

CPC COOPERATIVE PATENT CLASSIFICATION

C CHEMISTRY; METALLURGY

(NOTES omitted)

CHEMISTRY

C08 ORGANIC MACROMOLECULAR COMPOUNDS; THEIR PREPARATION OR CHEMICAL WORKING-UP; COMPOSITIONS BASED THEREON

C08J WORKING-UP; GENERAL PROCESSES OF COMPOUNDING; AFTER-TREATMENT NOT COVERED BY SUBCLASSES [C08B](#), [C08C](#), [C08F](#), [C08G](#) or [C08H](#) (working, e.g. shaping, of plastics [B29](#))

NOTES

- 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.
- 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 7/0427](#) 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 7/0427](#): the polymeric substrate to be coated.
 - [C08J 9/0061](#): the polymeric component in majority in a multicomponents foamable blend.
- 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 7/0427](#): 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.

WARNINGS

- The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

C08J 5/14	covered by	B24D 3/22 , B24D 3/28 , F16D 69/02
C08J 5/16	covered by	C10N 2050/14
- In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

3/00 Processes of treating or compounding macromolecular substances

3/005 . {Processes for mixing polymers}

- 3/02 . . Making solutions, dispersions, lattices or gels by other methods than by solution, emulsion or suspension polymerisation techniques
- 3/03 . . . in aqueous media
- 3/05 from solid polymers
- 3/07 from polymer solutions
- 3/075 Macromolecular gels
- 3/09 . . . in organic liquids
- 3/091 {characterised by the chemical constitution of the organic liquid}
- 3/092 {Hydrocarbons}
- 3/093 {Halogenated hydrocarbons}
- 3/095 {Oxygen containing compounds}
- 3/096 {Nitrogen containing compounds}
- 3/097 {Sulfur containing compounds}
- 3/098 {Other compounds}
- 3/11 from solid polymers
- 3/12 . . Powdering or granulating
- 3/122 . . . {Pulverisation by spraying}
- 3/124 . . . {Treatment for improving the free-flowing characteristics}
- 3/126 . . . {Polymer particles coated by polymer, e.g. core shell structures}
- 3/128 . . . {Polymer particles coated by inorganic and non-macromolecular organic compounds}
- 3/14 . . . by precipitation from solutions {[C08J 3/122](#) takes precedence}
- 3/16 . . . by coagulating dispersions {[C08J 3/122](#) takes precedence}
- 3/18 . . Plasticising macromolecular compounds ([plasticisers C08K](#))
- 3/20 . . Compounding polymers with additives, e.g. colouring
- 3/201 . . . {Pre-melted polymers}
- 3/203 . . . {Solid polymers with solid and/or liquid additives}
- 3/205 . . . in the presence of a {continuous} liquid phase
- 3/2053 {the additives only being premixed with a liquid phase}
- 3/2056 {the polymer being pre-melted}
- 3/21 the polymer being premixed with a liquid phase
- 3/212 {and solid additives}
- 3/215 at least one additive being also premixed with a liquid phase
- 3/22 . . . using masterbatch techniques
- 3/223 {Packed additives}
- 3/226 {using a polymer as a carrier}
- 3/24 . . Crosslinking, e.g. vulcanising, of macromolecules ([mechanical aspects B29C 35/00](#); [crosslinking agents C08K](#))
- 3/241 . . . {Preventing premature crosslinking by physical separation of components, e.g. encapsulation}
- 3/242 . . . {Applying crosslinking or accelerating agent onto compounding ingredients such as fillers, reinforcements}
- 3/243 . . . {Two or more independent types of crosslinking for one or more polymers}
- 3/244 . . . {Stepwise homogeneous crosslinking of one polymer with one crosslinking system, e.g. partial curing}
- 3/245 . . . {Differential crosslinking of one polymer with one crosslinking type, e.g. surface crosslinking}
- 3/246 . . . {Intercrosslinking of at least two polymers}
- 3/247 . . . {Heating methods}
- 3/248 . . . {Measuring crosslinking reactions}
- 3/26 . . . of latex
- 3/28 . . . Treatment by wave energy or particle radiation
- 5/00** **Manufacture of articles or shaped materials containing macromolecular substances**
([manufacture of semi-permeable membranes B01D 67/00 - B01D 71/00](#))
- 5/005 . . {Reinforced macromolecular compounds with nanosized materials, e.g. nanoparticles, nanofibres, nanotubes, nanowires, nanorods or nanolayered materials}
- 5/02 . . Direct processing of dispersions, e.g. latex, to articles
- 5/04 . . Reinforcing macromolecular compounds with loose or coherent fibrous material
- 5/0405 . . . {with inorganic fibres}
- 5/041 {with metal fibres}
- 5/042 {with carbon fibres}
- 5/043 {with glass fibres}
- 5/045 . . . {with vegetable or animal fibrous material}
- 5/046 . . . {with synthetic macromolecular fibrous material}
- NOTE**
{ Note 2 following the title of subclass [C08J](#) may be applied }
- 5/047 . . . {with mixed fibrous material}
- 5/048 {Macromolecular compound to be reinforced also in fibrous form}
- 5/06 . . . using pretreated fibrous materials
- 5/08 glass fibres
- 5/10 . . . characterised by the additives used in the polymer mixture
- 5/12 . . Bonding of a preformed macromolecular material to the same or other solid material such as metal, glass, leather, e.g. using adhesives
- 5/121 . . . {by heating}
- 5/122 . . . {using low molecular chemically inert solvents, swelling or softening agents}
- 5/124 . . . {using adhesives based on a macromolecular component}
- 5/125 {Adhesives in organic diluents}
- 5/127 {Aqueous adhesives}
- 5/128 {Adhesives without diluent}
- 5/18 . . Manufacture of films or sheets
- 5/20 . . Manufacture of shaped structures of ion-exchange resins
- 5/22 . . Films, membranes or diaphragms
- NOTES**
- {Membranes of which at least the ion-exchanging parts are inorganic, i.e. mixtures of non polymeric ion exchange compounds, e.g. inorganic salts, and at least one polymer are classified in [C08J 5/22](#); membranes based on cellulose are classified in [C08J 5/2212](#).}
 - Methods for incorporating reinforcement supports or filling bodies are classified in [C08J 5/2206](#) (the support or filling body has no ion exchange activity).
 - Groups, e.g. SO₂F, which do not have ion-exchanging properties, but which may, by simple hydrolysis in an alkaline, neutral

C08J

C08J 5/22

(continued)

or acid medium, be transformed into ion-exchanging groups, e.g. SO₂H, are considered as such.

4. Ion-exchanging fibrous fabrics are considered as heterogeneous membranes and are classified in [C08J 5/2275](#); they include composite membranes, mixtures of two or more (ion exchange) polymers.

5. Membranes obtained by homogeneous melting or from a solution are considered as homogeneous, even if the membrane contains (after solidification of the melt or the solution) heterogeneous elements, e.g. filling bodies, supports e.g. in the form of fabrics, or the like, i.e. the ion exchange resin forms the membrane.

6. Reactions which change the nature of the ion-exchanging groups, introduction of ion-exchanging groups, after-treatment (membrane has already been formed) are classified in [C08J 5/2287](#).

7. Quaternising reactions are not considered as after-treatments.

5/2206 . . . {based on organic and/or inorganic macromolecular compounds}

5/2212 {Natural macromolecular compounds}

5/2218 {Synthetic macromolecular compounds}

5/2225 {containing fluorine}

5/2231 {based on macromolecular compounds obtained by reactions involving unsaturated carbon-to-carbon bonds}

5/2237 {containing fluorine}

5/2243 {obtained by introduction of active groups capable of ion-exchange into compounds of the type [C08J 5/2231](#)}

5/225 {containing fluorine}

5/2256 {based on macromolecular compounds obtained by reactions other than those involving carbon-to-carbon bonds, e.g. obtained by polycondensation}

5/2262 {containing fluorine}

5/2268 {based on macromolecular compounds obtained by reactions involving unsaturated carbon-to-carbon bonds, and by reactions not involving this type of bond}

5/2275 {Heterogeneous membranes}

5/2281 {fluorine containing heterogeneous membranes}

5/2287 . . . {After-treatment}

5/2293 {After-treatment of fluorine-containing membranes}

5/24 . . Impregnating materials with prepolymers which can be polymerised *in situ*, e.g. manufacture of preregs

NOTE

{In groups [C08J 5/24](#) - [C08J 5/249](#), the last place priority rule is not applied, i.e. the common rule is applied.}

