

# CPC COOPERATIVE PATENT CLASSIFICATION

## C08F MACROMOLECULAR COMPOUNDS OBTAINED BY REACTIONS ONLY INVOLVING CARBON-TO-CARBON UNSATURATED BONDS

### NOTES

1. In this subclass, boron or silicon are considered as metals.
2. In this subclass, the following expression is used with the meaning indicated:
  - "aliphatic radical" means an acyclic or a non-aromatic carbocyclic carbon skeleton which is considered to be terminated by every bond to:
    - a. an element other than carbon
    - b. a carbon atom having a double bond to one atom other than carbon
    - c. an aromatic carbocyclic ring or a heterocyclic ring.Examples: Polymers of
  1.  $\text{CH}_2=\text{CH}-\text{O}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{C}(=\text{O})-\text{O}-\text{CH}_2-\text{CH}_2-\text{OH}$  are classified in group [C08F 16/28](#)
  2.  $\text{CH}_2=\text{CH}-\text{C}(=\text{O})-\text{CH}=\text{CH}_2$  are classified in group [C08F 16/36](#)
  3. para- $\text{C}_6\text{H}_4\text{Cl}(\text{CH}=\text{CH}_2)$  are classified in group [C08F 12/18](#).
3. In this subclass:
  - a. in the absence of an indication to the contrary, a catalyst or a polymer is classified in the last appropriate place .
  - b. {From April 2012 onwards, in a copolymer, the monomer in majority is given an Indexing Code and the monomer(s) in minority are given Indexing Code(s) in the form of a C-Set. The Indexing Codes are linked. The monomer in majority is always indicated first in the C-set. Example: a copolymer having ethylene in majority and styrene in minority is classified in ( [C08F 210/02](#), [C08F 212/08](#) ). }
4. In this subclass:
  - a. macromolecular compounds and their preparation are classified in the groups for the type of compound prepared. General processes for the preparation of macromolecular compounds according to more than one main group are classified in the groups for the processes employed ( [C08F 2/00](#) - [C08F 8/00](#) ). Processes for the preparation of macromolecular compounds are also classified in the groups for the types of reactions employed, if of interest;
  - b. subject matter relating to both homopolymers and copolymers is classified in groups [C08F 10/00](#) - [C08F 38/00](#);
  - c. subject matter limited to homopolymers is classified only in groups [C08F 110/00](#) - [C08F 138/00](#);
  - d. subject matter limited to copolymers is classified only in groups [C08F 210/00](#) - [C08F 246/00](#);
  - e. in groups [C08F 210/00](#) - [C08F 238/00](#), in the absence of an indication to the contrary, a copolymer is classified according to the major monomeric component.
5. This subclass covers also compositions based on monomers which form macromolecular compounds classifiable in this subclass (paints [C09D 4/00](#); adhesives [C09J 4/00](#) ). In this subclass:
  - a. if the monomers are defined, classification is made according to the polymer to be formed:
    - in groups [C08F 10/00](#) - [C08F 246/00](#) if no preformed polymer is present;
    - in groups [C08F 251/00](#) - [C08F 291/00](#) if a preformed polymer is present, considering the reaction to take place as a graft or cross-linking reaction;
  - b. if the presence of compounding ingredients is of interest, classification is made in group [C08F 2/44](#) (sensitising agents [C08F 2/50](#); catalysts [C08F 4/00](#) );
  - c. if the compounding ingredients are of interest per se, classification is also made in subclass [C08K](#).

### Processes; Catalysts

2/00

#### Processes of polymerisation

#### NOTE

- Group [C08F 2/00](#) and subgroups can be incomplete according to the following classification rules:
- if a process of polymerisation is specifically used for only one type of polymer, it is not classified in [C08F 2/00](#);
  - in such a case, the classification symbol of [C08F 2/00](#) providing for the process of polymerisation may be used in the form of Combination Set in the groups providing for the polymer, e.g. ( [C08F 36/04](#), [C08F 2/14](#) )
  - this method of classification is applied only when a note after the group providing for the

polymer explicitly indicates which symbols of [C08F 2/00](#) may be used for forming the Combination Set.

- |       |  |
|-------|--|
| 2/001 | • {Multistage polymerisation processes characterised by a change in reactor conditions without deactivating the intermediate polymer ( <a href="#">C08F 295/00</a> , <a href="#">C08F 297/00</a> take precedence)} |
| 2/002 | • {Scale prevention in a polymerisation reactor or its auxiliary parts}  |
| 2/004 | • • {by a prior coating on the reactor walls}  |
| 2/005 | • • {by addition of a scale inhibitor to the polymerisation medium}  |
| 2/007 | • • {Scale prevention in the auxiliary parts}  |
| 2/008 | • {cleaning reaction vessels using chemicals (mechanical methods <a href="#">B08B 9/08</a> )}  |
| 2/01  | • characterised by special features of the polymerisation apparatus used   |

- 2/02 . Polymerisation in bulk
- 2/04 . Polymerisation in solution ([C08F 2/32](#) takes precedence)
- 2/06 . . Organic solvent
- 2/08 . . . with the aid of dispersing agents for the polymer
- 2/10 . . Aqueous solvent
- 2/12 . Polymerisation in non-solvents ([C08F 2/32](#) takes precedence)
- 2/14 . . Organic medium
- 2/16 . . Aqueous medium
- 2/18 . . . Suspension polymerisation
- 2/20 . . . with the aid of macromolecular dispersing agents
- 2/22 . . . Emulsion polymerisation
- 2/24 . . . . with the aid of emulsifying agents
- 2/26 . . . . . anionic
- 2/28 . . . . . cationic
- 2/30 . . . . . non-ionic
- 2/32 . Polymerisation in water-in-oil emulsions
- 2/34 . Polymerisation in gaseous state
- 2/36 . Polymerisation in solid state
- 2/38 . Polymerisation using regulators, e.g. chain terminating agents, {e.g. telomerisation}
- 2/40 . . using retarding agents
- 2/42 . . using short-stopping agents
- 2/44 . Polymerisation in the presence of compounding ingredients, e.g. plasticisers, dyestuffs, fillers
- 2/46 . Polymerisation initiated by wave energy or particle radiation
- 2/48 . . by ultra-violet or visible light
- 2/50 . . . with sensitising agents
- 2/52 . . by electric discharge, e.g. voltolisation
- 2/54 . . by X-rays or electrons
- 2/56 . . by ultrasonic vibrations
- 2/58 . Polymerisation initiated by direct application of electric current (electrolytic processes, e.g. electrophoresis [C25](#))
- 2/60 . Polymerisation by the diene synthesis

#### 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

- 4/005 . {Friedel-Crafts catalysts in general}

##### NOTE

Where a carrier is considered of particular interest a further classification may be made in group [C08F 4/02](#).

- 4/02 . Carriers therefor
- 4/022 . . {Magnesium halide as support anhydrous or hydrated or complexed by means of a Lewis base for Ziegler-type catalysts}
- 4/025 . . {Metal oxides}
- 4/027 . . {Polymers}
- 4/04 . Azo-compounds
- 4/06 . Metallic compounds other than hydrides and other than metallo-organic compounds; Boron halide or aluminium halide complexes with organic compounds containing oxygen
- 4/08 . . of alkali metals
- 4/083 . . . {an alkali metal bound to oxygen}
- 4/086 . . . {an alkali metal bound to nitrogen, e.g.  $\text{LiN}(\text{C}_2\text{H}_5)_2$ }
- 4/10 . . of alkaline earth metals, zinc, cadmium, mercury, copper or silver
- 4/12 . . of boron, aluminium, gallium, indium, thallium or rare earths
- 4/14 . . . Boron halides or aluminium halides; Complexes thereof with organic compounds containing oxygen
- 4/16 . . of silicon, germanium, tin, lead, titanium, zirconium or hafnium
- 4/18 . . . Oxides
- 4/20 . . of antimony, bismuth, vanadium, niobium or tantalum
- 4/22 . . of chromium, molybdenum or tungsten
- 4/24 . . . Oxides
- 4/26 . . of manganese, iron group metals or platinum group metals
- 4/28 . Oxygen or compounds releasing free oxygen (redox systems [C08F 4/40](#))
- 4/30 . . Inorganic compounds
- 4/32 . . Organic compounds
- 4/34 . . . Per-compounds with one peroxy-radical
- 4/36 . . . Per-compounds with more than one peroxy radical
- 4/38 . . . Mixtures of peroxy-compounds
- 4/40 . Redox systems
- 4/42 . Metals; Metal hydrides; Metallo-organic compounds; Use thereof as catalyst precursors
- 4/44 . . selected from light metals, zinc, cadmium, mercury, copper, silver, gold, boron, gallium, indium, thallium, rare earths or actinides
- 4/46 . . . selected from alkali metals
- 4/461 . . . . {Catalysts containing at least two different components covered by the same or by different subgroups of group [C08F 4/46](#), e.g. butyllithium + propylrubidium}
- 4/463 . . . . {selected from sodium or potassium ([C08F 4/461](#) takes precedence)}
- 4/465 . . . . . {Metallic sodium or potassium}
- 4/466 . . . . . {an alkali metal bound to a cyclic carbon}
- 4/468 . . . . . {at least two metal atoms in the same molecule}

4/48	. . . . .	selected from lithium, rubidium, caesium or francium { <a href="#">C08F 4/461</a> takes precedence }	4/60058	. . . . .	{OO}
4/482	. . . . .	{Metallic lithium, rubidium, caesium or francium}	4/60062	. . . . .	{PN}
4/484	. . . . .	{an alkali metal bound to a cyclic carbon}	4/60065	. . . . .	{PO}
4/486	. . . . .	{at least two metal atoms in the same molecule}	4/60068	. . . . .	{Dianionic ligand}
4/488	. . . . .	{at least two lithium atoms in the same molecule}	4/60072	. . . . .	{NN}
4/50	. . .	selected from alkaline earth metals, zinc, cadmium, mercury, copper or silver	4/60075	. . . . .	{NO}
4/52	. . .	selected from boron, aluminium, gallium, indium, thallium or rare earths ( <a href="#">C08F 4/14</a> takes precedence)	4/60079	. . . . .	{OO}
4/54	. . .	together with other compounds thereof	4/60082	. . . . .	{Tridentate ligand (not used)}
4/545	. . . . .	{rare earths being present, e.g. triethylaluminium + neodymium octanoate}	4/60086	. . . . .	{Neutral ligand}
4/56	. . . . .	Alkali metals being the only metals present, e.g. Alfin catalysts	4/60089	. . . . .	{NNN}
4/565	. . . . .	{Lithium being present, e.g. butyllithium + sodiumphenoxide}	4/60093	. . . . .	{NNO}
4/58	. . .	together with silicon, germanium, tin, lead, antimony, bismuth or compounds thereof	4/60096	. . . . .	{NNS}
4/60	. . .	together with refractory metals, iron group metals, platinum group metals, manganese, rhenium {technetium} or compounds thereof	4/60099	. . . . .	{NSN}
		<b>NOTES</b>	4/60103	. . . . .	{PNN}
		1. In groups <a href="#">C08F 4/60</a> - <a href="#">C08F 4/64</a> , the term "component" comprises the transition metal or a compound thereof, pretreated or not { (pretreating per se <a href="#">C08F 4/61</a> , <a href="#">C08F 4/63</a> and <a href="#">C08F 4/65</a> ) }	4/60106	. . . . .	{PNP}
		2. Group <a href="#">C08F 4/60003</a> takes precedence over groups <a href="#">C08F 4/602</a> - <a href="#">C08F 4/619</a>	4/6011	. . . . .	{Monoanionic ligand}
4/60003	. . . . .	{the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond (not used)}	4/60113	. . . . .	{NNN}
		<b>NOTE</b>	4/60117	. . . . .	{NNO}
		For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom	4/6012	. . . . .	{ONN}
4/60006	. . . . .	{Bidentate ligand (not used)}	4/60124	. . . . .	{ONO}
4/6001	. . . . .	{Neutral ligand}	4/60127	. . . . .	{ON*O}
4/60013	. . . . .	{NN}	4/60131	. . . . .	{PNO}
4/60017	. . . . .	{NO}	4/60134	. . . . .	{SNN}
4/6002	. . . . .	{NS}	4/60137	. . . . .	{SNO}
4/60024	. . . . .	{OS}	4/60141	. . . . .	{Dianionic ligand}
4/60027	. . . . .	{PN}	4/60144	. . . . .	{NN(R)C}
4/60031	. . . . .	{PO}	4/60148	. . . . .	{NN(R)N}
4/60034	. . . . .	{PP}	4/60151	. . . . .	{NNO}
4/60037	. . . . .	{PS}	4/60155	. . . . .	{ON(R)C}
4/60041	. . . . .	{Monoanionic ligand}	4/60158	. . . . .	{ONO}
4/60044	. . . . .	{NN}	4/60162	. . . . .	{O*O*P}
4/60048	. . . . .	{NO}	4/60165	. . . . .	{OSO}
4/60051	. . . . .	{NS}	4/60168	. . . . .	{Tetra- or multi-dentate ligand (not used)}
4/60055	. . . . .	{ON}	4/60172	. . . . .	{Neutral ligand}
			4/60175	. . . . .	{ONNO}
			4/60179	. . . . .	{PNNN}
			4/60182	. . . . .	{Monoanionic ligand}
			4/60186	. . . . .	{Dianionic ligand}
			4/60189	. . . . .	{ONNO}
			4/60193	. . . . .	{OOOO}
			4/60196	. . . . .	{OSSO}
			4/602	. . . . .	Component covered by group <a href="#">C08F 4/60</a> with an organo-aluminium compound { ( <a href="#">C08F 4/60003</a> - <a href="#">C08F 4/60196</a> take precedence) }
			4/6022	. . . . .	{Component of <a href="#">C08F 4/60</a> containing at least two different metals}
			4/6024	. . . . .	{containing magnesium}
			4/6026	. . . . .	{containing aluminium}
			4/6028	. . . . .	{with an alumoxane, i.e. a compound containing an -Al-O-Al-group}
			4/603	. . . . .	Component covered by group <a href="#">C08F 4/60</a> with a metal or compound covered by group <a href="#">C08F 4/44</a> other than an organo-aluminium compound { ( <a href="#">C08F 4/60003</a> - <a href="#">C08F 4/60196</a> take precedence) }
			4/6032	. . . . .	{Component of <a href="#">C08F 4/60</a> containing at least two different metals}
			4/6035	. . . . .	{containing magnesium}
			4/6037	. . . . .	{containing aluminium}

