
- D Y02B 60/121      • • • • Low-power processors  
                                  <administratively transferred to [Y02D 10/122](#)>
- D Y02B 60/1214      • • • • Performance modes  
                                  <administratively transferred to [Y02D 10/124](#)>
- D Y02B 60/1217      • • • • Frequency modification  
                                  <administratively transferred to [Y02D 10/126](#)>
- D Y02B 60/1221      • • • • Clock disabling  
                                  <administratively transferred to [Y02D 10/128](#)>
- D Y02B 60/1225      • • • Access, addressing or allocation within memory systems or architectures, e.g. to reduce power consumption or heat production, or to increase battery life  
                                  <administratively transferred to [Y02D 10/13](#)>
- D Y02B 60/1228      • • • Interconnection, or transfer of information or other signals between, memories, peripherals or central processing units  
                                  <administratively transferred to [Y02D 10/14](#)>
- D Y02B 60/1232      • • • Acting upon peripherals  
                                  <administratively transferred to [Y02D 10/15](#)>
- D Y02B 60/1235      • • • • the peripheral being a bus  
                                  <administratively transferred to [Y02D 10/151](#)>
- D Y02B 60/1239      • • • • the peripheral being a memory control unit [MCU]  
                                  <administratively transferred to [Y02D 10/152](#)>
- D Y02B 60/1242      • • • • the peripheral being a display  
                                  <administratively transferred to [Y02D 10/153](#)>

- D Y02B 60/1246
  - • • the peripheral being disc or storage devices  
<administratively transferred to [Y02D 10/154](#)>
- D Y02B 60/125
  - • • • The peripheral being a CD-ROM unit  
<administratively transferred to [Y02D 10/1542](#)>
- D Y02B 60/1253
  - • • the peripheral being a cursor control device  
<administratively transferred to [Y02D 10/155](#)>
- D Y02B 60/1257
  - • • the peripheral being a keyboard  
<administratively transferred to [Y02D 10/156](#)>
- D Y02B 60/126
  - • • the peripheral being a modem  
<administratively transferred to [Y02D 10/157](#)>
- D Y02B 60/1264
  - • • the peripheral being a PCMCIA card  
<administratively transferred to [Y02D 10/158](#)>
- D Y02B 60/1267
  - • • the peripheral being a printer  
<administratively transferred to [Y02D 10/159](#)>
- D Y02B 60/1271
  - • • • Data transfer to print units  
<administratively transferred to [Y02D 10/1592](#)>
- D Y02B 60/1275
  - • Cooling means for computing equipment provided with thermal management  
<administratively transferred to [Y02D 10/16](#)>
- D Y02B 60/1278
  - • Power management  
<administratively transferred to [Y02D 10/17](#)>
- D Y02B 60/1282
  - • • Selective power distribution  
<administratively transferred to [Y02D 10/171](#)>
- D Y02B 60/1285
  - • • Controlling the supply voltage  
<administratively transferred to [Y02D 10/172](#)>
- D Y02B 60/1289
  - • • Monitoring user presence  
<administratively transferred to [Y02D 10/173](#)>
- D Y02B 60/1292
  - • • Battery monitoring  
<administratively transferred to [Y02D 10/174](#)>
- D Y02B 60/1296
  - • • Power strips aiming to energy efficient operation  
<administratively transferred to [Y02D 10/175](#)>
- D Y02B 60/14
  - Reducing energy consumption by means of multiprocessor or multiprocessing based techniques, other than acting upon the power supply  
<administratively transferred to [Y02D 10/20](#)>
- D Y02B 60/142
  - • Resource allocation  
<administratively transferred to [Y02D 10/22](#)>
- D Y02B 60/144
  - • Scheduling  
<administratively transferred to [Y02D 10/24](#)>
- D Y02B 60/146
  - • Increasing resource utilisation, e.g. virtualisation, consolidation  
<administratively transferred to [Y02D 10/26](#)>
- D Y02B 60/148
  - • Load distribution  
<administratively transferred to [Y02D 10/28](#)>
- D Y02B 60/16
  - Reducing energy consumption in distributed systems  
<administratively transferred to [Y02D 10/30](#)>
- D Y02B 60/162
  - • Delegation or migration  
<administratively transferred to [Y02D 10/32](#)>
- D Y02B 60/165
  - • Monitoring  
<administratively transferred to [Y02D 10/34](#)>
- D Y02B 60/167
  - • Resource sharing  
<administratively transferred to [Y02D 10/36](#)>