5/241 . . {using inorganic fibres}

5/242 . . . {using metal fibres}

5/243 . . . {using carbon fibres}

5/244 . . . {using glass fibres}

5/245 . . {using natural fibres}

5/246 . . {using polymer based synthetic fibres}

5/247 . . {using fibres of at least two types}

5/248 . . {using pre-treated fibres}

5/249 . . {characterised by the additives used in the prepolymer mixture}

7/00 **Chemical treatment or coating of shaped articles made of macromolecular substances** (coating with metallic material [C23C](#); electrolytic deposition of metals [C25](#))

7/02 . . with solvents, e.g. swelling agents

7/04 . . Coating

7/042 . . {with two or more layers, where at least one layer of a composition contains a polymer binder}

7/0423 . . . {with at least one layer of inorganic material and at least one layer of a composition containing a polymer binder}

7/0427 . . {with only one layer of a composition containing a polymer binder (with more layers [C08J 7/042](#))}

7/043 . . Improving the adhesiveness of the coatings *per se*, e.g. forming primers (adhesives in the form of films or foils characterised by the primer layers between the polymer carriers and the adhesives [C09J 7/50](#))

7/044 . . Forming conductive coatings; Forming coatings having anti-static properties

7/046 . . Forming abrasion-resistant coatings; Forming surface-hardening coatings

7/048 . . Forming gas barrier coatings

7/05 . . Forming flame retardant coatings or fire resistant coatings

7/052 . . Forming heat-sealable coatings

7/054 . . Forming anti-misting or drip-proofing coatings

7/056 . . Forming hydrophilic coatings

7/06 . . with compositions not containing macromolecular substances

7/065 . . . {Low-molecular-weight organic substances, e.g. absorption of additives in the surface of the article}

7/08 . . {Heat treatment}

7/12 . . Chemical modification

7/123 . . {Treatment by wave energy or particle radiation ([C08J 7/18](#) takes precedence)}

7/126 . . {Halogenation}

7/14 . . with acids, their salts or anhydrides

7/16 . . with polymerisable compounds

7/18 . . . using wave energy or particle radiation

9/00 **Working-up of macromolecular substances to porous or cellular articles or materials; After-treatment thereof** (mechanical aspects of shaping of plastics or substances in a plastic state for the production of porous or cellular articles [B29C](#))

NOTE

In groups [C08J 9/16](#) - [C08J 9/22](#), the following term is used with the meaning indicated:

- "expandable" includes also expanding, pre-expanded or expanded.

{This Note corresponds to IPC Note (1) relating to [C08J 9/16](#) - [C08J 9/22](#).}

- 9/0004 . {Use of compounding ingredients, the chemical constitution of which is unknown, broadly defined, or irrelevant}
- 9/0009 . . {Phase change materials}
- 9/0014 . {Use of organic additives}
- 9/0019 . . {halogenated}
- 9/0023 . . {containing oxygen}
- 9/0028 . . {containing nitrogen}
- 9/0033 . . {containing sulfur}
- 9/0038 . . {containing phosphorus}
- 9/0042 . . {containing silicon}
- 9/0047 . . {containing boron}
- 9/0052 . . {Organo-metallic compounds}
- 9/0057 . . {containing antimony, arsenic, or bismuth}
- 9/0061 . {characterized by the use of several polymeric components}
- 9/0066 . {Use of inorganic compounding ingredients}
- 9/0071 . . {Nanosized fillers, i.e. having at least one dimension below 100 nanometers}
- 9/0076 . . . {Nanofibres}
- 9/008 . . . {Nanoparticles}
- 9/0085 . {Use of fibrous compounding ingredients [\(C08J 9/0076 takes precedence\)](#)}
- 9/009 . {Use of pretreated compounding ingredients}
- 9/0095 . {Mixtures of at least two compounding ingredients belonging to different one-dot groups}
- 9/02 . using blowing gases generated by the reacting monomers or modifying agents during the preparation or modification of macromolecules
- 9/04 . using blowing gases generated by a previously added blowing agent
- 9/06 . . by a chemical blowing agent
- 9/065 . . . {Hydrides or carbides}
- 9/08 . . . developing carbon dioxide
- 9/10 . . . developing nitrogen {, the blowing agent being a compound containing a nitrogen-to-nitrogen bond}
- 9/101 {Agents modifying the decomposition temperature}
- 9/102 {Azo-compounds}
- 9/103 {Azodicarbonamide}
- 9/104 {Hydrazines; Hydrazides; Semicarbazides; Semicarbazones; Hydrazones; Derivatives thereof}
- 9/105 {containing sulfur}
- 9/106 {Azides}
- 9/107 {Nitroso compounds}
- 9/108 {in a heterocyclic ring containing at least one carbon atom}
- 9/12 . . by a physical blowing agent
- 9/122 . . . {Hydrogen, oxygen, CO₂, nitrogen or noble gases}
- 9/125 . . . {Water, e.g. hydrated salts}
- 9/127 . . . {Mixtures of organic and inorganic blowing agents}
- 9/14 . . . organic
- 9/141 {Hydrocarbons}
- 9/142 {Compounds containing oxygen but no halogen atom}
- 9/143 {Halogen containing compounds}
- 9/144 {containing carbon, halogen and hydrogen only}
- 9/145 {only chlorine as halogen atoms}
- 9/146 {only fluorine as halogen atoms}
- 9/147 {containing carbon and halogen atoms only}
- 9/148 {perfluorinated}
- 9/149 {Mixtures of blowing agents covered by more than one of the groups [C08J 9/141 - C08J 9/143](#)}
- 9/16 . Making expandable particles
- 9/18 . . by impregnating polymer particles with the blowing agent
- 9/20 . . by suspension polymerisation in the presence of the blowing agent
- 9/22 . After-treatment of expandable particles; Forming foamed products
- 9/224 . . Surface treatment
- 9/228 . . Forming foamed products
- 9/232 . . . by sintering expandable particles
- 9/236 . . . using binding agents
- 9/24 . by surface fusion and bonding of particles to form voids, e.g. sintering [\(of expandable particles C08J 9/232\)](#)
- 9/26 . by elimination of a solid phase from a macromolecular composition or article, e.g. leaching out
- 9/28 . by elimination of a liquid phase from a macromolecular composition or article, e.g. drying of coagulum
- 9/283 . . {a discontinuous liquid phase emulsified in a continuous macromolecular phase}
- 9/286 . . {the liquid phase being a solvent for the monomers but not for the resulting macromolecular composition, i.e. macroporous or macroreticular polymers}
- 9/30 . by mixing gases into liquid compositions or plastisols, e.g. frothing with air
- 9/32 . from compositions containing microballoons, e.g. syntactic foams
- 9/33 . Agglomerating foam fragments, e.g. waste foam
- 9/34 . Chemical features in the manufacture of articles consisting of a foamed macromolecular core and a macromolecular surface layer having a higher density than the core
- 9/35 . Composite foams, i.e. continuous macromolecular foams containing discontinuous cellular particles or fragments
- 9/36 . After-treatment [\(C08J 9/22 takes precedence\)](#)
- 9/365 . . {Coating}
- 9/38 . . Destruction of cell membranes
- 9/40 . . Impregnation
- 9/405 . . . {with polymerisable compounds}
- 9/42 . . . with macromolecular compounds
- 11/00** **Recovery or working-up of waste materials** [\(recovery of plastics B29B 17/00; polymerisation processes involving purification or recycling of waste polymers or their depolymerisation products C08B, C08C, C08E, C08G, C08H\)](#)
- 11/02 . of solvents, plasticisers or unreacted monomers
- 11/04 . of polymers
- 11/06 . . without chemical reactions
- 11/08 . . . using selective solvents for polymer components

