

# CPC COOPERATIVE PATENT CLASSIFICATION

## C CHEMISTRY; METALLURGY

(NOTES omitted)

### CHEMISTRY

#### C08 ORGANIC MACROMOLECULAR COMPOUNDS; THEIR PREPARATION OR CHEMICAL WORKING-UP; COMPOSITIONS BASED THEREON (manufacture or treatment of artificial threads, fibres, bristles or ribbons [D01](#))

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

##### NOTES

- In this subclass, boron or silicon are considered as metals.
- 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:
    - an element other than carbon
    - a carbon atom having a double bond to one atom other than carbon
    - an aromatic carbocyclic ring or a heterocyclic ring.

Examples: Polymers of

  - $\text{CH}_2=\text{CH}-\text{O}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{C}(=\text{O})-\text{O}-\text{CH}_2-\text{CH}_2-\text{OH}$  are classified in group [C08F 16/28](#)
  - $\text{CH}_2=\text{CH}-\text{C}(=\text{O})-\text{CH}=\text{CH}_2$  are classified in group [C08F 16/36](#)
  - para- $\text{C}_6\text{H}_4\text{Cl}(\text{CH}=\text{CH}_2)$  are classified in group [C08F 12/18](#).
- In this subclass:
  - in the absence of an indication to the contrary, a catalyst or a polymer is classified in the last appropriate place .
  - {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](#) ). }
- In this subclass:
  - 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;
  - subject matter relating to both homopolymers and copolymers is classified in groups [C08F 10/00](#) - [C08F 38/00](#);
  - subject matter limited to homopolymers is classified only in groups [C08F 110/00](#) - [C08F 138/00](#);
  - subject matter limited to copolymers is classified only in groups [C08F 210/00](#) - [C08F 246/00](#);
  - 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.
- 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:
  - 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;
  - 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](#) );
  - 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](#) )

## C08F 2/00

(continued)