- 4/605 . . . . Component covered by group [C08F 4/60](#) with a metal or compound covered by group [C08F 4/44](#), not provided for in a single group of groups [C08F 4/602](#) or [C08F 4/603](#) {([C08F 4/60003](#) - [C08F 4/60196](#) take precedence)}
- 4/6052 . . . . {Component of [C08F 4/60](#) containing at least two different metals}
- 4/6055 . . . . {containing magnesium}
- 4/6057 . . . . {containing aluminium}
- 4/606 . . . . Catalyst comprising at least two different metals, in metallic form or as compounds thereof, in addition to the component covered by groups [C08F 4/60](#) {([C08F 4/60003](#) - [C08F 4/60196](#) take precedence)}
- 4/6065 . . . . {containing silicium}
- 4/607 . . . . Catalyst containing a specific non-metal or metal-free compound {([C08F 4/60003](#) - [C08F 4/60196](#) take precedence)}
- 4/608 . . . . inorganic
- 4/609 . . . . organic
- 4/6091 . . . . {hydrocarbon}
- 4/6092 . . . . {containing aliphatic unsaturation}
- 4/6093 . . . . {containing halogen}
- 4/6094 . . . . {containing oxygen}
- 4/6095 . . . . {containing nitrogen}
- 4/6096 . . . . {containing sulfur}
- 4/6097 . . . . {containing phosphorus}
- 4/6098 . . . . {containing another heteroatom}
- 4/61 . . . . Pretreating the metal or compound covered by group [C08F 4/60](#) before the final contacting with the metal or compound covered by group [C08F 4/44](#) {([C08F 4/60003](#) - [C08F 4/60196](#) take precedence)}
- 4/611 . . . . Pretreating with non-metals or metal-free compounds
- 4/612 . . . . Pretreating with metals or metal-containing compounds
- 4/613 . . . . with metals covered by group [C08F 4/60](#) or compounds thereof
- 4/614 . . . . with magnesium or compounds thereof
- 4/6141 . . . . {and metals of [C08F 4/60](#) or compounds thereof}
- 4/6143 . . . . {halides of magnesium}
- 4/6145 . . . . {and metals of group [C08F 4/60](#) or compounds thereof}
- 4/6146 . . . . {organo-magnesium compounds}
- 4/6148 . . . . {magnesium or compounds thereof not provided for in [C08F 4/6143](#) or [C08F 4/6146](#)}
- 4/615 . . . . with aluminium or compounds thereof
- 4/6152 . . . . {and metals of [C08F 4/60](#) or compounds thereof}
- 4/6155 . . . . {and magnesium or compounds thereof}
- 4/6157 . . . . {and metals of [C08F 4/60](#) or compounds thereof}
- 4/616 . . . . with silicon or compounds thereof
- 4/6162 . . . . {and metals of [C08F 4/60](#) or compounds thereof}
- 4/6165 . . . . {and magnesium or compounds thereof}
- 4/6167 . . . . {and aluminium or compounds thereof}
- 4/617 . . . . with metals or metal-containing compounds, not provided for in groups [C08F 4/613](#) - [C08F 4/616](#)
- 4/6172 . . . . {and metals of [C08F 4/60](#) or compounds thereof}
- 4/6174 . . . . {and magnesium or compounds thereof}
- 4/6176 . . . . {and aluminium or compounds thereof}
- 4/6178 . . . . {and silicon or compounds thereof}
- 4/618 . . . . with metals or metal-containing compounds, provided for in at least two of the groups [C08F 4/613](#) - [C08F 4/617](#)
- 4/6181 . . . . {and metals of [C08F 4/60](#) or compounds thereof}
- 4/6183 . . . . {and magnesium or compounds thereof}
- 4/6185 . . . . {and aluminium or compounds thereof}
- 4/6186 . . . . {and silicon or compounds thereof}
- 4/6188 . . . . {and metals or metal-containing compounds of [C08F 4/617](#)}
- 4/619 . . . . Component covered by group [C08F 4/60](#) containing a transition metal-carbon bond {([C08F 4/60003](#) - [C08F 4/60196](#) take precedence)}
- 4/61904 . . . . {in combination with another component of [C08F 4/60](#)}
- 4/61908 . . . . {in combination with an ionising compound other than alumoxane, e.g.  $(C_6F_5)_4B^+X^-$ }
- 4/61912 . . . . {in combination with an organoaluminium compound}
- 4/61916 . . . . {supported on a carrier, e.g. silica,  $MgCl_2$ , polymer}
- 4/6192 . . . . containing at least one cyclopentadienyl ring, condensed or not, e.g. an indenyl or a fluorenyl ring
- 4/61922 . . . . {containing at least two cyclopentadienyl rings, fused or not}
- 4/61925 . . . . {two cyclopentadienyl rings being mutually non-bridged}
- 4/61927 . . . . {two cyclopentadienyl rings being mutually bridged}
- 4/62 . . . . Refractory metals or compounds thereof

**NOTE**

Group [C08F 4/62003](#) takes precedence over groups [C08F 4/622](#) - [C08F 4/639](#)

- 4/62003 . . . . {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond (not used)}

**NOTE**

For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned

## C08F 4/62003

(continued)

atoms except for compounds marked with \* where the charge is on the marked atom

4/62006	. . . . .	{Bidentate ligand (not used)}	4/622	. . . . .	Component covered by group <a href="#">C08F 4/62</a> with an organo-aluminium compound {(C08F 4/62003 - C08F 4/62196 take precedence)}
4/6201	. . . . .	{Neutral ligand}	4/6222	. . . . .	{Component of <a href="#">C08F 4/62</a> containing at least two different metals}
4/62013	. . . . .	{NN}	4/6224	. . . . .	{containing magnesium}
4/62017	. . . . .	{NO}	4/6226	. . . . .	{containing aluminium}
4/6202	. . . . .	{NS}	4/6228	. . . . .	{with an aluminoxane, i.e. a compound containing an Al-O-Al- group}
4/62024	. . . . .	{OS}	4/623	. . . . .	Component covered by group <a href="#">C08F 4/62</a> with a metal or compound covered by group <a href="#">C08F 4/44</a> other than an organo-aluminium compound {(C08F 4/62003 - C08F 4/62196 take precedence)}
4/62027	. . . . .	{PN}	4/6232	. . . . .	{Component of <a href="#">C08F 4/62</a> containing at least two different metals}
4/62031	. . . . .	{PO}	4/6235	. . . . .	{containing magnesium}
4/62034	. . . . .	{PP}	4/6237	. . . . .	{containing aluminium}
4/62037	. . . . .	{PS}	4/625	. . . . .	Component covered by group <a href="#">C08F 4/62</a> with a metal or compound covered by group <a href="#">C08F 4/44</a> , not provided for in a single group of groups <a href="#">C08F 4/622</a> or <a href="#">C08F 4/623</a> {(C08F 4/62003 - C08F 4/62196 take precedence)}
4/62041	. . . . .	{Monoanionic ligand}	4/6252	. . . . .	{Component of <a href="#">C08F 4/62</a> containing at least two different metals}
4/62044	. . . . .	{NN}	4/6255	. . . . .	{containing magnesium}
4/62048	. . . . .	{NO}	4/6257	. . . . .	{containing aluminium}
4/62051	. . . . .	{NS}	4/626	. . . . .	Catalysts comprising at least two different metals, in metallic form or as compounds thereof, in addition to the component covered by group <a href="#">C08F 4/62</a> {(C08F 4/62003 - C08F 4/62196 take precedence)}
4/62055	. . . . .	{ON}	4/6265	. . . . .	{containing silicium}
4/62058	. . . . .	{OO}	4/627	. . . . .	Catalysts containing a specific non-metal or metal-free compound {(C08F 4/62003 - C08F 4/62196 take precedence)}
4/62062	. . . . .	{PN}	4/628	. . . . .	inorganic
4/62065	. . . . .	{PO}	4/629	. . . . .	organic
4/62068	. . . . .	{Dianionic ligand}	4/6291	. . . . .	{hydrocarbon}
4/62072	. . . . .	{NN}	4/6292	. . . . .	{containing aliphatic unsaturation}
4/62075	. . . . .	{NO}	4/6293	. . . . .	{containing halogen}
4/62079	. . . . .	{OO}	4/6294	. . . . .	{containing oxygen}
4/62082	. . . . .	{Tridentate ligand (not used)}	4/6295	. . . . .	{containing nitrogen}
4/62086	. . . . .	{Neutral ligand}	4/6296	. . . . .	{containing sulfur}
4/62089	. . . . .	{NNN}	4/6297	. . . . .	{containing phosphorus}
4/62093	. . . . .	{NNO}	4/6298	. . . . .	{containing another heteroatom}
4/62096	. . . . .	{NNS}	4/63	. . . . .	Pretreating the metal or compound covered by group <a href="#">C08F 4/62</a> before the final contacting with the metal or compound covered by group <a href="#">C08F 4/44</a> {(C08F 4/62003 - C08F 4/62196 take precedence)}
4/62099	. . . . .	{NSN}	4/631	. . . . .	Pretreating with non-metals or metal-free compounds
4/62103	. . . . .	{PNN}	4/632	. . . . .	Pretreating with metals or metal-containing compounds
4/62106	. . . . .	{PNP}	4/633	. . . . .	with metals covered by group <a href="#">C08F 4/62</a> or compounds thereof
4/6211	. . . . .	{Monoanionic ligand}			
4/62113	. . . . .	{NNN}			
4/62117	. . . . .	{NNO}			
4/6212	. . . . .	{ONN}			
4/62124	. . . . .	{ONO}			
4/62127	. . . . .	{ON*O}			
4/62131	. . . . .	{PNO}			
4/62134	. . . . .	{SNN}			
4/62137	. . . . .	{SNO}			
4/62141	. . . . .	{Dianionic ligand}			
4/62144	. . . . .	{NN(R)C}			
4/62148	. . . . .	{NN(R)N}			
4/62151	. . . . .	{NNO}			
4/62155	. . . . .	{ON(R)C}			
4/62158	. . . . .	{ONO}			
4/62162	. . . . .	{O*O*P}			
4/62165	. . . . .	{OSO}			
4/62168	. . . . .	{Tetra- or multi-dentate ligand (not used)}			
4/62172	. . . . .	{Neutral ligand}			
4/62175	. . . . .	{ONNO}			
4/62179	. . . . .	{PNNN}			
4/62182	. . . . .	{Monoanionic ligand}			
4/62186	. . . . .	{Dianionic ligand}			
4/62189	. . . . .	{ONNO}			
4/62193	. . . . .	{OOOO}			
4/62196	. . . . .	{OSSO}			