- D Y02B 60/18
  - • Reducing energy consumption at software or application-level  
<administratively transferred to [Y02D 10/40](#)>
- D Y02B 60/181
  - • • Compilation  
<administratively transferred to [Y02D 10/41](#)>
- D Y02B 60/183
  - • • Installation  
<administratively transferred to [Y02D 10/42](#)>
- D Y02B 60/185
  - • • At application level, i.e. feedback, prediction, usage patterns  
<administratively transferred to [Y02D 10/43](#)>
- D Y02B 60/186
  - • • Suspending or hibernating, performance or eco-modes, operating system support, e.g. advanced configuration and power interface [ACPI]  
<administratively transferred to [Y02D 10/44](#)>
- D Y02B 60/188
  - • • Information retrieval in databases  
<administratively transferred to [Y02D 10/45](#)>
- D Y02B 60/30
  - Techniques for reducing energy-consumption in wire-line communication networks  
<administratively transferred to [Y02D 50/00](#)>
- D Y02B 60/31
  - • using reduced link rate, e.g. adaptive link rate, not involving auto-negotiation  
<administratively transferred to [Y02D 50/10](#)>
- D Y02B 60/32
  - • using subset functionality  
<administratively transferred to [Y02D 50/20](#)>
- D Y02B 60/33
  - • by selective link activation in bundled links  
<administratively transferred to [Y02D 50/30](#)>
- D Y02B 60/34
  - • by operating in low-power or sleep mode  
<administratively transferred to [Y02D 50/40](#)>
- D Y02B 60/35
  - • • specifically suitable for Ethernet, e.g. IEEE802.3az  
<administratively transferred to [Y02D 50/42](#)>
- D Y02B 60/36
  - • • specifically suitable for DSL  
<administratively transferred to [Y02D 50/44](#)>
- D Y02B 60/40
  - High level techniques for reducing energy-consumption in communication networks  
<administratively transferred to [Y02D 30/00](#)>
- D Y02B 60/41
  - • by proxying, i.e. delegating network functionalities while in low-power mode, e.g. ECMA 393 standard  
<administratively transferred to [Y02D 30/10](#)>
- D Y02B 60/42
  - • by energy-aware routing  
<administratively transferred to [Y02D 30/20](#)>
- D Y02B 60/43
  - • by signaling and coordination, e.g. signaling reduction, link layer discovery protocol [LLDP], control policies, green TCP  
<administratively transferred to [Y02D 30/30](#)>
- D Y02B 60/44
  - • • specifically suitable for Ethernet, e.g. IEEE802.3az  
<administratively transferred to [Y02D 30/32](#)>
- D Y02B 60/45
  - • • specifically suitable for DSL  
<administratively transferred to [Y02D 30/34](#)>
- D Y02B 60/46
  - • Application modification for reducing energy-consumption, e.g. green peer-to-peer,  
<administratively transferred to [Y02D 30/40](#)>
- D Y02B 60/50
  - Techniques for reducing energy-consumption in wireless communication networks  
<administratively transferred to [Y02D 70/00](#)>



**Project: RP0512 (Y02D)****N Y02D****CLIMATE CHANGE MITIGATION TECHNOLOGIES IN INFORMATION AND COMMUNICATION TECHNOLOGIES [ICT], I.E. INFORMATION AND COMMUNICATION TECHNOLOGIES AIMING AT THE REDUCTION OF THEIR OWN ENERGY USE**NOTES

1. This subclass covers information and communication technologies [ICT] whose purpose is to minimize the use of energy during the operation of the involved ICT equipment.

2. This subclass does not cover the use of an ICT technology supporting energy efficient operation of a further piece of equipment, nor the reuse or recycling of ICT equipment.

**N Y02D 10/00****Energy efficient computing**

N Y02D 10/10

- Reducing energy consumption at the single machine level, e.g. processors, personal computers, peripherals or power supply

N Y02D 10/11

- • involving a plurality of components

N Y02D 10/12

- • acting upon the main processing unit

N Y02D 10/122

- • • Low-power processors

N Y02D 10/124

- • • Performance modes

N Y02D 10/126

- • • Frequency modification

N Y02D 10/128

- • • Clock disabling

N Y02D 10/13

- • Access, addressing or allocation within memory systems or architectures, e.g. to reduce power consumption or heat production or to increase battery life

N Y02D 10/14

- • Interconnection, or transfer of information or other signals between, memories, peripherals or central processing units