- 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 ([C08F 295/00](#), [C08F 297/00](#) 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 B08B 9/08](#))}
- 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	dianionic compounds, the charge is on the
4/36	. . . Per-compounds with more than one peroxy radical	first and the last mentioned atoms except
4/38	. . . Mixtures of peroxy-compounds	for compounds marked with * where the
4/40	. Redox systems	charge is on the marked atom
4/42	. Metals; Metal hydrides; Metallo-organic compounds; Use thereof as catalyst precursors	4/60006 . . . . . {Bidentate ligand (not used)}
4/44	. . selected from light metals, zinc, cadmium, mercury, copper, silver, gold, boron, gallium, indium, thallium, rare earths or actinides	4/6001 . . . . . {Neutral ligand}
4/46	. . . selected from alkali metals	4/60013 . . . . . {NN}
4/461	. . . . {Catalysts containing at least two different components covered by the same or by different subgroups of group <a href="#">C08F 4/46</a> , e.g. butyllithium + propylrubidium}	4/60017 . . . . . {NO}
4/463	. . . . {selected from sodium or potassium ( <a href="#">C08F 4/461</a> takes precedence)}	4/6002 . . . . . {NS}
4/465	. . . . . {Metallic sodium or potassium}	4/60024 . . . . . {OS}
4/466	. . . . . {an alkali metal bound to a cyclic carbon}	4/60027 . . . . . {PN}
4/468	. . . . . {at least two metal atoms in the same molecule}	4/60031 . . . . . {PO}
4/48	. . . . selected from lithium, rubidium, caesium or francium {( <a href="#">C08F 4/461</a> takes precedence)}	4/60034 . . . . . {PP}
4/482	. . . . . {Metallic lithium, rubidium, caesium or francium}	4/60037 . . . . . {PS}
4/484	. . . . . {an alkali metal bound to a cyclic carbon}	4/60041 . . . . . {Monoanionic ligand}
4/486	. . . . . {at least two metal atoms in the same molecule}	4/60044 . . . . . {NN}
4/488	. . . . . {at least two lithium atoms in the same molecule}	4/60048 . . . . . {NO}
4/50	. . . selected from alkaline earth metals, zinc, cadmium, mercury, copper or silver	4/60051 . . . . . {NS}
4/52	. . . selected from boron, aluminium, gallium, indium, thallium or rare earths ( <a href="#">C08F 4/14</a> takes precedence)	4/60055 . . . . . {ON}
4/54	. . . together with other compounds thereof	4/60058 . . . . . {OO}
4/545	. . . . {rare earths being present, e.g. triethylaluminium + neodymium octanoate}	4/60062 . . . . . {PN}
4/56	. . . . Alkali metals being the only metals present, e.g. Alfin catalysts	4/60065 . . . . . {PO}
4/565	. . . . . {Lithium being present, e.g. butyllithium + sodiumphenoxide}	4/60068 . . . . . {Dianionic ligand}
4/58	. . . together with silicon, germanium, tin, lead, antimony, bismuth or compounds thereof	4/60072 . . . . . {NN}
4/60	. . . together with refractory metals, iron group metals, platinum group metals, manganese, rhenium {technetium} or compounds thereof	4/60075 . . . . . {NO}
	<b>NOTES</b>	4/60079 . . . . . {OO}
	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> ) }	4/60082 . . . . . {Tridentate ligand (not used)}
	2. Group <a href="#">C08F 4/60003</a> takes precedence over groups <a href="#">C08F 4/602</a> - <a href="#">C08F 4/619</a>	4/60086 . . . . . {Neutral 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)}	4/60089 . . . . . {NNN}
	<b>NOTE</b>	4/60093 . . . . . {NNO}
	For monoanionic compounds, the charge is on the last mentioned atom; for	4/60096 . . . . . {NNS}
		4/60099 . . . . . {NSN}
		4/60103 . . . . . {PNN}
		4/60106 . . . . . {PNP}
		4/6011 . . . . . {Monoanionic ligand}
		4/60113 . . . . . {NNN}
		4/60117 . . . . . {NNO}
		4/6012 . . . . . {ONN}
		4/60124 . . . . . {ONO}
		4/60127 . . . . . {ON*O}
		4/60131 . . . . . {PNO}
		4/60134 . . . . . {SNN}
		4/60137 . . . . . {SNO}
		4/60141 . . . . . {Dianionic ligand}
		4/60144 . . . . . {NN(R)C}
		4/60148 . . . . . {NN(R)N}
		4/60151 . . . . . {NNO}
		4/60155 . . . . . {ON(R)C}
		4/60158 . . . . . {ONO}
		4/60162 . . . . . {O*O*P}