4/634	. . . . .	with magnesium or compounds thereof	4/63922	. . . . .	{containing at least two cyclopentadienyl rings, fused or not}
4/6341	. . . . .	{and metals of <a href="#">C08F 4/62</a> or compounds thereof}	4/63925	. . . . .	{two cyclopentadienyl rings being mutually non-bridged}
4/6343	. . . . .	{halides of magnesium}	4/63927	. . . . .	{two cyclopentadienyl rings being mutually bridged}
4/6345	. . . . .	{and metals of <a href="#">C08F 4/62</a> or compounds thereof}	4/64	. . . . .	Titanium, zirconium, hafnium or compounds thereof
4/6346	. . . . .	{organo-magnesium compounds}	<b>NOTE</b>		
4/6348	. . . . .	{magnesium or compounds thereof not provided for in <a href="#">C08F 4/6345</a> or <a href="#">C08F 4/6346</a> }	Group <a href="#">C08F 4/64003</a> takes precedence over groups <a href="#">C08F 4/642</a> - <a href="#">C08F 4/659</a>		
4/635	. . . . .	with aluminium or compounds thereof	4/64003	. . . . .	{the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond (not used)}
4/6352	. . . . .	{and metals of <a href="#">C08F 4/62</a> or compounds thereof}	<b>NOTE</b>		
4/6355	. . . . .	{and magnesium or compounds thereof}	For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom		
4/6357	. . . . .	{and metals of <a href="#">C08F 4/62</a> or compounds thereof}	4/64006	. . . . .	{Bidentate ligand (not used)}
4/636	. . . . .	with silicon or compounds thereof	4/6401	. . . . .	{Neutral ligand}
4/6362	. . . . .	{and metals of <a href="#">C08F 4/62</a> or compounds thereof}	4/64013	. . . . .	{NN}
4/6365	. . . . .	{and magnesium or compounds thereof}	4/64017	. . . . .	{NO}
4/6367	. . . . .	{and aluminium or compounds thereof}	4/6402	. . . . .	{NS}
4/637	. . . . .	with metals or metal-containing compounds, not provided for in groups <a href="#">C08F 4/633</a> - <a href="#">C08F 4/636</a>	4/64024	. . . . .	{OS}
4/6372	. . . . .	{and metals of <a href="#">C08F 4/62</a> or compounds thereof}	4/64027	. . . . .	{PN}
4/6374	. . . . .	{and magnesium or compounds thereof}	4/64031	. . . . .	{PO}
4/6376	. . . . .	{and aluminium or compounds thereof}	4/64034	. . . . .	{PP}
4/6378	. . . . .	{and silicon or compounds thereof}	4/64037	. . . . .	{PS}
4/638	. . . . .	with metals or metal-containing compounds, not provided for in a single group of groups <a href="#">C08F 4/633</a> - <a href="#">C08F 4/637</a>	4/64041	. . . . .	{Monoanionic ligand}
4/6381	. . . . .	{and metals or metal-containing compounds of <a href="#">C08F 4/62</a> }	4/64044	. . . . .	{NN}
4/6383	. . . . .	{and magnesium or compounds thereof}	4/64048	. . . . .	{NO}
4/6385	. . . . .	{and aluminium or compounds thereof}	4/64051	. . . . .	{NS}
4/6386	. . . . .	{and silicon or compounds thereof}	4/64055	. . . . .	{ON}
4/6388	. . . . .	{and metals or metal-containing compounds of <a href="#">C08F 4/637</a> }	4/64058	. . . . .	{OO}
4/639	. . . . .	Component covered by group <a href="#">C08F 4/62</a> containing a transition metal-carbon bond {( <a href="#">C08F 4/62003</a> - <a href="#">C08F 4/62196</a> take precedence)}	4/64062	. . . . .	{PN}
4/63904	. . . . .	{in combination with another component of <a href="#">C08F 4/62</a> }	4/64065	. . . . .	{PO}
4/63908	. . . . .	{in combination with an ionising compound other than alumoxane, e.g. (C <sub>6</sub> F <sub>5</sub> ) <sub>4</sub> B X <sup>+</sup> }	4/64068	. . . . .	{Dianionic ligand}
4/63912	. . . . .	{in combination with an organoaluminium compound}	4/64072	. . . . .	{NN}
4/63916	. . . . .	{supported on a carrier, e.g. silica, MgCl <sub>2</sub> , polymer}	4/64075	. . . . .	{NO}
4/6392	. . . . .	containing at least one cyclopentadienyl ring, condensed or not, e.g. an indenyl or a fluorenyl ring	4/64079	. . . . .	{OO}
			4/64082	. . . . .	{Tridentate ligand (not used)}
			4/64086	. . . . .	{Neutral ligand}
			4/64089	. . . . .	{NNN}
			4/64093	. . . . .	{NNO}
			4/64096	. . . . .	{NNS}
			4/64099	. . . . .	{NSN}
			4/64103	. . . . .	{PNN}
			4/64106	. . . . .	{PNP}
			4/6411	. . . . .	{Monoanionic ligand}
			4/64113	. . . . .	{NNN}
			4/64117	. . . . .	{NNO}
			4/6412	. . . . .	{ONN}
			4/64124	. . . . .	{ONO}
			4/64127	. . . . .	{ON*O}

4/64131	. . . . .	{PNO}	4/647	. . . . .	Catalysts containing a specific non-metal or metal-free compound { <a href="#">C08F 4/64003</a> - <a href="#">C08F 4/64196</a> take precedence}
4/64134	. . . . .	{SNN}	4/648	. . . . .	inorganic
4/64137	. . . . .	{SNO}	4/649	. . . . .	organic
4/64141	. . . . .	{Dianionic ligand}	4/6491	. . . . .	{hydrocarbon}
4/64144	. . . . .	{NN(R)C}	4/6492	. . . . .	{containing aliphatic unsaturation}
4/64148	. . . . .	{NN(R)N}	4/6493	. . . . .	{containing halogen}
4/64151	. . . . .	{NNO}	4/6494	. . . . .	{containing oxygen}
4/64155	. . . . .	{ON(R)C}	4/6495	. . . . .	{containing nitrogen}
4/64158	. . . . .	{ONO}	4/6496	. . . . .	{containing sulfur}
4/64162	. . . . .	{O*O*P}	4/6497	. . . . .	{containing phosphorus}
4/64165	. . . . .	{OSO}	4/6498	. . . . .	{containing another heteroatom}
4/64168	. . . . .	{Tetra- or multi-dentate ligand (not used)}	4/65	. . . . .	Pretreating the metal or compound covered by group <a href="#">C08F 4/64</a> before the final contacting with the metal or compound covered by group <a href="#">C08F 4/44</a> { <a href="#">C08F 4/64003</a> - <a href="#">C08F 4/64196</a> take precedence}
4/64172	. . . . .	{Neutral ligand}	4/651	. . . . .	Pretreating with non-metals or metal-free compounds
4/64175	. . . . .	{ONNO}	4/652	. . . . .	Pretreating with metals or metal-containing compounds
4/64179	. . . . .	{PNNN}	4/653	. . . . .	with metals of <a href="#">C08F 4/64</a> or compounds thereof
4/64182	. . . . .	{Monoanionic ligand}	4/654	. . . . .	with magnesium or compounds thereof
4/64186	. . . . .	{Dianionic ligand}	4/6541	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}
4/64189	. . . . .	{ONNO}	4/6543	. . . . .	{halides of magnesium}
4/64193	. . . . .	{OOOO}	4/6545	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}
4/64196	. . . . .	{OSSO}	4/6546	. . . . .	{organo-magnesium compounds}
4/642	. . . . .	Component covered by group <a href="#">C08F 4/64</a> with an organo-aluminium compound { <a href="#">C08F 4/64003</a> - <a href="#">C08F 4/64196</a> take precedence}	4/6548	. . . . .	{magnesium or compounds thereof, not provided for in <a href="#">C08F 4/6543</a> or <a href="#">C08F 4/6546</a> }
4/6421	. . . . .	{Titanium tetrahalides with organo-aluminium compounds}	4/655	. . . . .	with aluminium or compounds thereof
4/6423	. . . . .	{Component of <a href="#">C08F 4/64</a> containing at least two different metals}	4/6552	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}
4/6425	. . . . .	{containing magnesium}	4/6555	. . . . .	{and magnesium or compounds thereof}
4/6426	. . . . .	{containing aluminium}	4/6557	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}
4/6428	. . . . .	{with an aluminoxane, i.e. a compound containing an Al-O-Al-group}	4/656	. . . . .	with silicon or compounds thereof
4/643	. . . . .	Component covered by group <a href="#">C08F 4/64</a> with a metal or compound covered by group <a href="#">C08F 4/44</a> other than an organo-aluminium compound { <a href="#">C08F 4/64003</a> - <a href="#">C08F 4/64196</a> take precedence}	4/6562	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}
4/6432	. . . . .	{Component of <a href="#">C08F 4/64</a> containing at least two different metals}	4/6565	. . . . .	{and magnesium or compounds thereof}
4/6435	. . . . .	{containing magnesium}	4/6567	. . . . .	{and aluminium or compounds thereof}
4/6437	. . . . .	{containing aluminium}	4/657	. . . . .	with metals or metal-containing compounds, not provided for in groups <a href="#">C08F 4/653</a> - <a href="#">C08F 4/656</a>
4/645	. . . . .	Component covered by group <a href="#">C08F 4/64</a> with a metal or compound covered by group <a href="#">C08F 4/44</a> , not provided for in a single group of groups <a href="#">C08F 4/642</a> - <a href="#">C08F 4/643</a> { <a href="#">C08F 4/60003</a> - <a href="#">C08F 4/60196</a> take precedence}	4/6572	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}
4/6452	. . . . .	{Component of <a href="#">C08F 4/64</a> containing at least two different metals}	4/6574	. . . . .	{and magnesium or compounds thereof}
4/6455	. . . . .	{containing magnesium}	4/6576	. . . . .	{and aluminium or compounds thereof}
4/6457	. . . . .	{containing aluminium}	4/6578	. . . . .	{and silicon or compounds thereof}
4/646	. . . . .	Catalysts comprising at least two different metals, in metallic form or as compounds thereof, in addition to the component covered by group <a href="#">C08F 4/64</a> { <a href="#">C08F 4/64003</a> - <a href="#">C08F 4/64196</a> take precedence}			
4/6465	. . . . .	{containing silicium}			

4/658	. . . . .	with metals or metal-containing compounds, not provided for in a single group of groups <a href="#">C08F 4/653</a> - <a href="#">C08F 4/657</a>	4/68094	. . . . .	{PS}
4/6581	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}	4/68103	. . . . .	{Monoanionic ligand}
4/6583	. . . . .	{and magnesium or compounds thereof}	4/68112	. . . . .	{NN}
4/6585	. . . . .	{and aluminium or compounds thereof}	4/6812	. . . . .	{NO}
4/6586	. . . . .	{and silicon or compounds thereof}	4/68129	. . . . .	{NS}
4/6588	. . . . .	{and metals or metal-containing compounds of <a href="#">C08F 4/657</a> }	4/68137	. . . . .	{ON}
4/659	. . . . .	Component covered by group <a href="#">C08F 4/64</a> containing a transition metal-carbon bond {( <a href="#">C08F 4/64003</a> - <a href="#">C08F 4/64196</a> take precedence)}	4/68146	. . . . .	{OO}
4/65904	. . . . .	{in combination with another component of <a href="#">C08F 4/64</a> }	4/68155	. . . . .	{PN}
4/65908	. . . . .	{in combination with an ionising compound other than alumoxane, e.g. (C <sub>6</sub> F <sub>5</sub> ) <sub>4</sub> B <sup>+</sup> X <sup>+</sup> }	4/68163	. . . . .	{PO}
4/65912	. . . . .	{in combination with an organoaluminium compound}	4/68172	. . . . .	{Dianionic ligand}
4/65916	. . . . .	{supported on a carrier, e.g. silica, MgCl <sub>2</sub> , polymer}	4/68181	. . . . .	{NN}
4/6592	. . . . .	containing at least one cyclopentadienyl ring, condensed or not, e.g. an indenyl or a fluorenyl ring	4/68189	. . . . .	{NO}
4/65922	. . . . .	{containing at least two cyclopentadienyl rings, fused or not}	4/68198	. . . . .	{OO}
4/65925	. . . . .	{two cyclopentadienyl rings being mutually non-bridged}	4/68206	. . . . .	{Tridentate ligand (not used)}
4/65927	. . . . .	{two cyclopentadienyl rings being mutually bridged}	4/68215	. . . . .	{Neutral ligand}
4/68	. . . . .	Vanadium, niobium, tantalum or compounds thereof	4/68224	. . . . .	{NNN}
4/68008	. . . . .	{the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond (not used)}	4/68232	. . . . .	{NNO}
		<b>NOTE</b>	4/68241	. . . . .	{NNS}
		For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom	4/6825	. . . . .	{NSN}
4/68017	. . . . .	{Bidentate ligand (not used)}	4/68258	. . . . .	{PNN}
4/68025	. . . . .	{Neutral ligand}	4/68267	. . . . .	{PNP}
4/68034	. . . . .	{NN}	4/68275	. . . . .	{Monoanionic ligand}
4/68043	. . . . .	{NO}	4/68284	. . . . .	{NNN}
4/68051	. . . . .	{NS}	4/68293	. . . . .	{NNO}
4/6806	. . . . .	{OS}	4/68301	. . . . .	{ONN}
4/68068	. . . . .	{PN}	4/6831	. . . . .	{ONO}
4/68077	. . . . .	{PO}	4/68318	. . . . .	{ON*O}
4/68086	. . . . .	{PP}	4/68327	. . . . .	{PNO}
			4/68336	. . . . .	{SNN}
			4/68344	. . . . .	{SNO}
			4/68353	. . . . .	{Dianionic ligand}
			4/68362	. . . . .	{NN(R)C}
			4/6837	. . . . .	{NN(R)N}
			4/68379	. . . . .	{NNO}
			4/68387	. . . . .	{ON(R)C}
			4/68396	. . . . .	{ONO}
			4/68405	. . . . .	{O*O*P}
			4/68413	. . . . .	{OSO}
			4/68422	. . . . .	{Tetra- or multi-dentate ligand (not used)}
			4/68431	. . . . .	{Neutral ligand}
			4/68439	. . . . .	{ONNO}
			4/68448	. . . . .	{PNNN}
			4/68456	. . . . .	{Monoanionic ligand}
			4/68465	. . . . .	{Dianionic ligand}
			4/68474	. . . . .	{ONNO}
			4/68482	. . . . .	{OOOO}
			4/68491	. . . . .	{OSSO}
			4/685	. . . . .	Vanadium or compounds thereof in combination with titanium or compounds thereof
			4/69	. . . . .	Chromium, molybdenum, tungsten or compounds thereof
			4/69008	. . . . .	{the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond (not used)}
					<b>NOTE</b>
					For monoanionic compounds, the charge is on the last mentioned atom;



C08F 4/69008

(continued)

for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with \* where the charge is on the marked atom