N Y02D 10/15

- • acting upon peripherals

N Y02D 10/151

- • • the peripheral being a bus

N Y02D 10/152

- • • the peripheral being a memory control unit [MCU]

N Y02D 10/153

- • • the peripheral being a display

N Y02D 10/154

- • • the peripheral being disc or storage devices

N Y02D 10/1542

- • • • the peripheral being a CD-ROM unit

N Y02D 10/155

- • • the peripheral being a cursor control device

N Y02D 10/156

- • • the peripheral being a keyboard

N Y02D 10/157

- • • the peripheral being a modem

N Y02D 10/158

- • • the peripheral being a PCMCIA card

N Y02D 10/159

- • • the peripheral being a printer

N Y02D 10/1592

- • • • Data transfer to print units

N Y02D 10/16

- • Cooling means for computing equipment provided with thermal management

N Y02D 10/17

- • Power management

N Y02D 10/171

- • • Selective power distribution

N Y02D 10/172

- • • Controlling the supply voltage

N Y02D 10/173

- • • Monitoring user presence

N Y02D 10/174

- • • Battery monitoring

N Y02D 10/175

- • • Power strips aiming to energy efficient operation

N Y02D 10/20

- Reducing energy consumption by means of multiprocessor or multiprocessing based techniques, other than acting upon the power supply

|          |                   |   |
|----------|-------------------|---|
| N        | Y02D 10/22        | • • Resource allocation   |
| N        | Y02D 10/24        | • • Scheduling  |
| N        | Y02D 10/26        | • • Increasing resource utilisation, e.g. virtualisation, consolidation   |
| N        | Y02D 10/28        | • • Load distribution   |
| N        | Y02D 10/30        | • Reducing energy consumption in distributed systems  |
| N        | Y02D 10/32        | • • Delegation or migration   |
| N        | Y02D 10/34        | • • Monitoring  |
| N        | Y02D 10/36        | • • Resource sharing  |
| N        | Y02D 10/40        | • Reducing energy consumption at software or application level  |
| N        | Y02D 10/41        | • • Compilation   |
| N        | Y02D 10/42        | • • Installation  |
| N        | Y02D 10/43        | • • At application level, i.e. feedback, prediction or usage patterns   |
| N        | Y02D 10/44        | • • Suspending or hibernating, performance or eco-modes, operating system support, e.g. advanced configuration and power interface [ACPI] |
| N        | Y02D 10/45        | • • Information retrieval in databases  |
| <b>N</b> | <b>Y02D 30/00</b> | <b>High level techniques for reducing energy consumption in communication networks</b>  |
| N        | Y02D 30/10        | • by proxying, i.e. delegating network functionalities while in low-power mode, e.g. ECMA 393 standard                                    |
| N        | Y02D 30/20        | • by energy-aware routing   |
| N        | Y02D 30/30        | • by signaling and coordination, e.g. signaling reduction, link layer discovery protocol [LLDP], control policies, green TCP              |
| N        | Y02D 30/32        | • • specifically suitable for Ethernet, e.g. IEEE802.3az  |
| N        | Y02D 30/34        | • • specifically suitable for DSL   |
| N        | Y02D 30/40        | • Application modification for reducing energy consumption, e.g. green peer-to-peer,  |
| <b>N</b> | <b>Y02D 50/00</b> | <b>Techniques for reducing energy consumption in wire-line communication networks</b>   |
| N        | Y02D 50/10        | • using reduced link rate, e.g. adaptive link rate, not involving auto-negotiation  |
| N        | Y02D 50/20        | • using subset functionality  |
| N        | Y02D 50/30        | • by selective link activation in bundled links   |
| N        | Y02D 50/40        | • by operating in low-power or sleep mode   |
| N        | Y02D 50/42        | • • specifically suitable for Ethernet, e.g. IEEE802.3az  |
| N        | Y02D 50/44        | • • specifically suitable for DSL   |
| <b>N</b> | <b>Y02D 70/00</b> | <b>Techniques for reducing energy consumption in wireless communication networks</b>  |
| N        | Y02D 70/10        | • according to the Radio Access Technology [RAT]  |
| N        | Y02D 70/12        | • • in 3rd Generation Partnership Project [3GPP] networks   |
| N        | Y02D 70/122       | • • • in 2nd generation [2G] networks   |
| N        | Y02D 70/1222      | • • • • in Global System for Mobile Communications [GSM] networks   |
| N        | Y02D 70/1224      | • • • • in General Packet Radio Service [GPRS] networks   |
| N        | Y02D 70/1226      | • • • • in Enhanced Data rates for GSM Evolution [EDGE] networks  |
| N        | Y02D 70/124       | • • • in 3rd generation [3G] networks   |
| N        | Y02D 70/1242      | • • • • in Universal Mobile Telecommunications Systems [UMTS] networks  |
| N        | Y02D 70/1244      | • • • • in High-Speed Downlink Packet Access [HSDPA] networks   |