		4/60165 . . . . . {OSO}
		4/60168 . . . . . {Tetra- or multi-dentate ligand (not used)}
		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 [C08F 4/60](#) with an organo-aluminium compound {(C08F 4/60003 - C08F 4/60196 take precedence)}
- 4/6022 . . . . {Component of [C08F 4/60](#) 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 [C08F 4/60](#) with a metal or compound covered by group [C08F 4/44](#) other than an organo-aluminium compound {(C08F 4/60003 - C08F 4/60196 take precedence)}
- 4/6032 . . . . {Component of [C08F 4/60](#) 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 . . . . Catalysts 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 . . . . Catalysts 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<sub>6</sub>F<sub>5</sub>)<sub>4</sub>BX<sup>+</sup>}
- 4/61912 . . . . {in combination with an organoaluminium compound}
- 4/61916 . . . . {supported on a carrier, e.g. silica, MgCl<sub>2</sub>, 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}	4/62141 . . . . .	{Dianionic ligand}
4/61927 . . . . .	{two cyclopentadienyl rings being mutually bridged}	4/62144 . . . . .	{NN(R)C}
4/62 . . . . .	Refractory metals or compounds thereof	4/62148 . . . . .	{NN(R)N}
<b>NOTE</b>		4/62151 . . . . .	{NNO}
Group <a href="#">C08F 4/62003</a> takes precedence over groups <a href="#">C08F 4/622</a> - <a href="#">C08F 4/639</a>		4/62155 . . . . .	{ON(R)C}
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)}	4/62158 . . . . .	{ONO}
<b>NOTE</b>		4/62162 . . . . .	{O*O*P}
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		4/62165 . . . . .	{OSO}
4/62006 . . . . .	{Bidentate ligand (not used)}	4/62168 . . . . .	{Tetra- or multi-dentate ligand (not used)}
4/6201 . . . . .	{Neutral ligand}	4/62172 . . . . .	{Neutral ligand}
4/62013 . . . . .	{NN}	4/62175 . . . . .	{ONNO}
4/62017 . . . . .	{NO}	4/62179 . . . . .	{PNNN}
4/6202 . . . . .	{NS}	4/62182 . . . . .	{Monoanionic ligand}
4/62024 . . . . .	{OS}	4/62186 . . . . .	{Dianionic ligand}
4/62027 . . . . .	{PN}	4/62189 . . . . .	{ONNO}
4/62031 . . . . .	{PO}	4/62193 . . . . .	{OOOO}
4/62034 . . . . .	{PP}	4/62196 . . . . .	{OSSO}
4/62037 . . . . .	{PS}	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)}
4/62041 . . . . .	{Monoanionic ligand}	4/6222 . . . . .	{Component of <a href="#">C08F 4/62</a> containing at least two different metals}
4/62044 . . . . .	{NN}	4/6224 . . . . .	{containing magnesium}
4/62048 . . . . .	{NO}	4/6226 . . . . .	{containing aluminium}
4/62051 . . . . .	{NS}	4/6228 . . . . .	{with an aluminoxane, i.e. a compound containing an Al-O-Al- group}
4/62055 . . . . .	{ON}	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)}
4/62058 . . . . .	{OO}	4/6232 . . . . .	{Component of <a href="#">C08F 4/62</a> containing at least two different metals}
4/62062 . . . . .	{PN}	4/6235 . . . . .	{containing magnesium}
4/62065 . . . . .	{PO}	4/6237 . . . . .	{containing aluminium}
4/62068 . . . . .	{Dianionic ligand}	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)}
4/62072 . . . . .	{NN}	4/6252 . . . . .	{Component of <a href="#">C08F 4/62</a> containing at least two different metals}
4/62075 . . . . .	{NO}	4/6255 . . . . .	{containing magnesium}
4/62079 . . . . .	{OO}	4/6257 . . . . .	{containing aluminium}
4/62082 . . . . .	{Tridentate ligand (not used)}	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)}
4/62086 . . . . .	{Neutral ligand}	4/6265 . . . . .	{containing silicium}
4/62089 . . . . .	{NNN}	4/627 . . . . .	Catalysts containing a specific non-metal or metal-free compound {(C08F 4/62003 - C08F 4/62196 take precedence)}
4/62093 . . . . .	{NNO}	4/628 . . . . .	inorganic
4/62096 . . . . .	{NNS}	4/629 . . . . .	organic
4/62099 . . . . .	{NSN}	4/6291 . . . . .	{hydrocarbon}
4/62103 . . . . .	{PNN}	4/6292 . . . . .	{containing aliphatic unsaturation}
4/62106 . . . . .	{PNP}		
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}		