4/69017 . . . . . {Bidentate ligand (not used)}  
 4/69025 . . . . . {Neutral ligand}  
 4/69034 . . . . . {NN}  
 4/69043 . . . . . {NO}  
 4/69051 . . . . . {NS}  
 4/6906 . . . . . {OS}  
 4/69068 . . . . . {PN}  
 4/69077 . . . . . {PO}  
 4/69086 . . . . . {PP}  
 4/69094 . . . . . {PS}  
 4/69103 . . . . . {Monoanionic ligand}  
 4/69112 . . . . . {NN}  
 4/6912 . . . . . {NO}  
 4/69129 . . . . . {NS}  
 4/69137 . . . . . {ON}  
 4/69146 . . . . . {OO}  
 4/69155 . . . . . {PN}  
 4/69163 . . . . . {PO}  
 4/69172 . . . . . {Dianionic ligand}  
 4/69181 . . . . . {NN}  
 4/69189 . . . . . {NO}  
 4/69198 . . . . . {OO}  
 4/69206 . . . . . {Tridentate ligand (not used)}  
 4/69215 . . . . . {Neutral ligand}  
 4/69224 . . . . . {NNN}  
 4/69232 . . . . . {NNO}  
 4/69241 . . . . . {NNS}  
 4/6925 . . . . . {NSN}  
 4/69258 . . . . . {PNN}  
 4/69267 . . . . . {PNP}  
 4/69275 . . . . . {Monoanionic ligand}  
 4/69284 . . . . . {NNN}  
 4/69293 . . . . . {NNO}  
 4/69301 . . . . . {ONN}  
 4/6931 . . . . . {ONO}  
 4/69318 . . . . . {ON\*O}  
 4/69327 . . . . . {PNO}  
 4/69336 . . . . . {SNN}  
 4/69344 . . . . . {SNO}  
 4/69353 . . . . . {Dianionic ligand}  
 4/69362 . . . . . {NN(R)C}  
 4/6937 . . . . . {NN(R)N}  
 4/69379 . . . . . {NNO}  
 4/69387 . . . . . {ON(R)C}  
 4/69396 . . . . . {ONO}  
 4/69405 . . . . . {O\*O\*P}  
 4/69413 . . . . . {OSO}  
 4/69422 . . . . . {Tetra- or multi-dentate ligand (not used)}  
 4/69431 . . . . . {Neutral ligand}  
 4/69439 . . . . . {ONNO}  
 4/69448 . . . . . {PNNN}  
 4/69456 . . . . . {Monoanionic ligand}  
 4/69465 . . . . . {Dianionic ligand}  
 4/69474 . . . . . {ONNO}  
 4/69482 . . . . . {OOOO}

4/69491 . . . . . {OSSO}  
 4/695 . . . . . Manganese, technetium, rhenium or compounds thereof  
 4/70 . . . . . Iron group metals, platinum group metals or compounds thereof  
 4/7001 . . . . . {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond (not used)}

**NOTE**

For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with \* where the charge is on the marked atom

4/7003 . . . . . {Bidentate ligand (not used)}  
 4/7004 . . . . . {Neutral ligand}  
 4/7006 . . . . . {NN}  
 4/7008 . . . . . {NO}  
 4/7009 . . . . . {NS}  
 4/7011 . . . . . {OS}  
 4/7013 . . . . . {PN}  
 4/7014 . . . . . {PO}  
 4/7016 . . . . . {PP}  
 4/7018 . . . . . {PS}  
 4/7019 . . . . . {Monoanionic ligand}  
 4/7021 . . . . . {NN}  
 4/7022 . . . . . {NO}  
 4/7024 . . . . . {NS}  
 4/7026 . . . . . {ON}  
 4/7027 . . . . . {OO}  
 4/7029 . . . . . {PN}  
 4/7031 . . . . . {PO}  
 4/7032 . . . . . {Dianionic ligand}  
 4/7034 . . . . . {NN}  
 4/7036 . . . . . {NO}  
 4/7037 . . . . . {OO}  
 4/7039 . . . . . {Tridentate ligand (not used)}  
 4/704 . . . . . {Neutral ligand}  
 4/7042 . . . . . {NNN}  
 4/7044 . . . . . {NNO}  
 4/7045 . . . . . {NNS}  
 4/7047 . . . . . {NSN}  
 4/7049 . . . . . {PNN}  
 4/705 . . . . . {PNP}  
 4/7052 . . . . . {Monoanionic ligand}  
 4/7054 . . . . . {NNN}  
 4/7055 . . . . . {NNO}  
 4/7057 . . . . . {ONN}  
 4/7059 . . . . . {ONO}  
 4/706 . . . . . {ON\*O}  
 4/7062 . . . . . {PNO}  
 4/7063 . . . . . {SNN}  
 4/7065 . . . . . {SNO}  
 4/7067 . . . . . {Dianionic ligand}  
 4/7068 . . . . . {NN(R)C}  
 4/707 . . . . . {NN(R)N}  
 4/7072 . . . . . {NNO}

- 4/7073 . . . . . {ON(R)C}  
 4/7075 . . . . . {ONO}  
 4/7077 . . . . . {O\*O\*P}  
 4/7078 . . . . . {OSO}  
 4/708 . . . . . {Tetra- or multi-dentate ligand (not used)}  
 4/7081 . . . . . {Neutral ligand}  
 4/7083 . . . . . {ONNO}  
 4/7085 . . . . . {PNNN}  
 4/7086 . . . . . {Monoanionic ligand}  
 4/7088 . . . . . {Dianionic ligand}  
 4/709 . . . . . {ONNO}  
 4/7091 . . . . . {OOOO}  
 4/7093 . . . . . {OSSO}  
 4/7095 . . . . . {Cobalt, nickel or compounds thereof (C08F 4/7001 - C08F 4/7093 take precedence)}  
 4/7096 . . . . . {Cobalt or compounds thereof}  
 4/7098 . . . . . {Nickel or compounds thereof}  
 4/72 . . . . . selected from metals not provided for in group C08F 4/44 (C08F 4/54 - C08F 4/70 take precedence)  
 4/74 . . . . . selected from refractory metals  
 4/76 . . . . . selected from titanium, zirconium, hafnium, vanadium, niobium or tantalum  
 4/78 . . . . . selected from chromium, molybdenum or tungsten  
 4/80 . . . . . selected from iron group metals or platinum group metals  
 4/82 . . . . . Pi-Allyl complexes
- 6/00 Post-polymerisation treatments (C08F 8/00 takes precedence; of conjugated diene rubbers C08C)**
- NOTES**
- In groups C08F 6/00 - C08F 6/28 the treatment of specific polymers is indicated using the subdivision of C08L 23/00 - C08L 57/12 in the form of C-Sets. Example: ( C08F 6/12, C08L 25/06 )
  - Groups C08F 6/001, C08F 6/006, C08F 6/008, C08F 6/02, C08F 6/04 take precedence over the other groups.
- 6/001 . . {Removal of residual monomers by physical means}  
 6/003 . . {from polymer solutions, suspensions, dispersions or emulsions without recovery of the polymer therefrom}  
 6/005 . . {from solid polymers}  
 6/006 . . {Removal of residual monomers by chemical reaction, e.g. scavenging}  
 6/008 . . {Treatment of solid polymer wetted by water or organic solvents, e.g. coagulum, filter cakes}  
 6/02 . . Neutralisation of the polymerisation mass, e.g. killing the catalyst (short-stopping C08F 2/42 ) {also removal of catalyst residues}  
 6/04 . . Fractionation  
 6/06 . . Treatment of polymer solutions  
 6/08 . . Removal of catalyst residues {(not used, see C08F 6/02)}  
 6/10 . . Removal of volatile materials, e.g. monomers, solvents  
 6/12 . . Separation of polymers from solutions

- 6/14 . . Treatment of polymer emulsions  
 6/16 . . Purification  
 6/18 . . Increasing the size of the dispersed particles  
 6/20 . . Concentration  
 6/22 . . Coagulation  
 6/24 . . Treatment of polymer suspensions  
 6/26 . . Treatment of polymers prepared in bulk {also solid polymers or polymer melts}  
 6/28 . . Purification

**8/00 Chemical modification by after-treatment** (graft polymers, block polymers, cross-linking with unsaturated monomers or with polymers C08F 251/00 - C08F 299/00; of conjugated diene rubbers C08C; cross-linking in general C08J)

#### NOTE

Classification is given in the form of C-Sets when sufficient information is provided concerning the polymer to be modified. In groups C08F 8/00 - C08F 8/50, the chemical modification of specific polymers is indicated using the subdivisions of C08F 10/00 - C08F 34/04, C08F 38/00 - C08F 38/04, C08F 110/00 - C08F 134/04, C08F 138/00 - C08F 138/04, C08F 210/00 - C08F 234/04, C08F 238/00 - C08F 299/08. Example: ( C08F 8/44, C08F 16/06 ) Otherwise, only the C08F 8/00 - C08F 8/50 symbol(s) is (are) given.

- 8/02 . . Alkylation  
 8/04 . . Reduction, e.g. hydrogenation  
 8/06 . . Oxidation  
 8/08 . . Epoxidation  
 8/10 . . Acylation  
 8/12 . . Hydrolysis  
 8/14 . . Esterification  
 8/16 . . Lactonisation  
 8/18 . . Introducing halogen atoms or halogen-containing groups  
 8/20 . . Halogenation  
 8/22 . . . by reaction with free halogens  
 8/24 . . Haloalkylation  
 8/26 . . Removing halogen atoms or halogen-containing groups from the molecule  
 8/28 . . Condensation with aldehydes or ketones  
 8/30 . . Introducing nitrogen atoms or nitrogen-containing groups (polymeric products of isocyanates or thiocyanates C08G)  
 8/32 . . . by reaction with amines  
 8/34 . . Introducing sulfur atoms or sulfur-containing groups  
 8/36 . . Sulfonation; Sulfation  
 8/38 . . Sulfohalogenation  
 8/40 . . Introducing phosphorus atoms or phosphorus-containing groups  
 8/42 . . Introducing metal atoms or metal-containing groups  
 8/44 . . Preparation of metal salts or ammonium salts  
 8/46 . . Reaction with unsaturated dicarboxylic acids or anhydrides thereof, e.g. maleinisation  
 8/48 . . Isomerisation; Cyclisation

#### NOTE

When the cyclisation is an epoxidation, C08F 8/08 takes precedence. When the

C08F 8/48

(continued)

cyclisation is a lactonisation, [C08F 8/16](#) takes precedence.

8/50 . Partial depolymerisation

### Homopolymers and copolymers

**10/00 Homopolymers and copolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond**

#### NOTE

In groups [C08F 10/00](#) - [C08F 10/14](#) the method of polymerisation or the nature of the catalyst may be indicated using the subdivision of [C08F 2/00](#) - [C08F 2/58](#) or of [C08F 4/00](#) - [C08F 4/82](#) in the form of C-Sets. Example: ( [C08F 10/02](#), [C08F 4/651](#) )

10/02 . Ethene  
10/04 . Monomers containing three or four carbon atoms  
10/06 . . Propene  
10/08 . . Butenes  
10/10 . . . Isobutene  
10/14 . Monomers containing five or more carbon atoms

**12/00 Homopolymers and 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**

#### NOTES

- Until March 2012, in groups [C08F 12/04](#) - [C08F 12/08](#) the method of polymerisation might be indicated using the subdivision of [C08F 2/02](#) - [C08F 2/06](#), [C08F 2/16](#) - [C08F 2/30](#), [C08F 2/34](#) or [C08F 2/38](#) - [C08F 2/46](#) in the form of C-sets; the nature of the catalyst might be indicated using the subdivision of [C08F 4/00](#) - [C08F 4/60](#), [C08F 4/62](#), [C08F 4/64](#) or [C08F 4/68](#) - [C08F 4/82](#) in the form of C-Sets. Example: ( [C08F 12/08](#), [C08F 2/20](#) )
- From April 2012 on, in groups [C08F 12/00](#) - [C08F 12/36](#) the method of polymerisation may be indicated using the subdivision of [C08F 2/00](#) - [C08F 2/60](#) in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of [C08F 4/00](#) - [C08F 4/82](#) in the form of C-Sets. Example: ( [C08F 12/08](#), [C08F 2/56](#) )

12/02 . Monomers containing only one unsaturated aliphatic radical  
12/04 . . containing one ring  
12/06 . . . Hydrocarbons  
12/08 . . . . Styrene  
12/12 . . . . Monomers containing a branched unsaturated aliphatic radical or a ring substituted by an alkyl radical  
12/14 . . . substituted by hetero atoms or groups containing heteroatoms  
12/16 . . . . Halogens  
12/18 . . . . . Chlorine  
12/20 . . . . . Fluorine  
12/22 . . . . . Oxygen  
12/24 . . . . . Phenols or alcohols

12/26 . . . . Nitrogen  
12/28 . . . . . Amines  
12/30 . . . . Sulfur  
12/32 . . containing two or more rings  
12/34 . Monomers containing two or more unsaturated aliphatic radicals  
12/36 . . Divinylbenzene

**14/00 Homopolymers and 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**

14/02 . Monomers containing chlorine  
14/04 . . Monomers containing two carbon atoms  
14/06 . . . Vinyl chloride

#### NOTE

In group [C08F 14/06](#) the method of polymerisation may be indicated using the subdivision of [C08F 2/02](#) - [C08F 2/06](#), [C08F 2/16](#) - [C08F 2/30](#), [C08F 2/34](#) or [C08F 2/38](#) - [C08F 2/46](#) in the form of C-Sets. Example: ( [C08F 14/06](#), [C08F 2/44](#) )

14/08 . . . Vinylidene chloride  
14/12 . . . 1,2- Dichloroethene  
14/14 . . Monomers containing three or more carbon atoms  
14/16 . Monomers containing bromine or iodine  
14/18 . Monomers containing fluorine

#### NOTE

In group [C08F 14/18](#) and subgroups, the method of polymerisation may be indicated using the subdivision of [C08F 2/02](#), [C08F 2/04](#), [C08F 2/16](#), [C08F 2/38](#), [C08F 2/44](#) and [C08F 2/46](#) in the form of C-Sets. Example: ( [C08F 14/22](#), [C08F 2/38](#) )

14/185 . . {Monomers containing fluorine not covered by the groups [C08F 14/20](#) - [C08F 14/28](#)}  
14/20 . . Vinyl fluoride  
14/22 . . Vinylidene fluoride  
14/24 . . Trifluorochloroethene  
14/26 . . Tetrafluoroethene  
14/28 . . Hexafluoropropene

**16/00 Homopolymers and 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**

16/02 . by an alcohol radical  
16/04 . . Acyclic compounds  
16/06 . . . Polyvinyl alcohol; {Vinyl alcohol}  
16/08 . . . Allyl alcohol  
16/10 . . Carbocyclic compounds  
16/12 . by an ether radical  
16/14 . . Monomers containing only one unsaturated aliphatic radical  
16/16 . . . Monomers containing no hetero atoms other than the ether oxygen  
16/18 . . . . Acyclic compounds