- 11/10 . . by chemically breaking down the molecular chains of polymers or breaking of crosslinks, e.g. devulcanisation ([depolymerisation to the original monomer C07](#))
- 11/105 . . . {[by treatment with enzymes](#)}
- 11/12 . . . by dry-heat treatment only
- 11/14 . . . by treatment with steam or water
- 11/16 . . . by treatment with inorganic material ([C08J 11/14 takes precedence](#))
- 11/18 . . . by treatment with organic material
- 11/20 by treatment with hydrocarbons or halogenated hydrocarbons
- 11/22 by treatment with organic oxygen-containing compounds
- 11/24 containing hydroxyl groups
- 11/26 containing carboxylic acid groups, their anhydrides or esters
- 11/28 by treatment with organic compounds containing nitrogen, sulfur or phosphorus
- 99/00 Subject matter not provided for in other groups of this subclass**
- 2201/00 Foams characterised by the foaming process**
- 2201/02 . characterised by mechanical pre- or post-treatments
- 2201/022 . . premixing or pre-blending a part of the components of a foamable composition, e.g. premixing the polyol with the blowing agent, surfactant and catalyst and only adding the isocyanate at the time of foaming
- 2201/024 . . Preparation or use of a blowing agent concentrate, i.e. masterbatch in a foamable composition
- 2201/026 . . Crosslinking before of after foaming
- 2201/028 . . Foaming by preparing of a high internal phase emulsion
- 2201/03 . . Extrusion of the foamable blend
- 2201/032 . . Impregnation of a formed object with a gas
- 2201/034 . . Post-expanding of foam beads or sheets
- 2201/036 . . Use of an organic, non-polymeric compound to impregnate, bind or coat a foam, e.g. fatty acid ester
- 2201/038 . . Use of an inorganic compound to impregnate, bind or coat a foam, e.g. waterglass
- 2201/04 . characterised by the elimination of a liquid or solid component, e.g. precipitation, leaching out, evaporation
- NOTE**
- When the elimination is performed in several steps, only the first step is indicated using codes [C08J 2201/042](#) - [C08J 2201/0547](#)
- 2201/042 . . Elimination of an organic solid phase
- 2201/0422 . . . containing oxygen atoms, e.g. saccharose
- 2201/0424 . . . containing halogen, nitrogen, sulphur or phosphorus atoms
- 2201/044 . . Elimination of an inorganic solid phase
- 2201/0442 . . . the inorganic phase being a metal, its oxide or hydroxide
- 2201/0444 . . . Salts
- 2201/0446 Elimination of NaCl only
- 2201/046 . . Elimination of a polymeric phase
- 2201/0462 . . . using organic solvents
- 2201/0464 . . . using water or inorganic fluids
- 2201/048 . . Elimination of a frozen liquid phase
- 2201/0482 . . . the liquid phase being organic
- 2201/0484 . . . the liquid phase being aqueous
- 2201/05 . . Elimination by evaporation or heat degradation of a liquid phase
- 2201/0502 . . . the liquid phase being organic
- 2201/0504 . . . the liquid phase being aqueous
- 2201/052 . . Inducing phase separation by thermal treatment, e.g. cooling a solution
- 2201/0522 . . . the liquid phase being organic
- 2201/0524 . . . the liquid phase being aqueous
- 2201/054 . . Precipitating the polymer by adding a non-solvent or a different solvent
- 2201/0542 . . . from an organic solvent-based polymer composition
- 2201/0543 the non-solvent being organic
- 2201/0544 the non-solvent being aqueous
- 2201/0545 . . . from an aqueous solvent-based polymer composition
- 2201/0546 the non-solvent being organic
- 2201/0547 the non-solvent being aqueous
- 2203/00 Foams characterized by the expanding agent**
- 2203/02 . CO₂-releasing, e.g. NaHCO₃ and citric acid
- 2203/04 . N₂ releasing, ex azodicarbonamide or nitroso compound
- 2203/06 . CO₂, N₂ or noble gases
- 2203/08 . Supercritical fluid
- 2203/10 . Water or water-releasing compounds
- 2203/12 . Organic compounds only containing carbon, hydrogen and oxygen atoms, e.g. ketone or alcohol
- 2203/14 . Saturated hydrocarbons, e.g. butane; Unspecified hydrocarbons
- 2203/142 . . Halogenated saturated hydrocarbons, e.g. H₃C-CF₃
- 2203/144 . . . Perhalogenated saturated hydrocarbons, e.g. F₃C-CF₃
- 2203/146 . . Saturated hydrocarbons containing oxygen and halogen atoms, e.g. F₃C-O-CH₂-CH₃
- 2203/16 . Unsaturated hydrocarbons
- 2203/162 . . Halogenated unsaturated hydrocarbons, e.g. H₂C=CF₂
- 2203/164 . . . Perhalogenated unsaturated hydrocarbons, e.g. F₂C=CF₂
- 2203/166 . . Unsaturated hydrocarbons containing oxygen and halogen atoms, e.g. F₃C-O-CH=CH₂
- 2203/18 . Binary blends of expanding agents
- 2203/182 . . of physical blowing agents, e.g. acetone and butane
- NOTE**
- The blowing agents should be specified by using codes [C08J 2203/06](#) - [C08J 2203/166](#).
- 2203/184 . . of chemical foaming agent and physical blowing agent, e.g. azodicarbonamide and fluorocarbon
- NOTE**
- The expanding agents should be specified by using codes [C08J 2203/02](#) - [C08J 2203/166](#).
- 2203/20 . Ternary blends of expanding agents

2203/202 . . of physical blowing agents

NOTE

The blowing agents should be specified by using codes [C08J 2203/02](#) - [C08J 2203/166](#).

2203/204 . . of chemical foaming agent and physical blowing agents

NOTE

The expanding agents should be specified by using codes [C08J 2203/02](#) - [C08J 2203/166](#).

2203/22 . Expandable microspheres, e.g. Expancel®

2205/00 Foams characterised by their properties

2205/02 . the finished foam itself being a gel or a gel being temporarily formed when processing the foamable composition

2205/022 . . Hydrogel, i.e. a gel containing an aqueous composition

2205/024 . . Organogel, i.e. a gel containing an organic composition

2205/026 . . Aerogel, i.e. a supercritically dried gel

2205/028 . . Xerogel, i.e. an air dried gel

2205/04 . characterised by the foam pores

2205/042 . . Nanopores, i.e. the average diameter being smaller than 0,1 micrometer

2205/044 . . Micropores, i.e. average diameter being between 0,1 micrometer and 0,1 millimeter

2205/046 . . Unimodal pore distribution

2205/048 . . Bimodal pore distribution, e.g. micropores and nanopores coexisting in the same foam

2205/05 . . Open cells, i.e. more than 50% of the pores are open

2205/052 . . Closed cells, i.e. more than 50% of the pores are closed

2205/06 . Flexible foams

2205/08 . Semi-flexible foams

2205/10 . Rigid foams

2207/00 Foams characterised by their intended use

2207/02 . Adhesive

2207/04 . Aerosol, e.g. polyurethane foam spray

2207/06 . Electrical wire insulation

2207/10 . Medical applications, e.g. biocompatible scaffolds

2207/12 . Sanitary use, e.g. diapers, napkins or bandages

Characterizing the main polymer used in a working-up process

2300/00 Characterised by the use of unspecified polymers

2300/10 . Polymers characterised by the presence of specified groups, e.g. terminal or pendant functional groups

2300/102 . . containing halogen atoms

2300/104 . . containing oxygen atoms

2300/105 . . . containing carboxyl groups

2300/106 . . containing nitrogen atoms

2300/108 . . containing hydrolysable silane groups

2300/12 . Polymers characterised by physical features, e.g. anisotropy, viscosity or electrical conductivity

2300/14 . Water soluble or water swellable polymers, e.g. aqueous gels

2300/16 . Biodegradable polymers

2300/20 . Polymers characterized by their physical structure

2300/202 . . Dendritic macromolecules, e.g. dendrimers or hyperbranched polymers

2300/204 . . Supramolecular materials

2300/206 . . Star polymers

2300/208 . . Interpenetrating networks [IPN]

2300/21 . . Polyrotaxanes; Polycatenanes

2300/22 . Thermoplastic resins

2300/24 . Thermosetting resins

2300/26 . Elastomers

2300/30 . Polymeric waste or recycled polymer

2301/00 Characterised by the use of cellulose, modified cellulose or cellulose derivatives

2301/02 . Cellulose; Modified cellulose

2301/04 . Oxycellulose; Hydrocellulose

2301/06 . Cellulose hydrate

2301/08 . Cellulose derivatives

2301/10 . . Esters of organic acids

2301/12 . . . Cellulose acetate

2301/14 . . Mixed esters

2301/16 . . Esters of inorganic acids

2301/18 . . . Cellulose nitrate

2301/20 . . Esters of both organic acids and inorganic acids

2301/22 . . Cellulose xanthate

2301/24 . . . Viscose

2301/26 . . Cellulose ethers

2301/28 . . . Alkyl ethers

2301/30 . . . Aryl ethers; Aralkyl ethers

2301/32 . . Cellulose ether-esters

2303/00 Characterised by the use of starch, amylose or amylopectin or of their derivatives or degradation products