- 4/6293 . . . . . {containing halogen}
- 4/6294 . . . . . {containing oxygen}
- 4/6295 . . . . . {containing nitrogen}
- 4/6296 . . . . . {containing sulfur}
- 4/6297 . . . . . {containing phosphorus}
- 4/6298 . . . . . {containing another heteroatom}
- 4/63 . . . . . Pretreating the metal or compound covered by group [C08F 4/62](#) before the final contacting with the metal or compound covered by group [C08F 4/44](#) {([C08F 4/62003](#) - [C08F 4/62196](#) take precedence)}
- 4/631 . . . . . Pretreating with non-metals or metal-free compounds
- 4/632 . . . . . Pretreating with metals or metal-containing compounds
- 4/633 . . . . . with metals covered by group [C08F 4/62](#) or compounds thereof
- 4/634 . . . . . with magnesium or compounds thereof
- 4/6341 . . . . . {and metals of [C08F 4/62](#) or compounds thereof}
- 4/6343 . . . . . {halides of magnesium}
- 4/6345 . . . . . {and metals of [C08F 4/62](#) or compounds thereof}
- 4/6346 . . . . . {organo-magnesium compounds}
- 4/6348 . . . . . {magnesium or compounds thereof not provided for in [C08F 4/6345](#) or [C08F 4/6346](#)}
- 4/635 . . . . . with aluminium or compounds thereof
- 4/6352 . . . . . {and metals of [C08F 4/62](#) or compounds thereof}
- 4/6355 . . . . . {and magnesium or compounds thereof}
- 4/6357 . . . . . {and metals of [C08F 4/62](#) or compounds thereof}
- 4/636 . . . . . with silicon or compounds thereof
- 4/6362 . . . . . {and metals of [C08F 4/62](#) or compounds thereof}
- 4/6365 . . . . . {and magnesium or compounds thereof}
- 4/6367 . . . . . {and aluminium or compounds thereof}
- 4/637 . . . . . with metals or metal-containing compounds, not provided for in groups [C08F 4/633](#) - [C08F 4/636](#)
- 4/6372 . . . . . {and metals of [C08F 4/62](#) or compounds thereof}
- 4/6374 . . . . . {and magnesium or compounds thereof}
- 4/6376 . . . . . {and aluminium or compounds thereof}
- 4/6378 . . . . . {and silicon or compounds thereof}
- 4/638 . . . . . with metals or metal-containing compounds, not provided for in a single group of groups [C08F 4/633](#) - [C08F 4/637](#)
- 4/6381 . . . . . {and metals or metal-containing compounds of [C08F 4/62](#)}
- 4/6383 . . . . . {and magnesium or compounds thereof}
- 4/6385 . . . . . {and aluminium or compounds thereof}
- 4/6386 . . . . . {and silicon or compounds thereof}
- 4/6388 . . . . . {and metals or metal-containing compounds of [C08F 4/637](#)}
- 4/639 . . . . . Component covered by group [C08F 4/62](#) containing a transition metal-carbon bond {([C08F 4/62003](#) - [C08F 4/62196](#) take precedence)}
- 4/63904 . . . . . {in combination with another component of [C08F 4/62](#)}
- 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<sup>+</sup>X<sup>+</sup>}
- 4/63912 . . . . . {in combination with an organoaluminium compound}
- 4/63916 . . . . . {supported on a carrier, e.g. silica, MgCl<sub>2</sub>, polymer}
- 4/6392 . . . . . containing at least one cyclopentadienyl ring, condensed or not, e.g. an indenyl or a fluorenyl ring
- 4/63922 . . . . . {containing at least two cyclopentadienyl rings, fused or not}
- 4/63925 . . . . . {two cyclopentadienyl rings being mutually non-bridged}
- 4/63927 . . . . . {two cyclopentadienyl rings being mutually bridged}
- 4/64 . . . . . Titanium, zirconium, hafnium or compounds thereof
- NOTE**
- Group [C08F 4/64003](#) takes precedence over groups [C08F 4/642](#) - [C08F 4/659](#)
- 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)}
- 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
- 4/64006 . . . . . {Bidentate ligand (not used)}
- 4/6401 . . . . . {Neutral ligand}
- 4/64013 . . . . . {NN}
- 4/64017 . . . . . {NO}
- 4/6402 . . . . . {NS}
- 4/64024 . . . . . {OS}
- 4/64027 . . . . . {PN}
- 4/64031 . . . . . {PO}
- 4/64034 . . . . . {PP}
- 4/64037 . . . . . {PS}
- 4/64041 . . . . . {Monoanionic ligand}
- 4/64044 . . . . . {NN}
- 4/64048 . . . . . {NO}
- 4/64051 . . . . . {NS}
- 4/64055 . . . . . {ON}
- 4/64058 . . . . . {OO}
- 4/64062 . . . . . {PN}
- 4/64065 . . . . . {PO}
- 4/64068 . . . . . {Dianionic ligand}