16/20	. . . . Monomers containing three or more carbon atoms in the unsaturated aliphatic radical	20/20	. . . of polyhydric alcohols or phenols
16/22	. . . . Carbocyclic compounds	20/22	. . . Esters containing halogen
16/24	. . . Monomers containing halogen	20/24	. . . . containing perhaloalkyl radicals
16/26	. . . Monomers containing oxygen atoms in addition to the ether oxygen	20/26	. . . Esters containing oxygen in addition to the carboxy oxygen
16/28	. . . Monomers containing nitrogen	20/28	. . . . containing no aromatic rings in the alcohol moiety
16/30	. . . Monomers containing sulfur	20/30	. . . . containing aromatic rings in the alcohol moiety
16/32	. . Monomers containing two or more unsaturated aliphatic radicals	20/32	. . . . containing epoxy radicals
16/34	. by an aldehyde radical	20/34	. . . Esters containing nitrogen
16/36	. by a ketonic radical	20/36	. . . . containing oxygen in addition to the carboxy oxygen
16/38	. by an acetal or ketal radical	20/38	. . . Esters containing sulfur
<b>18/00</b>	<b>Homopolymers and 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, of carbonic acid or of a haloformic acid</b>	20/40	. . . Esters of unsaturated alcohols
18/02	. Esters of monocarboxylic acids	20/42	. . Nitriles
18/04	. . Vinyl esters	20/44	. . . Acrylonitrile
18/06	. . . Vinyl formate		
18/08	. . . Vinyl acetate		
18/10	. . . of monocarboxylic acids containing three or more carbon atoms		
18/12	. . with unsaturated alcohols containing three or more carbon atoms		
18/14	. Esters of polycarboxylic acids		
18/16	. . with alcohols containing three or more carbon atoms		
18/18	. . . Diallyl phthalate		
18/20	. Esters containing halogen		
18/22	. Esters containing nitrogen		
18/24	. Esters of carbonic or haloformic acids		
<b>20/00</b>	<b>Homopolymers and 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 a salt, anhydride, ester, amide, imide or nitrile thereof</b>		
20/02	. Monocarboxylic acids having less than ten carbon atoms, Derivatives thereof		
20/04	. . Acids, Metal salts or ammonium salts thereof		
20/06	. . . Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof		
20/08	. . Anhydrides		
20/10	. . Esters		
	<b>NOTE</b>		
	In groups <a href="#">C08F 20/12</a> - <a href="#">C08F 20/14</a> the method of polymerisation may be indicated using the subdivision of <a href="#">C08F 2/02</a> - <a href="#">C08F 2/06</a> , <a href="#">C08F 2/16</a> - <a href="#">C08F 2/30</a> , <a href="#">C08F 2/34</a> or <a href="#">C08F 2/38</a> - <a href="#">C08F 2/46</a> in the form of C-Sets. Example: ( <a href="#">C08F 20/12</a> , <a href="#">C08F 2/26</a> )		
20/12	. . . of monohydric alcohols or phenols		
20/14	. . . . Methyl esters		
20/16	. . . . of phenols or of alcohols containing two or more carbon atoms		
20/18	. . . . with acrylic or methacrylic acids		
		20/50	. . . containing four or more carbon atoms
		20/52	. . Amides or imides
		20/54	. . . Amides
		20/56	. . . . Acrylamide; Methacrylamide
		20/58	. . . . containing oxygen in addition to the carbonamido oxygen
		20/60	. . . . containing nitrogen in addition to the carbonamido nitrogen
		20/62	. Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof
		20/64	. . Acids; Metal salts or ammonium salts thereof
		20/66	. . Anhydrides
		20/68	. . Esters
		20/70	. . Nitriles; Amides; Imides
		<b>22/00</b>	<b>Homopolymers and 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; Salts, anhydrides, esters, amides, imides or nitriles thereof</b>
		22/02	. Acids; Metal salts or ammonium salts thereof
		22/04	. Anhydrides, e.g. cyclic anhydrides
		22/06	. . Maleic anhydride
		22/10	. Esters
		22/105	. . {of polyhydric alcohols or polyhydric phenols, e.g. ethylene glycol dimethacrylate}
		22/12	. . of phenols or saturated alcohols {( <a href="#">C08F 22/105</a> takes precedence )}
		22/14	. . . Esters having no free carboxylic acid groups
		22/16	. . . Esters having free carboxylic acid groups
		22/18	. . . Esters containing halogen
		22/20	. . . Esters containing oxygen in addition to the carboxy oxygen
		22/22	. . . Esters containing nitrogen
		22/24	. . . Esters containing sulfur

- 22/26 . . of unsaturated alcohols { [\(C08F 22/105 takes precedence\)](#) }
- 22/28 . . . Diallyl maleate
- 22/30 . Nitriles
- 22/32 . . alfa-Cyano-acrylic acid; Esters thereof
- 22/34 . . Vinylidene cyanide
- 22/36 . Amides or imides
- 22/38 . . Amides
- 22/385 . . . { [Monomers containing two or more \(meth\)acrylamide groups, e.g. N,N'-methylenebisacrylamide](#) }
- 22/40 . . Imides, e.g. cyclic imides
- 24/00 Homopolymers and 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 (cyclic esters of polyfunctional acids [C08F 18/00](#); cyclic anhydrides of unsaturated acids [C08F 20/00](#), [C08F 22/00](#))**
- 26/00 Homopolymers and 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**
  - 26/02 . by a single or double bond to nitrogen
  - 26/04 . . Diallylamine
  - 26/06 . by a heterocyclic ring containing nitrogen
  - 26/08 . . N-vinyl-pyrrolidine
  - 26/10 . . N-Vinyl-pyrrolidone
  - 26/12 . . N-Vinyl-carbazole
- 28/00 Homopolymers and 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**
  - 28/02 . by a bond to sulfur
  - 28/04 . . Thioethers
  - 28/06 . by a heterocyclic ring containing sulfur
- 30/00 Homopolymers and copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium or a metal (metal salts, e.g. phenolates or alcoholates, see the parent compounds)**
  - 30/02 . containing phosphorus
  - 30/04 . containing a metal
  - 30/06 . . containing boron
  - 30/08 . . containing silicon
  - 30/10 . . containing germanium
- 32/00 Homopolymers and copolymers of cyclic compounds having no unsaturated aliphatic radicals in a side chain, and having one or more carbon-to-carbon double bonds in a carbocyclic ring system**
  - 32/02 . having no condensed rings
  - 32/04 . . having one carbon-to-carbon double bond
  - 32/06 . . having two or more carbon-to-carbon double bonds
  - 32/08 . having two condensed rings ([coumarone-indene polymers C08F 244/00](#))

- 34/00 Homopolymers and copolymers of cyclic compounds having no unsaturated aliphatic radicals in a side chain and having one or more carbon-to-carbon double bonds in a heterocyclic ring (cyclic esters of polyfunctional acids [C08F 18/00](#); cyclic anhydrides or imides [C08F 22/00](#))**
  - 34/02 . in a ring containing oxygen ([coumarone-indene polymers C08F 244/00](#))
  - 34/04 . in a ring containing sulfur
- 36/00 Homopolymers and copolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds ([C08F 32/00 takes precedence](#))**

**NOTE**

In [C08F 36/00](#) - [C08F 36/22](#) the method of polymerisation may be indicated using the subdivision of [C08F 2/00](#) - [C08F 2/58](#) in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of [C08F 4/00](#) - [C08F 4/60](#), [C08F 4/62](#), [C08F 4/64](#), [C08F 4/642](#), [C08F 4/6421](#), [C08F 4/643](#) or [C08F 4/68](#) - [C08F 4/82](#) in the form of C-Sets. Example: ( [C08F 36/04](#), [C08F 4/642](#) )

  - 36/02 . the radical having only two carbon-to-carbon double bonds
  - 36/04 . . conjugated
  - 36/045 . . . { [conjugated hydrocarbons other than butadiene or isoprene](#) }
  - 36/06 . . . Butadiene
  - 36/08 . . . Isoprene
  - 36/14 . . . containing elements other than carbon and hydrogen
  - 36/16 . . . . containing halogen
  - 36/18 . . . . containing chlorine
  - 36/20 . . unconjugated
  - 36/22 . the radical having three or more carbon-to-carbon double bonds
- 38/00 Homopolymers and copolymers of compounds having one or more carbon-to-carbon triple bonds**
  - 38/02 . Acetylene
  - 38/04 . Vinylacetylene

### Homopolymers

- 110/00 Homopolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond**

**NOTE**

In groups [C08F 110/00](#) - [C08F 110/14](#) the method of polymerisation or the nature of the catalyst may be indicated using the subdivision of [C08F 2/00](#) - [C08F 2/58](#) or of [C08F 4/00](#) - [C08F 4/82](#) in the form of C-Sets. Example: ( [C08F 110/14](#), [C08F 4/6592](#) )

  - 110/02 . Ethene
  - 110/04 . monomers containing three or four carbon atoms
  - 110/06 . . Propene
  - 110/08 . . Butenes
  - 110/10 . . . Isobutene



110/14 . Monomers containing five or more carbon atoms

**112/00 Homopolymers 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**

**NOTE**

From April 2012 on, in groups  
[C08F 112/00](#) - [C08F 112/36](#) the method of polymerisation may be indicated using the subdivision of [C08F 2/00](#) - [C08F 2/60](#) in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of [C08F 4/00](#) - [C08F 4/82](#) in the form of C-Sets.  
 Example: ( [C08F 112/08](#), [C08F 4/70](#) )

112/02 . Monomers containing only one unsaturated aliphatic radical

112/04 . . containing one ring

112/06 . . . Hydrocarbons

112/08 . . . . Styrene

112/12 . . . . Monomers containing a branched unsaturated aliphatic radical or a ring substituted by an alkyl radical

112/14 . . . substituted by hetero atoms or groups containing heteroatoms

112/32 . . containing two or more rings

112/34 . Monomers containing two or more unsaturated aliphatic radicals

112/36 . . Divinylbenzene

**114/00 Homopolymers 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**

114/02 . Monomers containing chlorine

114/04 . . Monomers containing two carbon atoms

114/06 . . . Vinyl chloride

114/08 . . . Vinylidene chloride

114/12 . . . 1,2- Dichloroethene

114/14 . . Monomers containing three or more carbon atoms

114/16 . Monomers containing bromine or iodine

114/18 . Monomers containing fluorine

114/185 . . {Monomers containing fluorine not covered by the groups [C08F 114/20](#) - [C08F 114/28](#)}

114/20 . . Vinyl fluoride

114/22 . . Vinylidene fluoride

114/24 . . Trifluorochloroethene

114/26 . . Tetrafluoroethene

114/28 . . Hexafluoropropene

**116/00 Homopolymers 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**

116/02 . by an alcohol radical

116/04 . . Acyclic compounds

116/06 . . . Polyvinyl alcohol; { [Vinyl alcohol](#) }

116/08 . . . Allyl alcohol

116/10 . . Carbocyclic compounds

116/12 . by an ether radical

116/14 . . Monomers containing only one unsaturated aliphatic radical

116/16 . . . Monomers containing no hetero atoms other than the ether oxygen

116/18 . . . . Acyclic compounds

116/20 . . . . Monomers containing three or more carbon atoms in the unsaturated aliphatic radical

116/34 . by an aldehydo radical

116/36 . by a ketonic radical

116/38 . by an acetal or ketal radical

**118/00 Homopolymers 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, of carbonic acid or of a haloformic acid**

118/02 . Esters of monocarboxylic acids

118/04 . . Vinyl esters

118/06 . . . Vinyl formate

118/08 . . . Vinyl acetate

118/10 . . . of monocarboxylic acids containing three or more carbon atoms

118/12 . . with unsaturated alcohols containing three or more carbon atoms

118/14 . Esters of polycarboxylic acids

118/16 . . with alcohols containing three or more carbon atoms

118/18 . . . Diallyl phthalate

**120/00 Homopolymers 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 a salt, anhydride, ester, amide, imide or nitrile thereof**

120/02 . Monocarboxylic acids having less than ten carbon atoms; Derivatives thereof