2303/02 . Starch; Degradation products thereof, e.g. dextrin

2303/04 . Starch derivatives

2303/06 . . Esters

2303/08 . . Ethers

2303/10 . . Oxidised starch

2303/12 . Amylose; Amylopectin; Degradation products thereof

2303/14 . Amylose derivatives; Amylopectin derivatives

2303/16 . . Esters

2303/18 . . Ethers

2303/20 . . Oxidised amylose; Oxidised amylopectin

2305/00 Characterised by the use of polysaccharides or of their derivatives not provided for in groups [C08J 2301/00](#) or [C08J 2303/00](#)

2305/02 . Dextran; Derivatives thereof

2305/04 . Alginic acid; Derivatives thereof

2305/06 . Pectin; Derivatives thereof

2305/08 . Chitin; Chondroitin sulfate; Hyaluronic acid; Derivatives thereof

2305/10 . Heparin; Derivatives thereof

2305/12 . Agar-agar; Derivatives thereof

2305/14 . Hemicellulose; Derivatives thereof

2305/16 . Cyclodextrin; Derivatives thereof

2307/00 Characterised by the use of natural rubber

2307/02 . Latex

2309/00 Characterised by the use of homopolymers or copolymers of conjugated diene hydrocarbons

2309/02 . Copolymers with acrylonitrile

2309/04 . . Latex

2309/06 . Copolymers with styrene

- 2309/08 . . Latex
- 2309/10 . Latex ([C08J 2309/04](#), [C08J 2309/08](#) take precedence)
- 2311/00 Characterised by the use of homopolymers or copolymers of chloroprene**
- 2311/02 . Latex
- 2313/00 Characterised by the use of rubbers containing carboxyl groups**
- 2313/02 . Latex
- 2315/00 Characterised by the use of rubber derivatives** ([C08J 2311/00](#), [C08J 2313/00](#) takes precedence)
- 2315/02 . Rubber derivatives containing halogen
- 2317/00 Characterised by the use of reclaimed rubber**
- 2319/00 Characterised by the use of rubbers not provided for in groups [C08J 2307/00](#) - [C08J 2317/00](#)**
- 2319/02 . Latex
- 2321/00 Characterised by the use of unspecified rubbers**
- 2321/02 . Latex
- 2323/00 Characterised by the use of homopolymers or copolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond; Derivatives of such polymers**
- 2323/02 . not modified by chemical after treatment
- 2323/04 . . Homopolymers or copolymers of ethene
- 2323/06 . . . Polyethylene
- 2323/08 . . . Copolymers of ethene ([C08J 2323/16](#) takes precedence)
- 2323/10 . . Homopolymers or copolymers of propene
- 2323/12 . . . Polypropene
- 2323/14 . . . Copolymers of propene ([C08J 2323/16](#) takes precedence)
- 2323/16 . . Ethene-propene or ethene-propene-diene copolymers
- 2323/18 . . Homopolymers or copolymers of hydrocarbons having four or more carbon atoms
- 2323/20 . . . having four to nine carbon atoms
- 2323/22 Copolymers of isobutene; butyl rubber
- 2323/24 . . . having ten or more carbon atoms
- 2323/26 . modified by chemical after-treatment
- 2323/28 . . by reaction with halogens or halogen-containing compounds ([C08J 2323/32](#) takes precedence)
- 2323/30 . . by oxidation
- 2323/32 . . by reaction with phosphorus- or sulfur-containing compounds
- 2323/34 . . . by chlorosulfonation
- 2323/36 . . by reaction with nitrogen-containing compounds, e.g. by nitration
- 2325/00 Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an aromatic carbocyclic ring; Derivatives of such polymers**
- 2325/02 . Homopolymers or copolymers of hydrocarbons
- 2325/04 . . Homopolymers or copolymers of styrene
- 2325/06 . . . Polystyrene
- 2325/08 . . . Copolymers of styrene ([C08J 2329/08](#), [C08J 2335/06](#), [C08J 2355/02](#) take precedence)
- 2325/10 with conjugated dienes
- 2325/12 with unsaturated nitriles
- 2325/14 with unsaturated esters
- 2325/16 . . Homopolymers or copolymers of alkyl-substituted styrenes
- 2325/18 . Homopolymers or copolymers of aromatic monomers containing elements other than carbon and hydrogen
- 2327/00 Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a halogen; Derivatives of such polymers**
- 2327/02 . not modified by chemical after-treatment
- 2327/04 . . containing chlorine atoms
- 2327/06 . . . Homopolymers or copolymers of vinyl chloride
- 2327/08 . . . Homopolymers or copolymers of vinylidene chloride
- 2327/10 . . containing bromine or iodine atoms
- 2327/12 . . containing fluorine atoms
- 2327/14 . . . Homopolymers or copolymers of vinyl fluoride
- 2327/16 . . . Homopolymers or copolymers of vinylidene fluoride
- 2327/18 . . . Homopolymers or copolymers of tetrafluoroethylene
- 2327/20 . . . Homopolymers or copolymers of hexafluoropropene
- 2327/22 . modified by chemical after-treatment
- 2327/24 . . halogenated
- 2329/00 Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an alcohol, ether, aldehydo, ketonic, acetal, or ketal radical; Hydrolysed polymers of esters of unsaturated alcohols with saturated carboxylic acids; Derivatives of such polymer**
- 2329/02 . Homopolymers or copolymers of unsaturated alcohols ([C08J 2329/14](#) takes precedence)
- 2329/04 . . Polyvinyl alcohol; Partially hydrolysed homopolymers or copolymers of esters of unsaturated alcohols with saturated carboxylic acids
- 2329/06 . . Copolymers of allyl alcohol
- 2329/08 . . . with vinyl aromatic monomers
- 2329/10 . Homopolymers or copolymers of unsaturated ethers ([C08J 2335/08](#) takes precedence)
- 2329/12 . Homopolymers or copolymers of unsaturated ketones
- 2329/14 . Homopolymers or copolymers of acetals or ketals obtained by polymerisation of unsaturated acetals or ketals or by after-treatment of polymers of unsaturated alcohols
- 2331/00 Characterised by the use of copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an acyloxy radical of a saturated carboxylic acid, or carbonic acid, or of a haloformic acid**
- 2331/02 . Characterised by the use of homopolymers or copolymers of esters of monocarboxylic acids

- 2331/04 . . Homopolymers or copolymers of vinyl acetate
- 2331/06 . Homopolymers or copolymers of esters of polycarboxylic acids
- 2331/08 . . of phthalic acid
- 2333/00** **Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and only one being terminated by only one carboxyl radical, or of salts, anhydrides, esters, amides, imides, or nitriles thereof; Derivatives of such polymers**
- 2333/02 . Homopolymers or copolymers of acids; Metal or ammonium salts thereof
- 2333/04 . esters
- 2333/06 . . of esters containing only carbon, hydrogen, and oxygen, the oxygen atom being present only as part of the carboxyl radical
- 2333/08 . . . Homopolymers or copolymers of acrylic acid esters
- 2333/10 . . . Homopolymers or copolymers of methacrylic acid esters
- 2333/12 Homopolymers or copolymers of methyl methacrylate
- 2333/14 . . of esters containing halogen, nitrogen, sulfur, or oxygen atoms in addition to the carboxy oxygen
- 2333/16 . . . Homopolymers or copolymers of esters containing halogen atoms
- 2333/18 . Homopolymers or copolymers of nitriles
- 2333/20 . . Homopolymers or copolymers of acrylonitrile ([C08J 2355/02 takes precedence](#))
- 2333/22 . . Homopolymers or copolymers of nitriles containing four or more carbon atoms
- 2333/24 . Homopolymers or copolymers of amides or imides
- 2333/26 . . Homopolymers or copolymers of acrylamide or methacrylamide
- 2335/00** **Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a carboxyl radical, and containing at least one other carboxyl radical in the molecule, or of salts, anhydrides, esters, amides, imides or nitriles thereof; Derivatives of such polymers**
- 2335/02 . Characterised by the use of homopolymers or copolymers of esters ([C08J 2335/06](#), [C08J 2335/08 take precedence](#))
- 2335/04 . Homopolymers or copolymers of nitriles ([C08J 2335/06](#), [C08J 2335/08 take precedence](#))
- 2335/06 . Copolymers with vinyl aromatic monomers
- 2335/08 . Copolymers with vinyl ethers
- 2337/00** **Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a heterocyclic ring containing oxygen; Derivatives of such polymers**
- 2339/00** **Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a single or double bond to nitrogen or by a heterocyclic ring containing nitrogen; Derivatives of such polymers**
- 2339/02 . Homopolymers or copolymers of vinylamine
- 2339/04 . Homopolymers or copolymers of monomers containing heterocyclic rings having nitrogen as ring member
- 2339/06 . . Homopolymers or copolymers of N-vinyl-pyrrolidones
- 2339/08 . . Homopolymers or copolymers of vinyl-pyridine
- 2341/00** **Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a bond to sulfur or by a heterocyclic ring containing sulfur; Derivatives of such polymers**
- 2343/00** **Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing boron, silicon, phosphorus, selenium, tellurium or a metal; Derivatives of such polymers (of metal salts, e.g. phenolates, alcoholates, see the parent compounds)**
- 2343/02 . Homopolymers or copolymers of monomers containing phosphorus
- 2343/04 . Homopolymers or copolymers of monomers containing silicon
- 2345/00** **Characterised by the use of homopolymers or copolymers of compounds having no unsaturated aliphatic radicals in side chain, and having one or more carbon-to-carbon double bonds in a carbocyclic or in a heterocyclic ring system; Derivatives of such polymers**
- 2345/02 . of coumarone-indene polymers
- 2347/00** **Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds; Derivatives of such polymers ([C08J 2345/00 takes precedence](#); of conjugated diene rubbers [C08J 2309/00 - C08J 2321/00](#))**
- 2349/00** **Characterised by the use of homopolymers or copolymers of compounds having one or more carbon-to-carbon triple bonds; Derivatives of such polymers**
- 2351/00** **Characterised by the use of graft polymers in which the grafted component is obtained by reactions only involving carbon-to-carbon unsaturated bonds; Derivatives of such polymers**
- 2351/02 . grafted on to polysaccharides
- 2351/04 . grafted on to rubbers
- 2351/06 . grafted on to homopolymers or copolymers of aliphatic hydrocarbons containing only one carbon-to-carbon double bond