4/64072	. . . . .	{NN}	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)}
4/64075	. . . . .	{NO}	4/6452	. . . . .	{Component of <a href="#">C08F 4/64</a> containing at least two different metals}
4/64079	. . . . .	{OO}	4/6455	. . . . .	{containing magnesium}
4/64082	. . . . .	{Tridentate ligand (not used)}	4/6457	. . . . .	{containing aluminium}
4/64086	. . . . .	{Neutral ligand}	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)}
4/64089	. . . . .	{NNN}	4/6465	. . . . .	{containing silicium}
4/64093	. . . . .	{NNO}	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)}
4/64096	. . . . .	{NNS}	4/648	. . . . .	inorganic
4/64099	. . . . .	{NSN}	4/649	. . . . .	organic
4/64103	. . . . .	{PNN}	4/6491	. . . . .	{hydrocarbon}
4/64106	. . . . .	{PNP}	4/6492	. . . . .	{containing aliphatic unsaturation}
4/6411	. . . . .	{Monoanionic ligand}	4/6493	. . . . .	{containing halogen}
4/64113	. . . . .	{NNN}	4/6494	. . . . .	{containing oxygen}
4/64117	. . . . .	{NNO}	4/6495	. . . . .	{containing nitrogen}
4/6412	. . . . .	{ONN}	4/6496	. . . . .	{containing sulfur}
4/64124	. . . . .	{ONO}	4/6497	. . . . .	{containing phosphorus}
4/64127	. . . . .	{ON*O}	4/6498	. . . . .	{containing another heteroatom}
4/64131	. . . . .	{PNO}	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)}
4/64134	. . . . .	{SNN}	4/651	. . . . .	Pretreating with non-metals or metal-free compounds
4/64137	. . . . .	{SNO}	4/652	. . . . .	Pretreating with metals or metal-containing compounds
4/64141	. . . . .	{Dianionic ligand}	4/653	. . . . .	with metals of <a href="#">C08F 4/64</a> or compounds thereof
4/64144	. . . . .	{NN(R)C}	4/654	. . . . .	with magnesium or compounds thereof
4/64148	. . . . .	{NN(R)N}	4/6541	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}
4/64151	. . . . .	{NNO}	4/6543	. . . . .	{halides of magnesium}
4/64155	. . . . .	{ON(R)C}	4/6545	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}
4/64158	. . . . .	{ONO}	4/6546	. . . . .	{organo-magnesium compounds}
4/64162	. . . . .	{O*O*P}	4/6548	. . . . .	{magnesium or compounds thereof, not provided for in <a href="#">C08F 4/6543</a> or <a href="#">C08F 4/6546</a> }
4/64165	. . . . .	{OSO}	4/655	. . . . .	with aluminium or compounds thereof
4/64168	. . . . .	{Tetra- or multi-dentate ligand (not used)}	4/6552	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}
4/64172	. . . . .	{Neutral ligand}	4/6555	. . . . .	{and magnesium or compounds thereof}
4/64175	. . . . .	{ONNO}	4/6557	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}
4/64179	. . . . .	{PNNN}			
4/64182	. . . . .	{Monoanionic ligand}			
4/64186	. . . . .	{Dianionic ligand}			
4/64189	. . . . .	{ONNO}			
4/64193	. . . . .	{OOOO}			
4/64196	. . . . .	{OSSO}			
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)}			
4/6421	. . . . .	{Titanium tetrahalides with organo-aluminium compounds}			
4/6423	. . . . .	{Component of <a href="#">C08F 4/64</a> containing at least two different metals}			
4/6425	. . . . .	{containing magnesium}			
4/6426	. . . . .	{containing aluminium}			
4/6428	. . . . .	{with an aluminoxane, i.e. a compound containing an Al-O-Al-group}			
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)}			
4/6432	. . . . .	{Component of <a href="#">C08F 4/64</a> containing at least two different metals}			
4/6435	. . . . .	{containing magnesium}			
4/6437	. . . . .	{containing aluminium}			