120/04 . . Acids; Metal salts or ammonium salts thereof

120/06 . . . Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof

120/08 . . Anhydrides

120/10 . . Esters

120/12 . . . of monohydric alcohols or phenols

120/14 . . . . Methyl esters

120/16 . . . . of phenols or of alcohols containing two or more carbon atoms

120/18 . . . . . with acrylic or methacrylic acids

120/20 . . . of polyhydric alcohols or phenols

120/22 . . . Esters containing halogen

120/24 . . . . containing perhaloalkyl radicals

120/26 . . . Esters containing oxygen in addition to the carboxy oxygen

120/28 . . . . containing no aromatic rings in the alcohol moiety

120/30 . . . . containing aromatic rings in the alcohol moiety

120/32 . . . . containing epoxy radicals

120/34 . . . Esters containing nitrogen

120/36 . . . . containing oxygen in addition to the carboxy oxygen

120/38 . . . Esters containing sulfur

120/40 . . . Esters of unsaturated alcohols

- 120/42 . . Nitriles
- 120/44 . . . Acrylonitrile
- 120/50 . . . containing four or more carbon atoms
- 120/52 . . Amides or imides
- 120/54 . . . Amides
- 120/56 . . . . Acrylamide; Methacrylamide
- 120/58 . . . . containing oxygen in addition to the carbonamido oxygen
- 120/60 . . . . containing nitrogen in addition to the carbonamido nitrogen
- 120/62 . Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof
- 120/64 . . Acids; Metal salts or ammonium salts thereof
- 120/66 . . Anhydrides
- 120/68 . . Esters
- 120/70 . . Nitriles; Amides; Imides
- 122/00 Homopolymers 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; Salts, anhydrides, esters, amides, imides or nitriles thereof**
  - 122/02 . Acids; Metal salts or ammonium salts thereof
  - 122/04 . Anhydrides, e.g. cyclic anhydrides
  - 122/06 . . Maleic anhydride
  - 122/10 . Esters
  - 122/105 . . {of polyhydric alcohols or polyhydric phenols, e.g. ethylene glycol dimethacrylat}
  - 122/12 . . of phenols or saturated alcohols {(C08F 122/105 takes precedence)}
  - 122/14 . . . Esters having no free carboxylic acid groups
  - 122/16 . . . Esters having free carboxylic acid groups
  - 122/18 . . . Esters containing halogen
  - 122/20 . . . Esters containing oxygen in addition to the carboxy oxygen
  - 122/22 . . . Esters containing nitrogen
  - 122/24 . . . Esters containing sulfur
  - 122/26 . . of unsaturated alcohols {(C08F 122/105 takes precedence)}
  - 122/28 . . . Diallyl maleate
  - 122/30 . Nitriles
  - 122/32 . . alfa-Cyano-acrylic acid; Esters thereof
  - 122/34 . . Vinylidene cyanide
  - 122/36 . Amides or imides
  - 122/38 . . Amides
  - 122/385 . . . {Monomers containing two or more (meth)acrylamide groups, e.g. N,N'-methylenebisacrylamide}
  - 122/40 . . Imides, e.g. cyclic imides
- 124/00 Homopolymers 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 (cyclic esters of polyfunctional acids C08F 118/00; cyclic anhydrides of unsaturated acids C08F 120/00, C08F 122/00)**

- 126/00 Homopolymers 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**
  - 126/02 . by a single or double bond to nitrogen
  - 126/04 . . Diallylamine
  - 126/06 . by a heterocyclic ring containing nitrogen
  - 126/08 . . N-Vinyl-pyrrolidine
  - 126/10 . . N-Vinyl-pyrrolidone
  - 126/12 . . N-Vinyl-carbazole
- 128/00 Homopolymers 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**
  - 128/02 . by a bond to sulfur
  - 128/04 . . Thioethers
  - 128/06 . by a heterocyclic ring containing sulfur
- 130/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium or a metal (metal salts, e.g. phenolates or alcoholates, see the parent compounds)**
  - 130/02 . containing phosphorus
  - 130/04 . containing a metal
  - 130/06 . . containing boron
  - 130/08 . . containing silicon
  - 130/10 . . containing germanium
- 132/00 Homopolymers of cyclic compounds containing no unsaturated aliphatic radicals in a side chain, and having one or more carbon-to-carbon double bonds in a carbocyclic ring system**
  - 132/02 . having no condensed rings
  - 132/04 . . having one carbon-to-carbon double bond
  - 132/06 . . having two or more carbon-to-carbon double bonds
  - 132/08 . having condensed rings
- 134/00 Homopolymers of cyclic compounds having no unsaturated aliphatic radicals in a side chain and having one or more carbon-to-carbon double bonds in a heterocyclic ring (cyclic esters of polyfunctional acids C08F 118/00; cyclic anhydrides or imides C08F 122/00)**
  - 134/02 . in a ring containing oxygen
  - 134/04 . in a ring containing sulfur
- 136/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds (C08F 132/00 takes precedence)**

**NOTE**

In C08F 136/00 - C08F 136/22 the method of polymerisation may be indicated using the subdivision of C08F 2/00 - C08F 2/58 in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of C08F 4/00 - C08F 4/60, C08F 4/62, C08F 4/64, C08F 4/642, C08F 4/6421, C08F 4/643 or

## C08F 136/00

(continued)

[C08F 4/68](#) - [C08F 4/82](#) in the form of C-Sets.Example: ( [C08F 136/18](#), [C08F 2/26](#) )

- 136/02 . the radical having only two carbon-to-carbon double bonds
- 136/04 . . conjugated
- 136/045 . . . {conjugated hydrocarbons other than butadiene or isoprene}
- 136/06 . . . Butadiene
- 136/08 . . . Isoprene
- 136/14 . . . containing elements other than carbon and hydrogen
- 136/16 . . . . containing halogen
- 136/18 . . . . containing chlorine
- 136/20 . . unconjugated
- 136/22 . the radical having three or more carbon-to-carbon double bonds
- 138/00 Homopolymers of compounds having one or more carbon-to-carbon triple bonds**
- 138/02 . Acetylene
- 138/04 . Vinylacetylene

**Copolymers****210/00 Copolymers of unsaturated aliphatic hydrocarbon having only one carbon-to-carbon double bond****NOTE**

In [C08F 210/00](#) - [C08F 210/18](#) the method of polymerisation or the nature of the catalyst may be indicated using the subdivision of [C08F 2/00](#) - [C08F 2/58](#) or of [C08F 4/00](#) - [C08F 4/82](#) in the form of C-Sets.  
Example: ( [C08F 210/06](#), [C08F 4/04](#) )

- 210/02 . Ethene
- 210/04 . Monomers containing three or four carbon atoms
- 210/06 . . Propene
- 210/08 . . Butenes
- 210/10 . . . Isobutene
- 210/12 . . . . with conjugated diolefins, e.g. butyl rubber
- 210/14 . Monomers containing five or more carbon atoms
- 210/16 . Copolymers of ethene with alfa-alkenes, e.g. EP rubbers
- 210/18 . . with non-conjugated dienes, e.g. EPT rubbers

**212/00 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****NOTE**

From April 2012 on, in groups [C08F 212/00](#) - [C08F 212/36](#) the method of polymerisation may be indicated using the subdivision of [C08F 2/00](#) - [C08F 2/60](#) in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of [C08F 4/00](#) - [C08F 4/82](#) in the form of C-Sets.  
Example: ( [C08F 212/08](#), [C08F 4/16](#) )

- 212/02 . Monomers containing only one unsaturated aliphatic radical
- 212/04 . . containing one ring
- 212/06 . . . Hydrocarbons

- 212/08 . . . . Styrene
- 212/10 . . . . . with nitriles
- 212/12 . . . . Monomers containing a branched unsaturated aliphatic radical or a ring substituted by an alkyl radical
- 212/14 . . . substituted by heteroatoms or groups containing heteroatoms
- 212/145 . . . . {the heteroatoms being part of ester groups derived from unsaturated acids}
- 212/32 . . containing two or more rings
- 212/34 . Monomers containing two or more unsaturated aliphatic radicals
- 212/36 . . Divinylbenzene
- 214/00 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**
- 214/02 . Monomers containing chlorine
- 214/04 . . Monomers containing two carbon atoms
- 214/06 . . . Vinyl chloride
- 214/08 . . . Vinylidene chloride
- 214/10 . . . . with nitriles
- 214/12 . . . 1,2-Dichloroethene
- 214/14 . . Monomers containing three or more carbon atoms
- 214/16 . Monomers containing bromine or iodine
- 214/18 . Monomers containing fluorine
- 214/182 . . {Monomers containing fluorine not covered by the groups [C08F 214/20](#) - [C08F 214/28](#)}
- 214/184 . . {with fluorinated vinyl ethers}
- 214/186 . . {with non-fluorinated comonomers}
- 214/188 . . . {with non-fluorinated vinyl ethers}
- 214/20 . . Vinyl fluoride
- 214/202 . . . {with fluorinated vinyl ethers}
- 214/205 . . . {with non-fluorinated comonomers}
- 214/207 . . . . {with non-fluorinated vinyl ethers}
- 214/22 . . Vinylidene fluoride
- 214/222 . . . {with fluorinated vinyl ethers}
- 214/225 . . . {with non-fluorinated comonomers}
- 214/227 . . . . {with non-fluorinated vinyl ethers}
- 214/24 . . Trifluorochloroethene
- 214/242 . . . {with fluorinated vinyl ethers}
- 214/245 . . . {with non-fluorinated comonomers}
- 214/247 . . . . {with non-fluorinated vinyl ethers}
- 214/26 . . Tetrafluoroethene
- 214/262 . . . {with fluorinated vinyl ethers}
- 214/265 . . . {with non-fluorinated comonomers}
- 214/267 . . . . {with non-fluorinated vinyl ethers}
- 214/28 . . Hexafluoropropene
- 214/282 . . . {with fluorinated vinyl ethers}
- 214/285 . . . {with non-fluorinated comonomers}
- 214/287 . . . . {with non-fluorinated vinyl ethers}
- 216/00 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**
- 216/02 . by an alcohol radical
- 216/04 . . Acyclic compounds
- 216/06 . . . Polyvinyl alcohol; {Vinyl alcohol}
- 216/08 . . . Allyl alcohol
- 216/085 . . . . {Allyl alcohol alkoxylate}

216/10	. . Carbocyclic compounds	220/02	. Monocarboxylic acids having less than ten carbon atoms; Derivatives thereof
216/12	. by an ether radical	220/04	. . Acids; Metal salts or ammonium salts thereof
216/125	. . {monomers containing two or more unsaturated aliphatic radicals}	220/06	. . . Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof
216/14	. . Monomers containing only one unsaturated aliphatic radical	220/08	. . Anhydrides
216/1408	. . . {Monomers containing halogen}	220/10	. . Esters
216/1416	. . . {Monomers containing oxygen in addition to the ether oxygen}	220/12	. . . of monohydric alcohols or phenols
2216/1425	. . . . {Monomers containing side chains of polyether groups}	220/14	. . . . Methyl esters
2216/1433	. . . . . {Monomers containing side chains of polyethyleneoxide groups}	220/16	. . . . of phenols or of alcohols containing two or more carbon atoms
2216/1441	. . . . . {Monomers containing side chains of polypropyleneoxide groups}	220/18	. . . . . with acrylic or methacrylic acids
2216/145	. . . . . {Monomers containing side chains of polyethylene-co-propyleneoxide groups}	2220/1808	. . . . . {Ethyl or undefined short-chain (meth)acrylate}
216/1458	. . . {Monomers containing nitrogen}	2220/1816	. . . . . {Propyl(meth)acrylate}
216/1466	. . . {Monomers containing sulfur}	2220/1825	. . . . . {Butyl(meth)acrylate}
2216/1475	. . . . {Monomers containing sulfur and oxygen}	2220/1833	. . . . . {Pentyl or undefined long chain (meth)acrylate}
2216/1483	. . . . {Monomers containing sulfur and nitrogen}	2220/1841	. . . . . {Hexyl(meth)acrylate}
2216/1491	. . . . {Monomers containing sulfur, oxygen and nitrogen}	2220/185	. . . . . {Heptyl(meth)acrylate}
216/16	. . . Monomers containing no hetero atoms other than the ether oxygen	2220/1858	. . . . . {(iso)Octyl(meth)acrylate}
216/165	. . . . {Carbocyclic compounds}	2220/1866	. . . . . {C9-(meth)Acrylate}
216/18	. . . . Acyclic compounds	2220/1875	. . . . . {(iso)Decyl(meth)acrylate}
216/20	. . . . . Monomers containing three or more carbon atoms in the unsaturated aliphatic radical	2220/1883	. . . . . {Lauryl(meth)acrylate}
216/34	. by an aldehydo radical	2220/1891	. . . . . {Longer chain (meth)acrylate}
216/36	. by a ketonic radical	220/20	. . . of polyhydric alcohols or phenols
216/38	. by an acetal or ketal radical	220/22	. . . Esters containing halogen
<b>218/00</b>	<b>Copolymers 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, of carbonic acid or of a haloformic acid</b>	220/24	. . . . containing perhaloalkyl radicals
218/02	. Esters of monocarboxylic acids	220/26	. . . Esters containing oxygen in addition to the carboxy oxygen
218/04	. . Vinyl esters	220/28	. . . . containing no aromatic rings in the alcohol moiety
218/06	. . . Vinyl formate	2220/281	. . . . . {and containing only one oxygen}
218/08	. . . Vinyl acetate	2220/282	. . . . . {and containing two or more oxygen atoms}
218/10	. . . of monocarboxylic acids containing three or more carbon atoms	2220/283	. . . . . {and containing one or more carboxylic moiety in the chain}
218/12	. . with unsaturated alcohols containing three or more carbon atoms	2220/285	. . . . . {and containing an ether chain in the alcohol moiety}
218/14	. Esters of polycarboxylic acids	2220/286	. . . . . {and containing polyethylenoxide in the alcohol moiety}
218/16	. . with alcohols containing three or more carbon atoms	2220/287	. . . . . {and containing polypropylenoxide in the alcohol moiety}
218/18	. . . Diallyl phthalate	2220/288	. . . . . {and containing polypropylen-co-ethylen oxide in the alcohol moiety}
2218/20	. {Esters containing halogen}	220/30	. . . . containing aromatic rings in the alcohol moiety
2218/22	. {Esters containing nitrogen}	2220/301	. . . . . {and one oxygen in the alcohol moiety}
2218/24	. {Esters of carbonic or haloformic acids}	2220/302	. . . . . {and two or more oxygen atoms in the alcohol moiety}
2218/245	. . {Esters of carbonic or haloformic acids, e.g. allyl carbonate}	2220/303	. . . . . {and one or more carboxylic moieties in the chain}
<b>220/00</b>	<b>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 a salt, anhydride ester, amide, imide or nitrile thereof</b>	2220/305	. . . . . {and ether chain in the alcohol moiety}
		2220/306	. . . . . {and polyethylenoxide chain in the alcohol moiety}
		2220/307	. . . . . {and polypropylene oxide chain in the alcohol moiety}
		2220/308	. . . . . {and polyethylene-co-propylene oxide chain in the alcohol moiety}
		220/32	. . . . containing epoxy radicals
		2220/325	. . . . . {containing glycidyl radical}
		220/34	. . . Esters containing nitrogen
		2220/343	. . . . {in the form of urethane links}