- 2351/08 . grafted on to macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 2351/10 . grafted on to inorganic materials
- 2353/00 Characterised by the use of block copolymers containing at least one sequence of a polymer obtained by reactions only involving carbon-to-carbon unsaturated bonds; Derivatives of such polymers**
- 2353/02 . of vinyl aromatic monomers and conjugated dienes
- 2355/00 Characterised by the use of homopolymers or copolymers, obtained by polymerisation reactions only involving carbon-to-carbon unsaturated bonds, not provided for in groups C08J 2323/00 - C08J 2353/00**
- 2355/02 . Acrylonitrile-Butadiene-Styrene [ABS] polymers
- 2355/04 . Polyadducts obtained by the diene synthesis
- 2357/00 Characterised by the use of unspecified polymers obtained by reactions only involving carbon-to-carbon unsaturated bonds**
- 2357/02 . Copolymers of mineral oil hydrocarbons
- 2357/04 . Copolymers in which only the monomer in minority is defined
- 2357/06 . Homopolymers or copolymers containing elements other than carbon and hydrogen
- 2357/08 . . containing halogen atoms
- 2357/10 . . containing oxygen atoms
- 2357/12 . . containing nitrogen atoms
- 2359/00 Characterised by the use of polyacetals containing polyoxymethylene sequences only**
- 2359/02 . Copolyoxymethylenes
- 2361/00 Characterised by the use of condensation polymers of aldehydes or ketones; Derivatives of such polymers**
- 2361/02 . Condensation polymers of aldehydes or ketones only
- 2361/04 . Condensation polymers of aldehydes or ketones with phenols only
- 2361/06 . . of aldehydes with phenols
- 2361/08 . . . with monohydric phenols
- 2361/10 Phenol-formaldehyde condensates
- 2361/12 . . . with polyhydric phenols
- 2361/14 . . . Modified phenol-aldehyde condensates
- 2361/16 . . of ketones with phenols
- 2361/18 . Condensation polymers of aldehydes or ketones with aromatic hydrocarbons or their halogen derivatives only
- 2361/20 . Condensation polymers of aldehydes or ketones with only compounds containing hydrogen attached to nitrogen
- 2361/22 . . of aldehydes with acyclic or carbocyclic compounds
- 2361/24 . . . with urea or thiourea
- 2361/26 . . of aldehydes with heterocyclic compounds
- 2361/28 . . . with melamine
- 2361/30 . . of aldehydes with heterocyclic and acyclic or carbocyclic compounds
- 2361/32 . . Modified amine-aldehyde condensates
- 2361/34 . Condensation polymers of aldehydes or ketones with monomers covered by at least two of the groups [C08J 2361/04](#), [C08J 2361/18](#), and [C08J 2361/20](#)
- 2363/00 Characterised by the use of epoxy resins; Derivatives of epoxy resins**
- 2363/02 . Polyglycidyl ethers of bis-phenols
- 2363/04 . Epoxynovolacs
- 2363/06 . Triglycidylisocyanurates
- 2363/08 . Epoxidised polymerised polyenes
- 2363/10 . Epoxy resins modified by unsaturated compounds
- 2365/00 Characterised by the use of macromolecular compounds obtained by reactions forming a carbon-to-carbon link in the main chain (C08J 2307/00 - C08J 2357/00, C08J 2361/00 take precedence); Derivatives of such polymers**
- 2365/02 . Polyphenylenes
- 2365/04 . Polyxylylenes
- 2367/00 Characterised by the use of polyesters obtained by reactions forming a carboxylic ester link in the main chain; Derivatives of such polymers**
- 2367/02 . Polyesters derived from dicarboxylic acids and dihydroxy compounds; ([C08J 2367/06 takes precedence](#))
- 2367/03 . . the dicarboxylic acids and dihydroxy compounds having the hydroxy and the carboxyl groups directly linked to aromatic rings
- 2367/04 . Polyesters derived from hydroxy carboxylic acids, e.g. lactones ([C08J 2367/06 takes precedence](#))
- 2367/06 . Unsaturated polyesters
- 2367/07 . . having terminal carbon-to-carbon unsaturated bonds
- 2367/08 . Polyesters modified with higher fatty oils or their acids, or with resins or resin acids
- 2369/00 Characterised by the use of polycarbonates; Derivatives of polycarbonates**
- 2371/00 Characterised by the use of polyethers obtained by reactions forming an ether link in the main chain; Derivatives of such polymers**
- 2371/02 . Polyalkylene oxides
- 2371/03 . . Polyepihalohydrins
- 2371/08 . Polyethers derived from hydroxy compounds or from their metallic derivatives ([C08J 2371/02 takes precedence](#))
- 2371/10 . . from phenols
- 2371/12 . . . Polyphenylene oxides
- 2371/14 . . Furfuryl alcohol polymers
- 2373/00 Characterised by the use of macromolecular compounds obtained by reactions forming a linkage containing oxygen or oxygen and carbon in the main chain, not provided for in groups C08J 2359/00 - C08J 2371/00; Derivatives of such polymers**
- 2373/02 . Polyanhydrides
- 2375/00 Characterised by the use of polyureas or polyurethanes; Derivatives of such polymers**
- 2375/02 . Polyureas
- 2375/04 . Polyurethanes
- 2375/06 . . from polyesters
- 2375/08 . . from polyethers