|   |              |  |
|---|--------------|--|
| N | Y02D 70/1246 | • • • in High-Speed Uplink Packet Access [HSUPA] networks  |
| N | Y02D 70/126  | • • • in 4th generation [4G] networks  |
| N | Y02D 70/1262 | • • • in Long-Term Evolution [LTE] networks  |
| N | Y02D 70/1264 | • • • in Long-Term Evolution Advanced [LTE-A] networks   |
| N | Y02D 70/14   | • • in Institute of Electrical and Electronics Engineers [IEEE] networks   |
| N | Y02D 70/142  | • • • in Wireless Local Area Networks [WLAN]   |
| N | Y02D 70/144  | • • • in Bluetooth and Wireless Personal Area Networks [WPAN]  |
| N | Y02D 70/146  | • • • in Worldwide Interoperability for Microwave Access [WiMAX] networks  |
| N | Y02D 70/16   | • • in other wireless communication networks   |
| N | Y02D 70/162  | • • • in Zigbee networks   |
| N | Y02D 70/164  | • • • in Satellite Navigation receivers  |
| N | Y02D 70/166  | • • • in Radio Frequency Identification [RF-ID] transceivers   |
| N | Y02D 70/168  | • • • in Digital Video Broadcasting [DVB] networks   |
| N | Y02D 70/20   | • independent of Radio Access Technologies   |
| N | Y02D 70/21   | • • in machine-to-machine [M2M] and device-to-device [D2D] communications  |
| N | Y02D 70/22   | • • in peer-to-peer [P2P], ad hoc and mesh networks  |
| N | Y02D 70/23   | • • in Voice over IP [VoIP] networks   |
| N | Y02D 70/24   | • • in Discontinuous Reception [DRX] networks  |
| N | Y02D 70/25   | • • in Discontinuous Transmission [DTX] networks   |
| N | Y02D 70/26   | • • in wearable devices, e.g. watches, glasses   |
| N | Y02D 70/30   | • Power-based selection of communication route or path   |
| N | Y02D 70/32   | • • based on wireless node resources   |
| N | Y02D 70/322  | • • • based on characteristics of available antennas   |
| N | Y02D 70/324  | • • • based on transmission power  |
| N | Y02D 70/326  | • • • based on available power or energy   |
| N | Y02D 70/34   | • • based on transmission quality or channel quality   |
| N | Y02D 70/38   | • • based on geographic position or location   |
| N | Y02D 70/39   | • • using selective relaying for reaching a BTS [Base Transceiver Station] or an access point  |
| N | Y02D 70/40   | • According to the transmission technology   |
| N | Y02D 70/42   | • • Near-field transmission systems, e.g. inductive or capacitive coupling   |
| N | Y02D 70/44   | • • Radio transmission systems, i.e. using radiation field   |
| N | Y02D 70/442  | • • • Diversity systems; Multi-antenna systems, i.e. transmission or reception using multiple antennas   |
| N | Y02D 70/444  | • • • using two or more spaced independent antennas  |
| N | Y02D 70/446  | • • • Relay systems  |
| N | Y02D 70/448  | • • • for communication between two or more posts  |
| N | Y02D 70/449  | • • • at least one of which is mobile  |
| N | Y02D 70/46   | • • Transmission systems employing electromagnetic waves other than radio-waves, e.g. infrared, visible or ultraviolet light, or employing corpuscular radiation, e.g. quantum communication |
| N | Y02D 70/48   | • • Transmission systems employing sonic, ultrasonic or infrasonic waves   |

**Project: N/A (Y10S)**

**U** Y10S 505/00 **Superconductor technology: apparatus, material, process**

- U Y10S 505/775
  - High  $t_c$ , above 30 K, superconducting material
- U Y10S 505/776
  - • Containing transition metal oxide with rare earth or alkaline earth
- Y10S 505/777
  - • • Lanthanum, e.g.  $\text{La}_2\text{CuO}_4$