2220/346	. . . . . {and further oxygen}	222/12	. . . of phenols or saturated alcohols {(C08F 222/1006 takes precedence)}
220/36	. . . . containing oxygen in addition to the carboxy oxygen	222/14	. . . Esters having no free carboxylic acid groups
2220/365	. . . . . {containing further carboxylic moieties}	2222/145	. . . . {the ester chains containing seven or more carbon atoms}
220/38	. . . Esters containing sulfur	222/16	. . . Esters having free carboxylic acid groups
2220/382	. . . . . {and containing oxygen}	2222/165	. . . . {the ester chains containing seven or more carbon atoms}
2220/385	. . . . . {and containing nitrogen}	222/18	. . . Esters containing halogen
2220/387	. . . . . {and containing nitrogen and oxygen}	2222/185	. . . . {the ester chains containing seven or more carbon atoms}
220/40	. . . Esters of unsaturated alcohols	222/20	. . . Esters containing oxygen in addition to the carboxy oxygen
220/42	. . Nitriles	2222/205	. . . . {the ester chains containing seven or more carbon atoms}
220/44	. . . Acrylonitrile	222/22	. . . Esters containing nitrogen
220/46	. . . . with carboxylic acids, sulfonic acids or salts thereof	2222/225	. . . . {the ester chains containing seven or more carbon atoms}
220/48	. . . . with nitrogen-containing monomers	222/24	. . . Esters containing sulfur
220/50	. . . containing four or more carbon atoms	2222/245	. . . . {the ester chains containing seven or more carbon atoms}
220/52	. . Amides or imides	222/26	. . of unsaturated alcohols {(C08F 222/1006 takes precedence)}
220/54	. . . Amides	222/28	. . . Diallyl maleate
220/56	. . . . Acrylamide; Methacrylamide	222/30	. Nitriles
220/58	. . . . containing oxygen in addition to the carbonamido oxygen	222/32	. . alfa-Cyano-acrylic acid; Esters thereof
2220/585	. . . . . {and containing other heteroatoms}	2222/321	. . . {alfa-Cyano-acrylic acid methyl ester}
220/60	. . . . containing nitrogen in addition to the carbonamido nitrogen	2222/322	. . . {alfa-Cyano-acrylic acid ethyl ester}
2220/603	. . . . . {and containing oxygen in addition to the carbonamido oxygen and nitrogen}	2222/323	. . . {alfa-Cyano-acrylic acid propyl ester}
2220/606	. . . . . {and containing other heteroatoms}	2222/324	. . . {alfa-Cyano-acrylic acid butyl ester}
220/62	. Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof (copolymers of drying oils C08F 242/00)	2222/325	. . . {alfa-Cyano-acrylic acid pentyl ester}
220/64	. . Acids; Metal salts or ammonium salts thereof	2222/326	. . . {alfa-Cyano-acrylic acid longer chain ester}
220/66	. . Anhydrides	2222/327	. . . {alfa-Cyano-acrylic acid alkoxy ester}
220/68	. . Esters	2222/328	. . . {alfa-Cyano-acrylic acid with more than one oxygen in the ester moiety}
220/70	. . Nitriles; Amides; Imides	222/34	. . Vinylidene cyanide
<b>222/00</b>	<b>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; Salts, anhydrides, esters, amides, imides, or nitriles thereof</b>	222/36	. Amides or imides
222/02	. Acids; Metal salts or ammonium salts thereof	222/38	. . Amides
222/04	. Anhydrides, e.g. cyclic anhydrides	222/385	. . . {Monomers containing two or more (meth)acrylamide groups, e.g. N,N'-methylenebisacrylamide}
222/06	. . Maleic anhydride	222/40	. . Imides, e.g. cyclic imides
222/08	. . . with vinyl aromatic monomers	2222/402	. . . {Alkyl substituted imides}
222/10	. Esters	2222/404	. . . {the substituted imides comprising oxygen other than the carboxy oxygen}
222/1006	. . {of polyhydric alcohols or polyhydric phenols, e.g. ethylene glycol dimethacrylat}	2222/406	. . . {the substituted imides comprising nitrogen other than the imide nitrogen}
2222/1013	. . . {of dialcohols}	2222/408	. . . {the substituted imides comprising other heteroatom}
2222/102	. . . . {of aromatic dialcohols}	<b>224/00</b>	<b>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 (cyclic esters of polyfunctional acids C08F 218/00; cyclic anhydrides of unsaturated acids C08F 220/00, C08F 222/00)</b>
2222/1026	. . . {of trialcohols}	<b>226/00</b>	<b>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</b>
2222/1033	. . . . {of aromatic trialcohols}		
2222/104	. . . {of tetraalcohols}		
2222/1046	. . . . {of aromatic tetraalcohols}		
2222/1053	. . . {of pentaalcohols}		
2222/106	. . . . {of aromatic pentaalcohols}		
2222/1066	. . . {Esters of polycondensation macromers}		
2222/1073	. . . . {of alcohol terminated polyesters or polycarbonates}		
2222/108	. . . . {of alcohol terminated polyethers}		
2222/1086	. . . . {of alcohol terminated (poly)urethanes}		
2222/1093	. . . . {of alcohol terminated epoxy functional polymers}		



- 226/02 . by a single or double bond to nitrogen
- 226/04 . . Diallylamine
- 226/06 . by a heterocyclic ring containing nitrogen
- 226/08 . . N-Vinyl-pyrrolidine
- 226/10 . . N-Vinyl-pyrrolidone
- 226/12 . . N-Vinylcarbazole
- 228/00 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**
- 228/02 . by a bond to sulfur
- 228/04 . . Thioethers
- 228/06 . by a heterocyclic ring containing sulfur
- 230/00 Copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium or a metal (metal salts, e.g. phenolates or alcoholates, see the parent compounds)**
- 230/02 . containing phosphorus
- 230/04 . containing a metal
- 230/06 . . containing boron
- 2230/065 . . . {the monomer being a polymerisable additive}
- 230/08 . . containing silicon
- 2230/085 . . . {the monomer being a polymerisable additive}
- 230/10 . . containing germanium
- 232/00 Copolymers of cyclic compounds containing no unsaturated aliphatic radicals in a side chain, and having one or more carbon-to-carbon double bonds in a carbocyclic ring system**
- 232/02 . having no condensed rings
- 232/04 . . having one carbon-to-carbon double bond
- 232/06 . . having two or more carbon-to-carbon double bonds
- 232/08 . having condensed rings (coumarone-indene polymers C08F 244/00)
- 234/00 Copolymers of cyclic compounds having no unsaturated aliphatic radicals in a side chain and having one or more carbon-to-carbon double bonds in a heterocyclic ring (cyclic esters of polyfunctional acids C08F 218/00; cyclic anhydrides or imides C08F 222/00)**
- 234/02 . in a ring containing oxygen (coumarone-indene polymers C08F 244/00)
- 234/04 . in a ring containing sulfur
- 236/00 Copolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds (C08F 232/00 takes precedence)**
- NOTE**
- In C08F 236/00 - C08F 236/22 the method of polymerisation may be indicated using the subdivision of C08F 2/00 - C08F 2/58 in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of C08F 4/00 - C08F 4/60, C08F 4/62, C08F 4/64, C08F 4/642, C08F 4/6421, C08F 4/643 or C08F 4/68 - C08F 4/82 in the form of C-Sets.  
Example: ( C08F 236/10, C08F 4/46 )
- 236/02 . the radical having only two carbon-to-carbon double bonds
- 236/04 . . conjugated
- 236/045 . . . {conjugated hydrocarbons other than butadiene or isoprene}
- 236/06 . . . Butadiene
- 236/08 . . . Isoprene
- 236/10 . . . with vinyl-aromatic monomers
- 236/12 . . . with nitriles
- 236/14 . . . containing elements other than carbon and hydrogen
- 236/16 . . . . containing halogen
- 236/18 . . . . containing chlorine
- 236/20 . . unconjugated
- 236/22 . the radical having three or more carbon-to-carbon double bonds
- 238/00 Copolymers of compounds having one or more carbon-to-carbon triple bonds**
- 238/02 . Acetylene
- 238/04 . Vinylacetylene
- 240/00 Copolymers of hydrocarbons and mineral oils, e.g. petroleum resins**
- 242/00 Copolymers of drying oils with other monomers**
- 244/00 Coumarone-indene copolymers**
- 246/00 Copolymers in which the nature of only the monomers in minority is defined**
- Graft polymers; Polymers crosslinked with unsaturated monomers**
- NOTE**
- In C08F 251/00 - C08F 292/00 the grafted monomer may be indicated using the subdivision of C08F 210/00 - C08F 238/04 preceded by a "+" sign.  
Example:  
C08F 265/06 + C08F 220/06
- 251/00 Macromolecular compounds obtained by polymerising monomers on to polysaccharides or derivatives thereof**
- 251/02 . on to cellulose or derivatives thereof
- 253/00 Macromolecular compounds obtained by polymerising monomers on to natural rubbers or derivatives thereof**
- 255/00 Macromolecular compounds obtained by polymerising monomers on to polymers of hydrocarbons as defined in group C08F 10/00**
- 255/02 . on to polymers of olefins having two or three carbon atoms
- 255/023 . . {On to modified polymers, e.g. chlorinated polymers}
- 255/026 . . {on to ethylene-vinylester copolymers}
- 255/04 . . on to ethene-propene copolymers  
{(C08F 255/023 takes precedence)}
- 255/06 . . on to ethene-propene-diene terpolymers  
{(C08F 255/023 takes precedence)}
- 255/08 . on to polymers of olefins having four or more carbon atoms
- 255/10 . . on to butene polymers

<b>257/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of aromatic monomers as defined in group <a href="#">C08F 12/00</a></b>	<b>269/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of heterocyclic oxygen-containing monomers as defined in group <a href="#">C08F 24/00</a></b>
257/02	• on to polymers of styrene or alkyl-substituted styrenes	<b>271/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of nitrogen-containing monomers as defined in group <a href="#">C08F 26/00</a></b>
<b>259/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of halogen containing monomers as defined in group <a href="#">C08F 14/00</a></b>	271/02	• on to polymers of monomers containing heterocyclic nitrogen
259/02	• on to polymers containing chlorine	<b>273/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of sulfur-containing monomers as defined in group <a href="#">C08F 28/00</a></b>
259/04	• . on to polymers of vinyl chloride	<b>275/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of monomers containing phosphorus, selenium, tellurium or a metal as defined in group <a href="#">C08F 30/00</a></b>
259/06	• . on to polymers of vinylidene chloride	<b>277/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of carbocyclic or heterocyclic monomers as defined respectively in group <a href="#">C08F 32/00</a> or in group <a href="#">C08F 34/00</a></b>
259/08	• on to polymers containing fluorine	<b>279/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of monomers having two or more carbon-to-carbon double bonds as defined in group <a href="#">C08F 36/00</a></b>
<b>261/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of oxygen-containing monomers as defined in group <a href="#">C08F 16/00</a></b>	<b>NOTE</b>	
261/02	• on to polymers of unsaturated alcohols	In <a href="#">C08F 279/02</a> and <a href="#">C08F 279/04</a> the method of polymerisation may be indicated using the subdivision of <a href="#">C08F 2/02</a> , <a href="#">C08F 2/16</a> , <a href="#">C08F 2/18</a> or <a href="#">C08F 2/22</a> in the form of C-Sets. Example: ( <a href="#">C08F 279/02</a> , <a href="#">C08F 2/22</a> )	
261/04	• . on to polymers of vinyl alcohol	279/02	• on to polymers of conjugated dienes
261/06	• on to polymers of unsaturated ethers	279/04	• . Vinyl aromatic monomers and nitriles as the only monomers
261/08	• on to polymers of unsaturated aldehydes	279/06	• . Vinyl aromatic monomers and methacrylates as the only monomers
261/10	• on to polymers of unsaturated ketones	<b>281/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of monomers having carbon-to-carbon triple bonds as defined in group <a href="#">C08F 38/00</a></b>
261/12	• on to polymers of unsaturated acetals or ketals	<b>283/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers provided for in subclass <a href="#">C08G</a> {(on to polymers modified by introduction of aliphatic unsaturated end or side groups <a href="#">C08F 290/00</a>)}</b>
<b>263/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of esters of unsaturated alcohols with saturated acids as defined in group <a href="#">C08F 18/00</a></b>	283/002	• {on to polymers modified by after-treatment}
263/02	• on to polymers of vinyl esters with monocarboxylic acids	283/004	• . {modified by incorporation of silicon atoms}
263/04	• . on to polymers of vinyl acetate	283/006	• {on to polymers provided for in <a href="#">C08G 18/00</a> ( <a href="#">C08F 283/004</a> takes precedence)}
263/06	• on to polymers of esters with polycarboxylic acids	283/008	• . {on to unsaturated polymers}
263/08	• . Polymerisation of diallyl phthalate prepolymers	283/01	• on to unsaturated polyesters { ( <a href="#">C08F 283/004</a> takes precedence) }
<b>265/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of unsaturated monocarboxylic acids or derivatives thereof as defined in group <a href="#">C08F 20/00</a></b>	<b>NOTE</b>	
265/02	• on to polymers of acids, salts or anhydrides	After the symbol of group <a href="#">C08F 283/01</a> - <a href="#">C08F 283/14</a> and using the C-Sets, notations concerning the method of	
265/04	• on to polymers of esters		
265/06	• . Polymerisation of acrylate or methacrylate esters on to polymers thereof		
<b>NOTE</b>			
In <a href="#">C08F 265/06</a> the method of polymerisation may be indicated using the subdivision of <a href="#">C08F 2/02</a> , <a href="#">C08F 2/16</a> , <a href="#">C08F 2/18</a> or <a href="#">C08F 2/22</a> in the form of C-Sets. Example: ( <a href="#">C08F 265/06</a> , <a href="#">C08F 2/16</a> )			
265/08	• on to polymers of nitriles		
265/10	• on to polymers of amides or imides		
<b>267/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to polymers of unsaturated polycarboxylic acids or derivatives thereof as defined in group <a href="#">C08F 22/00</a></b>		
267/02	• on to polymers of acids or salts		
267/04	• on to polymers of anhydrides		
267/06	• on to polymers of esters		
267/08	• on to polymers of nitriles		
267/10	• on to polymers of amides or imides		