- 2375/10 . . from polyacetals
- 2375/12 . . from compounds containing nitrogen and active hydrogen, the nitrogen atom not being part of an isocyanate group
- 2375/14 . . Polyurethanes having carbon-to-carbon unsaturated bonds
- 2375/16 . . . having terminal carbon-to-carbon unsaturated bonds
- 2377/00 Characterised by the use of polyamides obtained by reactions forming a carboxylic amide link in the main chain; Derivatives of such polymers**
- 2377/02 . Polyamides derived from omega-amino carboxylic acids or from lactams thereof ([C08J 2377/10 takes precedence](#))
- 2377/04 . Polyamides derived from alpha-amino carboxylic acids ([C08J 2377/10 takes precedence](#))
- 2377/06 . Polyamides derived from polyamines and polycarboxylic acids ([C08J 2377/10 takes precedence](#))
- 2377/08 . . from polyamines and polymerised unsaturated fatty acids
- 2377/10 . Polyamides derived from aromatically bound amino and carboxyl groups of amino carboxylic acids or of polyamines and polycarboxylic acids
- 2377/12 . Polyester-amides
- 2379/00 Characterised by the use of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing nitrogen with or without oxygen, or carbon only, not provided for in groups [C08J 2361/00](#) - [C08J 2377/00](#)**
- 2379/02 . Polyamines
- 2379/04 . Polycondensates having nitrogen-containing heterocyclic rings in the main chain; Polyhydrazides; Polyamide acids or similar polyimide precursors
- 2379/06 . . Polyhydrazides; Polytriazoles; Polyamino-triazoles; Polyoxadiazoles
- 2379/08 . . Polyimides; Polyester-imides; Polyamide-imides; Polyamide acids or similar polyimide precursors
- 2381/00 Characterised by the use of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing sulfur with or without nitrogen, oxygen, or carbon only; Polysulfones; Derivatives of such polymers**
- 2381/02 . Polythioethers; Polythioether-ethers
- 2381/04 . Polysulfides
- 2381/06 . Polysulfones; Polyethersulfones
- 2381/08 . Polysulfonates
- 2381/10 . Polysulfonamides; Polysulfonimides
- 2383/00 Characterised by the use of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing silicon with or without sulfur, nitrogen, oxygen, or carbon only; Derivatives of such polymers**
- 2383/02 . Polysilicates
- 2383/04 . Polysiloxanes
- 2383/05 . . containing silicon bound to hydrogen
- 2383/06 . . containing silicon bound to oxygen-containing groups ([C08J 2383/12 takes precedence](#))
- 2383/07 . . containing silicon bound to unsaturated aliphatic groups
- 2383/08 . . containing silicon bound to organic groups containing atoms other than carbon, hydrogen, and oxygen
- 2383/10 . Block- or graft-copolymers containing polysiloxane sequences
- 2383/12 . . containing polyether sequences
- 2383/14 . in which at least two but not all the silicon atoms are connected by linkages other than oxygen atoms ([C08J 2383/10 takes precedence](#))
- 2383/16 . in which all the silicon atoms are connected by linkages other than oxygen atoms
- 2385/00 Characterised by the use of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing atoms other than silicon, sulfur, nitrogen, oxygen, and carbon; Derivatives of such polymers**
- 2385/02 . containing phosphorus
- 2385/04 . containing boron
- 2387/00 Characterised by the use of unspecified macromolecular compounds, obtained otherwise than by polymerisation reactions only involving unsaturated carbon-to-carbon bonds**
- 2389/00 Characterised by the use of proteins; Derivatives thereof**
- 2389/02 . Casein-aldehyde condensates
- 2389/04 . Products derived from waste materials, e.g. horn, hoof or hair
- 2389/06 . . derived from leather or skin
- 2391/00 Characterised by the use of oils, fats or waxes; Derivatives thereof**
- 2391/02 . Vulcanised oils, e.g. factice
- 2391/04 . Linoxyn
- 2391/06 . Waxes
- 2391/08 . . Mineral waxes
- 2393/00 Characterised by the use of natural resins; Derivatives thereof**
- 2393/02 . Shellac
- 2393/04 . Rosin
- 2395/00 Bituminous materials, e.g. asphalt, tar or pitch**
- 2397/00 Characterised by the use of lignin-containing materials**
- 2397/02 . Lignocellulosic material, e.g. wood, straw or bagasse
- 2399/00 Characterised by the use of natural macromolecular compounds or of derivatives thereof not provided for in groups [C08J 2301/00](#) - [C08J 2307/00](#) or [C08J 2389/00](#) - [C08J 2397/00](#)**

Characterizing additional polymers used in a working-up process

- 2400/00 Characterised by the use of unspecified polymers**
- 2400/10 . Polymers characterised by the presence of specified groups, e.g. terminal or pendant functional groups
- 2400/102 . . containing halogen atoms
- 2400/104 . . containing oxygen atoms
- 2400/105 . . . containing carboxyl groups

- 2400/106 . . containing nitrogen atoms
- 2400/108 . . containing hydrolysable silane groups
- 2400/12 . Polymers characterised by physical features, e.g. anisotropy, viscosity or electrical conductivity
- 2400/14 . Water soluble or water swellable polymers, e.g. aqueous gels
- 2400/16 . Biodegradable polymers
- 2400/20 . Polymers characterized by their physical structure
- 2400/202 . . Dendritic macromolecules, e.g. dendrimers or hyperbranched polymers
- 2400/204 . . Supramolecular materials
- 2400/206 . . Star polymers
- 2400/208 . . Interpenetrating networks [IPN]
- 2400/21 . . Polyrotaxanes; Polycatenanes
- 2400/22 . Thermoplastic resins
- 2400/24 . Thermosetting resins
- 2400/26 . Elastomers
- 2400/30 . Polymeric waste or recycled polymer
- 2401/00 Characterised by the use of cellulose, modified cellulose or cellulose derivatives**
- 2401/02 . Cellulose; Modified cellulose
- 2401/04 . . Oxycellulose; Hydrocellulose
- 2401/06 . . Cellulose hydrate
- 2401/08 . Cellulose derivatives
- 2401/10 . . Esters of organic acids
- 2401/12 . . . Cellulose acetate
- 2401/14 . . Mixed esters
- 2401/16 . . Esters of inorganic acids
- 2401/18 . . . Cellulose nitrate
- 2401/20 . . Esters of both organic acids and inorganic acids
- 2401/22 . . Cellulose xanthate
- 2401/24 . . . Viscose
- 2401/26 . . Cellulose ethers
- 2401/28 . . . Alkyl ethers
- 2401/30 . . . Aryl ethers; Aralkyl ethers
- 2401/32 . . Cellulose ether-esters
- 2403/00 Characterised by the use of starch, amylose or amylopectin or of their derivatives or degradation products**
- 2403/02 . Starch; Degradation products thereof, e.g. dextrin
- 2403/04 . Starch derivatives
- 2403/06 . . Esters
- 2403/08 . . Ethers
- 2403/10 . . Oxidised starch
- 2403/12 . Amylose; Amylopectin; Degradation products thereof
- 2403/14 . Amylose derivatives; Amylopectin derivatives
- 2403/16 . . Esters
- 2403/18 . . Ethers
- 2403/20 . . Oxidised amylose; Oxidised amylopectin
- 2405/00 Characterised by the use of polysaccharides or of their derivatives not provided for in groups C08J 2401/00 or C08J 2403/00**
- 2405/02 . Dextran; Derivatives thereof
- 2405/04 . Alginic acid; Derivatives thereof
- 2405/06 . Pectin; Derivatives thereof
- 2405/08 . Chitin; Chondroitin sulfate; Hyaluronic acid; Derivatives thereof
- 2405/10 . Heparin; Derivatives thereof
- 2405/12 . Agar-agar; Derivatives thereof
- 2405/14 . Hemicellulose; Derivatives thereof
- 2405/16 . Cyclodextrin; Derivatives thereof
- 2407/00 Characterised by the use of natural rubber**
- 2407/02 . Latex
- 2409/00 Characterised by the use of homopolymers or copolymers of conjugated diene hydrocarbons**
- 2409/02 . Copolymers with acrylonitrile
- 2409/04 . . Latex
- 2409/06 . Copolymers with styrene
- 2409/08 . . Latex
- 2409/10 . Latex ([C08J 2409/04](#), [C08J 2409/08](#) take precedence)
- 2411/00 Characterised by the use of homopolymers or copolymers of chloroprene**
- 2411/02 . Latex
- 2413/00 Characterised by the use of rubbers containing carboxyl groups**
- 2413/02 . Latex
- 2415/00 Characterised by the use of rubber derivatives** ([C08J 2411/00](#), [C08J 2413/00](#) takes precedence)
- 2415/02 . Rubber derivatives containing halogen
- 2417/00 Characterised by the use of reclaimed rubber**
- 2419/00 Characterised by the use of rubbers not provided for in groups [C08J 2407/00](#) - [C08J 2417/00](#)**
- 2419/02 . Latex
- 2421/00 Characterised by the use of unspecified rubbers**
- 2421/02 . Latex
- 2423/00 Characterised by the use of homopolymers or copolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond; Derivatives of such polymers**
- 2423/02 . not modified by chemical after treatment
- 2423/04 . . Homopolymers or copolymers of ethene
- 2423/06 . . . Polyethene
- 2423/08 . . . Copolymers of ethene ([C08J 2423/16](#) takes precedence)
- 2423/10 . . Homopolymers or copolymers of propene
- 2423/12 . . . Polypropene
- 2423/14 . . . Copolymers of propene ([C08J 2423/16](#) takes precedence)
- 2423/16 . . Ethene-propene or ethene-propene-diene copolymers
- 2423/18 . . Homopolymers or copolymers of hydrocarbons having four or more carbon atoms
- 2423/20 . . . having four to nine carbon atoms
- 2423/22 Copolymers of isobutene; butyl rubber
- 2423/24 . . . having ten or more carbon atoms
- 2423/26 . modified by chemical after-treatment
- 2423/28 . . by reaction with halogens or halogen-containing compounds ([C08J 2423/32](#) takes precedence)
- 2423/30 . . by oxidation
- 2423/32 . . by reaction with phosphorus- or sulfur-containing compounds
- 2423/34 . . . by chlorosulfonation
- 2423/36 . . by reaction with nitrogen-containing compounds, e.g. by nitration