## C08F 283/01

(continued)

- polymerisation or the nature of the catalyst can be indicated. These notations are selected from groups [C08F 2/00](#), [C08F 2/16](#), [C08F 2/46](#), [C08F 2/48](#), [C08F 2/50](#), [C08F 4/00](#), [C08F 4/04](#), [C08F 4/06](#), [C08F 4/28](#) and [C08F 4/42](#). Example: ([C08F 283/01](#), [C08F 2/16](#))
- 283/02 . on to polycarbonates or saturated polyesters  
{([C08F 283/004](#) takes precedence)}
- 283/04 . on to polycarbonamides, polyesteramides or polyimides {([C08F 283/004](#) takes precedence)}
- 283/045 . . {on to unsaturated polycarbonamides, polyesteramides or polyimides}
- 283/06 . on to polyethers, polyoxymethylenes or polyacetals  
{([C08F 283/004](#) takes precedence)}
- 283/065 . . {on to unsaturated polyethers, polyoxymethylenes or polyacetals}
- 283/08 . . on to polyphenylene oxides
- 283/085 . . . {on to unsaturated polyphenylene oxides}
- 283/10 . on to polymers containing more than one epoxy radical per molecule {([C08F 283/004](#) takes precedence)}
- 283/105 . . {on to unsaturated polymers containing more than one epoxy radical per molecule}
- 283/12 . on to polysiloxanes
- 283/122 . . {on to saturated polysiloxanes containing hydrolysable groups, e.g. alkoxy-, thio-, hydroxy-}
- 283/124 . . {on to polysiloxanes having carbon-to-carbon double bonds}
- 283/126 . . {on to polysiloxanes being the result of polycondensation and radical polymerisation reactions}
- 283/128 . . {on to reaction products of polysiloxanes having at least one Si-H bond and compounds having carbon-to-carbon double bonds}
- 283/14 . on to polymers obtained by ring-opening polymerisation of carbocyclic compounds having one or more carbon-to-carbon double bonds in the carbocyclic ring, i.e. polyalkeneamers  
{([C08F 283/004](#) takes precedence)}
- 285/00 Macromolecular compounds obtained by polymerising monomers on to preformed graft polymers {([C08F 283/00](#) takes precedence)}**
- 287/00 Macromolecular compounds obtained by polymerising monomers on to block polymers {([C08F 283/00](#) takes precedence)}**
- 289/00 Macromolecular compounds obtained by polymerising monomers on to macromolecular compounds not provided for in groups [C08F 251/00](#) - [C08F 287/00](#)**
- 290/00 Macromolecular compounds obtained by polymerising monomers on to polymers modified by introduction of aliphatic unsaturated end or side groups**
- 290/02 . on to polymers modified by introduction of unsaturated end groups
- 290/04 . . Polymers provided for in subclasses [C08C](#) or [C08F](#)
- 290/042 . . . {Polymers of hydrocarbons as defined in group [C08F 10/00](#)}
- 290/044 . . . {Polymers of aromatic monomers as defined in group [C08F 12/00](#)}
- 290/046 . . . {Polymers of unsaturated carboxylic acids or derivatives thereof}
- 290/048 . . . {Polymers of monomers having two or more carbon-to-carbon double bonds as defined in group [C08F 36/00](#)}
- 290/06 . . Polymers provided for in subclass [C08G](#)
- 290/061 . . . {Polyesters; Polycarbonates}
- 290/062 . . . {Polyethers}
- 290/064 . . . {Polymers containing more than one epoxy group per molecule}
- 290/065 . . . {Polyamides; Polyesteramides; Polyimides}
- 290/067 . . . {Polyurethanes; Polyureas}
- 290/068 . . . {Polysiloxanes}
- 290/08 . on to polymers modified by introduction of unsaturated side groups
- 290/10 . . Polymers provided for in subclass [C08B](#)
- 290/12 . . Polymers provided for in subclasses [C08C](#) or [C08F](#)
- 290/122 . . . {Polymers of hydrocarbons as defined in group [C08F 10/00](#)}
- 290/124 . . . {Polymers of aromatic monomers as defined in group [C08F 12/00](#)}
- 290/126 . . . {Polymers of unsaturated carboxylic acids or derivatives thereof}
- 290/128 . . . {Polymers of monomers having two or more carbon-to-carbon double bonds as defined in group [C08F 36/00](#)}
- 290/14 . . Polymers provided for in subclass [C08G](#)
- 290/141 . . . {Polyesters; Polycarbonates}
- 290/142 . . . {Polyethers}
- 290/144 . . . {Polymers containing more than one epoxy group per molecule}
- 290/145 . . . {Polyamides; Polyesteramides; Polyimides}
- 290/147 . . . {Polyurethanes; Polyureas}
- 290/148 . . . {Polysiloxanes}
- 291/00 Macromolecular compounds obtained by polymerising monomers on to macromolecular compounds according to more than one of the groups [C08F 251/00](#) - [C08F 289/00](#)**
- NOTE**
- In [C08F 291/00](#) the method of polymerisation may be indicated using the subdivision of [C08F 2/02](#), [C08F 2/16](#), [C08F 2/18](#) or [C08F 2/22](#) in the form of C-Sets. Example: ([C08F 291/00](#), [C08F 2/16](#))
- 291/02 . on to elastomers
- 291/04 . on to halogen-containing macromolecules
- 291/06 . on to oxygen-containing macromolecules
- 291/08 . . on to macromolecules containing hydroxy radicals
- 291/10 . . on to macromolecules containing epoxy radicals
- 291/12 . on to nitrogen-containing macromolecules
- 291/14 . on to sulfur-containing macromolecules
- 291/16 . on to macromolecules containing more than two metal atoms
- 291/18 . on to irradiated or oxidised macromolecules (epoxidised [C08F 291/10](#))
- 291/185 . . {The monomer(s) not being present during the irradiation or the oxidation of the macromolecule}

<b>292/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to inorganic materials</b>	299/0428	. . . . . {by ultra-violet or visible light}
		299/0435	. . . . . {with sensitising agents}
		299/0442	. . . {Catalysts}
		299/045	. . . . {Peroxy-compounds}
		299/0457	. . . . {Nitrogen containing compounds}
		299/0464	. . . . {Metals or metal containing compounds}
		299/0471	. . . . {Other compounds}
		299/0478	. . . {Copolymers from unsaturated polyesters and low molecular monomers characterised by the monomers used}
		299/0485	. . . {from polyesters with side or terminal unsaturations}
		299/0492	. . . . {the unsaturation being in acrylic or methacrylic groups}
		299/06	. . from polyurethanes
		299/065	. . . {from polyurethanes with side or terminal unsaturations}
		299/08	. . from polysiloxanes
		<b>301/00</b>	<b>Macromolecular compounds not provided for in groups <a href="#">C08F 10/00</a> - <a href="#">C08F 299/00</a></b>
<b>Block polymers</b>			
<b>293/00</b>	<b>Macromolecular compounds obtained by polymerisation on to a macromolecule having groups capable of inducing the formation of new polymer chains bound exclusively at one or both ends of the starting macromolecule (on to polymers modified by introduction of unsaturated end groups <a href="#">C08F 290/02</a>)</b>		
293/005	. {using free radical "living" or "controlled" polymerisation, e.g. using a complexing agent}		
<b>295/00</b>	<b>Macromolecular compounds obtained by polymerisation using successively different catalyst types without deactivating the intermediate polymer</b>		
<b>297/00</b>	<b>Macromolecular compounds obtained by successively polymerising different monomer systems using a catalyst of the ionic or coordination type without deactivating the intermediate polymer</b>		
297/02	. using a catalyst of the anionic type		
297/023	. . {using a coupling agent}		
297/026	. . {polymerising acrylic acid, methacrylic acid or derivatives thereof}		
297/04	. . polymerising vinyl aromatic monomers and conjugated dienes		
297/042	. . . {using a polyfunctional initiator}		
297/044	. . . {using a coupling agent}		
297/046	. . . {polymerising vinyl aromatic monomers and isoprene, optionally with other conjugated dienes}		
297/048	. . . {polymerising vinyl aromatic monomers, conjugated dienes and polar monomers}		
297/06	. using a catalyst of the coordination type		
297/08	. . polymerising mono-olefins		
297/083	. . . {the monomers being ethylene or propylene}		
297/086	. . . . {the block polymer contains at least three blocks}		
<b>299/00</b>	<b>Macromolecular compounds obtained by interreacting polymers involving only carbon-to-carbon unsaturated bond reactions, in the absence of non-macromolecular monomers (in the presence of non-macromolecular monomers <a href="#">C08F 251/00</a> - <a href="#">C08F 291/00</a>; involving other reactions <a href="#">C08G 81/00</a>)</b>		
299/02	. from unsaturated polycondensates		
299/022	. . {from polycondensates with side or terminal unsaturations}		
299/024	. . . {the unsaturation being in acrylic or methacrylic groups}		
299/026	. . {from the reaction products of polyepoxides and unsaturated monocarboxylic acids, their anhydrides, halogenides or esters with low molecular weight}		
299/028	. . . {photopolymerisable compositions}		
299/04	. . from polyesters		
299/0407	. . . {Processes of polymerisation}		
299/0414	. . . . {Suspension or emulsion polymerisation}		
299/0421	. . . . {Polymerisation initiated by wave energy or particle radiation}		
		<b>2400/00</b>	<b>Characteristics for processes of polymerization</b>
		2400/02	. Control or adjustment of polymerization parameters
		<b>2410/00</b>	<b>Catalyst preparation (not used)</b>
		2410/01	. Additive used together with the catalyst, excluding compounds containing Al or B
		2410/02	. Anti-static agent incorporated into the catalyst
		2410/03	. Multinuclear procatalyst, i.e. containing two or more metals, being different or not
		2410/04	. Dual catalyst, i.e. use of two different catalysts, where none of the catalysts is a metallocene
		2410/05	. Transitioning, i.e. transition from one catalyst to another with use of a deactivating agent
		<b>2420/00</b>	<b>Metallocene catalysts (not used)</b>
		2420/01	. Cp or analog bridged to a non-Cp X neutral donor
		2420/02	. Cp or analog bridged to a non-Cp X anionic donor
		2420/03	. Cp or analog not bridged to a non-Cp X ancillary neutral donor
		2420/04	. Cp or analog not bridged to a non-Cp X ancillary anionic donor
		2420/05	. Cp or analog where at least one of the carbon atom of the Cp ring is replaced by a heteroatom
		2420/06	. Cp or analog where at least one of the carbon atoms of the ring is replaced by a heteroatom
		<b>2438/00</b>	<b>Living radical polymerisation</b>
		2438/01	. Atom Transfer Radical Polymerization [ATRP] or reverse ATRP
		2438/02	. Stable Free Radical Polymerisation [SFRP]; Nitroxide Mediated Polymerisation [NMP] for, e.g. using 2,2,6,6-tetramethylpiperidine-1-oxyl [TEMPO]
		2438/03	. Use of a di- or tri-thiocarbonylthio compound, e.g. di- or tri-thioester, di- or tri-thiocarbamate, or a xanthate as chain transfer agent, e.g. Reversible Addition Fragmentation chain Transfer [RAFT] or Macromolecular Design via Interchange of Xanthates [MADIX]
		<b>2500/00</b>	<b>Characteristics or properties of obtained polymers; Use thereof (not used)</b>

- 2500/01 . High molecular weight
- 2500/02 . Low molecular weight
- 2500/03 . Narrow molecular weight distribution
- 2500/04 . Broad molecular weight distribution
- 2500/05 . Bimodal or multimodal molecular weight distribution
- 2500/06 . Narrow composition distribution
- 2500/07 . High density
- 2500/08 . Low density
- 2500/09 . Long chain branches
- 2500/10 . Short chain branches
- 2500/11 . Melt tension or melt strength
- 2500/12 . Melt flow index or melt flow ratio
- 2500/13 . Environmental stress cracking resistance
- 2500/14 . Die swell or die swell ratio or swell ratio
- 2500/15 . Isotactic
- 2500/16 . Syndiotactic
- 2500/17 . Viscosity
- 2500/18 . Bulk density
- 2500/19 . Shear ratio or shear ratio index
- 2500/20 . Activation energy or enthalpy
- 2500/21 . Rubbery or elastomeric properties
- 2500/22 . Sticky polymer
- 2500/23 . Waxy properties
- 2500/24 . Polymer with special particle form or size
- 2500/25 . Cycloolefine
- 2500/26 . Use as polymer for film forming
  
- 2800/00** **Copolymer characterised by the proportions of the comonomers expressed (not used)**
- 2800/10 . as molar percentages
- 2800/20 . as weight or mass percentages
  
- 2810/00** **Chemical modification of a polymer (not used)**
- 2810/10 . including a reactive processing step which leads, inter alia, to morphological and/or rheological modifications, e.g. visbreaking
- 2810/20 . leading to a crosslinking, either explicitly or inherently
- 2810/30 . leading to the formation or introduction of aliphatic or alicyclic unsaturated groups
- 2810/40 . taking place solely at one end or both ends of the polymer backbone, i.e. not in the side or lateral chains
- 2810/50 . wherein the polymer is a copolymer and the modification is taking place only on one or more of the monomers present in minority