- 2425/00** Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an aromatic carbocyclic ring; Derivatives of such polymers
- 2425/02 . Homopolymers or copolymers of hydrocarbons
 - 2425/04 . . Homopolymers or copolymers of styrene
 - 2425/06 . . . Polystyrene
 - 2425/08 . . . Copolymers of styrene ([C08J 2429/08](#), [C08J 2435/06](#), [C08J 2455/02](#) take precedence)
 - 2425/10 with conjugated dienes
 - 2425/12 with unsaturated nitriles
 - 2425/14 . . . with unsaturated esters
 - 2425/16 . . Homopolymers or copolymers of alkyl-substituted styrenes
 - 2425/18 . Homopolymers or copolymers of aromatic monomers containing elements other than carbon and hydrogen
- 2427/00** Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a halogen; Derivatives of such polymers
- 2427/02 . not modified by chemical after-treatment
 - 2427/04 . . containing chlorine atoms
 - 2427/06 . . . Homopolymers or copolymers of vinyl chloride
 - 2427/08 . . . Homopolymers or copolymers of vinylidene chloride
 - 2427/10 . . containing bromine or iodine atoms
 - 2427/12 . . containing fluorine atoms
 - 2427/14 . . . Homopolymers or copolymers of vinyl fluoride
 - 2427/16 . . . Homopolymers or copolymers of vinylidene fluoride
 - 2427/18 . . . Homopolymers or copolymers of tetrafluoroethylene
 - 2427/20 . . . Homopolymers or copolymers of hexafluoropropene
 - 2427/22 . modified by chemical after-treatment
 - 2427/24 . . halogenated
- 2429/00** Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an alcohol, ether, aldehydo, ketonic, acetal, or ketal radical; Hydrolysed polymers of esters of unsaturated alcohols with saturated carboxylic acids; Derivatives of such polymer
- 2429/02 . Homopolymers or copolymers of unsaturated alcohols ([C08J 2429/14](#) takes precedence)
 - 2429/04 . . Polyvinyl alcohol; Partially hydrolysed homopolymers or copolymers of esters of unsaturated alcohols with saturated carboxylic acids
 - 2429/06 . . Copolymers of allyl alcohol
 - 2429/08 . . . with vinyl aromatic monomers
 - 2429/10 . Homopolymers or copolymers of unsaturated ethers ([C08J 2435/08](#) takes precedence)
 - 2429/12 . Homopolymers or copolymers of unsaturated ketones
- 2429/14 . Homopolymers or copolymers of acetals or ketals obtained by polymerisation of unsaturated acetals or ketals or by after-treatment of polymers of unsaturated alcohols
- 2431/00** Characterised by the use of copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an acyloxy radical of a saturated carboxylic acid, or carbonic acid, or of a haloformic acid
- 2431/02 . Characterised by the use of homopolymers or copolymers of esters of monocarboxylic acids
 - 2431/04 . . Homopolymers or copolymers of vinyl acetate
 - 2431/06 . Homopolymers or copolymers of esters of polycarboxylic acids
 - 2431/08 . . of phthalic acid
- 2433/00** Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and only one being terminated by only one carboxyl radical, or of salts, anhydrides, esters, amides, imides, or nitriles thereof; Derivatives of such polymers
- 2433/02 . Homopolymers or copolymers of acids; Metal or ammonium salts thereof
 - 2433/04 . esters
 - 2433/06 . . of esters containing only carbon, hydrogen, and oxygen, the oxygen atom being present only as part of the carboxyl radical
 - 2433/08 . . . Homopolymers or copolymers of acrylic acid esters
 - 2433/10 . . . Homopolymers or copolymers of methacrylic acid esters
 - 2433/12 Homopolymers or copolymers of methyl methacrylate
 - 2433/14 . . of esters containing halogen, nitrogen, sulfur, or oxygen atoms in addition to the carboxy oxygen
 - 2433/16 . . . Homopolymers or copolymers of esters containing halogen atoms
 - 2433/18 . Homopolymers or copolymers of nitriles
 - 2433/20 . . Homopolymers or copolymers of acrylonitrile ([C08J 2455/02](#) takes precedence)
 - 2433/22 . . Homopolymers or copolymers of nitriles containing four or more carbon atoms
 - 2433/24 . Homopolymers or copolymers of amides or imides
 - 2433/26 . . Homopolymers or copolymers of acrylamide or methacrylamide
- 2435/00** Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a carboxyl radical, and containing at least one other carboxyl radical in the molecule, or of salts, anhydrides, esters, amides, imides or nitriles thereof; Derivatives of such polymers
- 2435/02 . Characterised by the use of homopolymers or copolymers of esters ([C08J 2435/06](#), [C08J 2435/08](#) take precedence)
 - 2435/04 . Homopolymers or copolymers of nitriles ([C08J 2435/06](#), [C08J 2435/08](#) take precedence)
 - 2435/06 . Copolymers with vinyl aromatic monomers

- 2435/08 . Copolymers with vinyl ethers
- 2437/00** Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a heterocyclic ring containing oxygen; Derivatives of such polymers
- 2439/00** Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a single or double bond to nitrogen or by a heterocyclic ring containing nitrogen; Derivatives of such polymers
- 2439/02 . Homopolymers or copolymers of vinylamine
- 2439/04 . Homopolymers or copolymers of monomers containing heterocyclic rings having nitrogen as ring member
- 2439/06 . . Homopolymers or copolymers of N-vinyl-pyrrolidones
- 2439/08 . . Homopolymers or copolymers of vinyl-pyridine
- 2441/00** Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a bond to sulfur or by a heterocyclic ring containing sulfur; Derivatives of such polymers
- 2443/00** Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing boron, silicon, phosphorus, selenium, tellurium or a metal; Derivatives of such polymers (of metal salts, e.g. phenolates, alcoholates, see the parent compounds)
- 2443/02 . Homopolymers or copolymers of monomers containing phosphorus
- 2443/04 . Homopolymers or copolymers of monomers containing silicon
- 2445/00** Characterised by the use of homopolymers or copolymers of compounds having no unsaturated aliphatic radicals in side chain, and having one or more carbon-to-carbon double bonds in a carbocyclic or in a heterocyclic ring system; Derivatives of such polymers
- 2445/02 . of coumarone-indene polymers
- 2447/00** Characterised by the use of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds; Derivatives of such polymers (C08J 2445/00 takes precedence; of conjugated diene rubbers C08J 2409/00 - C08J 2421/00)
- 2449/00** Characterised by the use of homopolymers or copolymers of compounds having one or more carbon-to-carbon triple bonds; Derivatives of such polymers
- 2451/00** Characterised by the use of graft polymers in which the grafted component is obtained by reactions only involving carbon-to-carbon unsaturated bonds; Derivatives of such polymers
- 2451/02 . grafted on to polysaccharides
- 2451/04 . grafted on to rubbers
- 2451/06 . grafted on to homopolymers or copolymers of aliphatic hydrocarbons containing only one carbon-to-carbon double bond
- 2451/08 . grafted on to macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 2451/10 . grafted on to inorganic materials
- 2453/00** Characterised by the use of block copolymers containing at least one sequence of a polymer obtained by reactions only involving carbon-to-carbon unsaturated bonds; Derivatives of such polymers
- 2453/02 . of vinyl aromatic monomers and conjugated dienes
- 2455/00** Characterised by the use of homopolymers or copolymers, obtained by polymerisation reactions only involving carbon-to-carbon unsaturated bonds, not provided for in groups C08J 2423/00 - C08J 2453/00
- 2455/02 . Acrylonitrile-Butadiene-Styrene [ABS] polymers
- 2455/04 . Polyadducts obtained by the diene synthesis
- 2457/00** Characterised by the use of unspecified polymers obtained by reactions only involving carbon-to-carbon unsaturated bonds
- 2457/02 . Copolymers of mineral oil hydrocarbons
- 2457/04 . Copolymers in which only the monomer in minority is defined
- 2457/06 . Homopolymers or copolymers containing elements other than carbon and hydrogen
- 2457/08 . . containing halogen atoms
- 2457/10 . . containing oxygen atoms
- 2457/12 . . containing nitrogen atoms
- 2459/00** Characterised by the use of polyacetals containing polyoxymethylene sequences only
- 2459/02 . Copolyoxymethylenes
- 2461/00** Characterised by the use of condensation polymers of aldehydes or ketones; Derivatives of such polymers
- 2461/02 . Condensation polymers of aldehydes or ketones only
- 2461/04 . Condensation polymers of aldehydes or ketones with phenols only
- 2461/06 . . of aldehydes with phenols
- 2461/08 . . . with monohydric phenols
- 2461/10 Phenol-formaldehyde condensates
- 2461/12 . . . with polyhydric phenols
- 2461/14 . . . Modified phenol-aldehyde condensates
- 2461/16 . . of ketones with phenols
- 2461/18 . Condensation polymers of aldehydes or ketones with aromatic hydrocarbons or their halogen derivatives only
- 2461/20 . Condensation polymers of aldehydes or ketones with only compounds containing hydrogen attached to nitrogen
- 2461/22 . . of aldehydes with acyclic or carbocyclic compounds

- 2461/24 . . . with urea or thiourea
- 2461/26 . . of aldehydes with heterocyclic compounds
- 2461/28 . . . with melamine
- 2461/30 . . of aldehydes with heterocyclic and acyclic or carbocyclic compounds
- 2461/32 . . Modified amine-aldehyde condensates
- 2461/34 . Condensation polymers of aldehydes or ketones with monomers covered by at least two of the groups [C08J 2461/04](#), [C08J 2461/18](#), and [C08J 2461/20](#)
- 2463/00 Characterised by the use of epoxy resins; Derivatives of epoxy resins**
- 2463/02 . Polyglycidyl ethers of bis-phenols
- 2463/04 . Epoxynovolacs
- 2463/06 . Triglycidylisocyanurates
- 2463/08 . Epoxidised polymerised polyenes
- 2463/10 . Epoxy resins modified by unsaturated compounds
- 2465/00 Characterised by the use of macromolecular compounds obtained by reactions forming a carbon-to-carbon link in the main chain ([C08J 2407/00](#) - [C08J 2457/00](#), [C08J 2461/00](#) take precedence); Derivatives of such polymers**
- 2465/02 . Polyphenylenes
- 2465/04 . Polyxylylenes
- 2467/00 Characterised by the use of polyesters obtained by reactions forming a carboxylic ester link in the main chain; Derivatives of such polymers**
- 2467/02 . Polyesters derived from dicarboxylic acids and dihydroxy compounds ([C08J 2467/06](#) takes precedence)
- 2467/03 . . the dicarboxylic acids and dihydroxy compounds having the hydroxy and the carboxyl groups directly linked to aromatic rings
- 2467/04 . Polyesters derived from hydroxy carboxylic acids, e.g. lactones ([C08J 2467/06](#) takes precedence)
- 2467/06 . Unsaturated polyesters
- 2467/07 . . having terminal carbon-to-carbon unsaturated bonds
- 2467/08 . Polyesters modified with higher fatty oils or their acids, or with resins or resin acids
- 2469/00 Characterised by the use of polycarbonates; Derivatives of polycarbonates**
- 2471/00 Characterised by the use of polyethers obtained by reactions forming an ether link in the main chain; Derivatives of such polymers**
- 2471/02 . Polyalkylene oxides
- 2471/03 . . Polyepihalohydrins
- 2471/08 . Polyethers derived from hydroxy compounds or from their metallic derivatives ([C08J 2471/02](#) takes precedence)
- 2471/10 . . from phenols
- 2471/12 . . . Polyphenylene oxides
- 2471/14 . . Furfuryl alcohol polymers
- 2473/00 Characterised by the use of macromolecular compounds obtained by reactions forming a linkage containing oxygen or oxygen and carbon in the main chain, not provided for in groups [C08J 2459/00](#) - [C08J 2471/00](#); Derivatives of such polymers**
- 2473/02 . Polyanhydrides
- 2475/00 Characterised by the use of polyureas or polyurethanes; Derivatives of such polymers**
- 2475/02 . Polyureas
- 2475/04 . Polyurethanes
- 2475/06 . . from polyesters
- 2475/08 . . from polyethers
- 2475/10 . . from polyacetals
- 2475/12 . . from compounds containing nitrogen and active hydrogen, the nitrogen atom not being part of an isocyanate group
- 2475/14 . . Polyurethanes having carbon-to-carbon unsaturated bonds
- 2475/16 . . . having terminal carbon-to-carbon unsaturated bonds
- 2477/00 Characterised by the use of polyamides obtained by reactions forming a carboxylic amide link in the main chain; Derivatives of such polymers**
- 2477/02 . Polyamides derived from omega-amino carboxylic acids or from lactams thereof ([C08J 2477/10](#) takes precedence)
- 2477/04 . Polyamides derived from alpha-amino carboxylic acids ([C08J 2477/10](#) takes precedence)
- 2477/06 . Polyamides derived from polyamines and polycarboxylic acids ([C08J 2477/10](#) takes precedence)
- 2477/08 . . from polyamines and polymerised unsaturated fatty acids
- 2477/10 . Polyamides derived from aromatically bound amino and carboxyl groups of amino carboxylic acids or of polyamines and polycarboxylic acids
- 2477/12 . Polyester-amides
- 2479/00 Characterised by the use of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing nitrogen with or without oxygen, or carbon only, not provided for in groups [C08J 2461/00](#) - [C08J 2477/00](#)**
- 2479/02 . Polyamines
- 2479/04 . Polycondensates having nitrogen-containing heterocyclic rings in the main chain; Polyhydrazides; Polyamide acids or similar polyimide precursors
- 2479/06 . . Polyhydrazides; Polytriazoles; Polyamino-triazoles; Polyoxadiazoles
- 2479/08 . . Polyimides; Polyester-imides; Polyamide-imides; Polyamide acids or similar polyimide precursors
- 2481/00 Characterised by the use of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing sulfur with or without nitrogen, oxygen, or carbon only; Polysulfones; Derivatives of such polymers**
- 2481/02 . Polythioethers; Polythioether-ethers
- 2481/04 . Polysulfides
- 2481/06 . Polysulfones; Polyethersulfones
- 2481/08 . Polysulfonates
- 2481/10 . Polysulfonamides; Polysulfonimides

2483/00 Characterised by the use of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing silicon with or without sulfur, nitrogen, oxygen, or carbon only; Derivatives of such polymers

- 2483/02 . Polysilicates
- 2483/04 . Polysiloxanes
- 2483/05 . . containing silicon bound to hydrogen
- 2483/06 . . containing silicon bound to oxygen-containing groups ([C08J 2483/12](#) takes precedence)
- 2483/07 . . containing silicon bound to unsaturated aliphatic groups
- 2483/08 . . containing silicon bound to organic groups containing atoms other than carbon, hydrogen, and oxygen
- 2483/10 . Block- or graft-copolymers containing polysiloxane sequences
- 2483/12 . . containing polyether sequences
- 2483/14 . in which at least two but not all the silicon atoms are connected by linkages other than oxygen atoms ([C08J 2483/10](#) takes precedence)
- 2483/16 . in which all the silicon atoms are connected by linkages other than oxygen atoms

2485/00 Characterised by the use of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing atoms other than silicon, sulfur, nitrogen, oxygen, and carbon; Derivatives of such polymers

- 2485/02 . containing phosphorus
- 2485/04 . containing boron

2487/00 Characterised by the use of unspecified macromolecular compounds, obtained otherwise than by polymerisation reactions only involving unsaturated carbon-to-carbon bonds

2489/00 Characterised by the use of proteins; Derivatives thereof

- 2489/02 . Casein-aldehyde condensates
- 2489/04 . Products derived from waste materials, e.g. horn, hoof or hair
- 2489/06 . . derived from leather or skin

2491/00 Characterised by the use of oils, fats or waxes; Derivatives thereof

- 2491/02 . Vulcanised oils, e.g. factice
- 2491/04 . Linoxyn
- 2491/06 . Waxes
- 2491/08 . . Mineral waxes

2493/00 Characterised by the use of natural resins; Derivatives thereof

- 2493/02 . Shellac
- 2493/04 . Rosin

2495/00 Bituminous materials, e.g. asphalt, tar or pitch

2497/00 Characterised by the use of lignin-containing materials

- 2497/02 . Lignocellulosic material, e.g. wood, straw or bagasse

2499/00 Characterised by the use of natural macromolecular compounds or of derivatives thereof not provided for in groups [C08J 2401/00](#) - [C08J 2407/00](#) or [C08J 2489/00](#) - [C08J 2497/00](#)