4/656	. . . . .	with silicon or compounds thereof	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)}
4/6562	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}			
4/6565	. . . . .	{and magnesium or compounds thereof}			
4/6567	. . . . .	{and aluminium or compounds thereof}			<b>NOTE</b>
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>			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
4/6572	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}			
4/6574	. . . . .	{and magnesium or compounds thereof}			
4/6576	. . . . .	{and aluminium or compounds thereof}	4/68017	. . . . .	{Bidentate ligand (not used)}
4/6578	. . . . .	{and silicon or compounds thereof}	4/68025	. . . . .	{Neutral ligand}
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>	4/68034	. . . . .	{NN}
4/6581	. . . . .	{and metals of <a href="#">C08F 4/64</a> or compounds thereof}	4/68043	. . . . .	{NO}
4/6583	. . . . .	{and magnesium or compounds thereof}	4/68051	. . . . .	{NS}
4/6585	. . . . .	{and aluminium or compounds thereof}	4/6806	. . . . .	{OS}
4/6586	. . . . .	{and silicon or compounds thereof}	4/68068	. . . . .	{PN}
4/6588	. . . . .	{and metals or metal-containing compounds of <a href="#">C08F 4/657</a> }	4/68077	. . . . .	{PO}
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)}	4/68086	. . . . .	{PP}
4/65904	. . . . .	{in combination with another component of <a href="#">C08F 4/64</a> }	4/68094	. . . . .	{PS}
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> }	4/68103	. . . . .	{Monoanionic ligand}
4/65912	. . . . .	{in combination with an organoaluminium compound}	4/68112	. . . . .	{NN}
4/65916	. . . . .	{supported on a carrier, e.g. silica, MgCl <sub>2</sub> , polymer}	4/6812	. . . . .	{NO}
4/6592	. . . . .	containing at least one cyclopentadienyl ring, condensed or not, e.g. an indenyl or a fluorenyl ring	4/68129	. . . . .	{NS}
4/65922	. . . . .	{containing at least two cyclopentadienyl rings, fused or not}	4/68137	. . . . .	{ON}
4/65925	. . . . .	{two cyclopentadienyl rings being mutually non-bridged}	4/68146	. . . . .	{OO}
4/65927	. . . . .	{two cyclopentadienyl rings being mutually bridged}	4/68155	. . . . .	{PN}
4/68	. . . . .	Vanadium, niobium, tantalum or compounds thereof	4/68163	. . . . .	{PO}
			4/68172	. . . . .	{Dianionic ligand}
			4/68181	. . . . .	{NN}
			4/68189	. . . . .	{NO}
			4/68198	. . . . .	{OO}
			4/68206	. . . . .	{Tridentate ligand (not used)}
			4/68215	. . . . .	{Neutral ligand}
			4/68224	. . . . .	{NNN}
			4/68232	. . . . .	{NNO}
			4/68241	. . . . .	{NNS}
			4/6825	. . . . .	{NSN}
			4/68258	. . . . .	{PNN}
			4/68267	. . . . .	{PNP}
			4/68275	. . . . .	{Monoanionic ligand}
			4/68284	. . . . .	{NNN}
			4/68293	. . . . .	{NNO}
			4/68301	. . . . .	{ONN}
			4/6831	. . . . .	{ONO}
			4/68318	. . . . .	{ON*O}
			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)}	4/69301	. . . . . {ONN}
4/68431	. . . . . {Neutral ligand}	4/6931	. . . . . {ONO}
4/68439	. . . . . {ONNO}	4/69318	. . . . . {ON*O}
4/68448	. . . . . {PNNN}	4/69327	. . . . . {PNO}
4/68456	. . . . . {Monoanionic ligand}	4/69336	. . . . . {SNN}
4/68465	. . . . . {Dianionic ligand}	4/69344	. . . . . {SNO}
4/68474	. . . . . {ONNO}	4/69353	. . . . . {Dianionic ligand}
4/68482	. . . . . {OOOO}	4/69362	. . . . . {NN(R)C}
4/68491	. . . . . {OSSO}	4/6937	. . . . . {NN(R)N}
4/685	. . . . . Vanadium or compounds thereof in combination with titanium or compounds thereof	4/69379	. . . . . {NNO}
4/69	. . . . . Chromium, molybdenum, tungsten or compounds thereof	4/69387	. . . . . {ON(R)C}
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)}	4/69396	. . . . . {ONO}
	<b>NOTE</b> 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	4/69405	. . . . . {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
4/69017	. . . . . {Bidentate ligand (not used)}	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)}
4/69025	. . . . . {Neutral ligand}		<b>NOTE</b> 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
4/69034	. . . . . {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}		
		4/7003	. . . . . {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

1. 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 )

2. 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, crosslinking with unsaturated monomers or with polymers C08F 251/00 - C08F 299/00; of conjugated diene rubbers C08C; crosslinking 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 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**

1. 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 )

2. 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	20/02	. Monocarboxylic acids having less than ten carbon atoms, Derivatives thereof
14/24	. . Trifluorochloroethene	20/04	. . Acids, Metal salts or ammonium salts thereof
14/26	. . Tetrafluoroethene	20/06	. . . Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof
14/28	. . Hexafluoropropene	20/08	. . Anhydrides
<b>16/00</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 alcohol, ether, aldehydo, ketonic, acetal or ketal radical</b>	20/10	. . Esters
16/02	. by an alcohol radical		<b>NOTE</b>
16/04	. . Acyclic compounds		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> )
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	20/12	. . . of monohydric alcohols or phenols
16/16	. . . Monomers containing no hetero atoms other than the ether oxygen	20/14	. . . . Methyl esters
16/18	. . . . Acyclic compounds	20/16	. . . . of phenols or of alcohols containing two or more carbon atoms
16/20	. . . . Monomers containing three or more carbon atoms in the unsaturated aliphatic radical	20/18	. . . . . with acrylic or methacrylic acids
16/22	. . . . Carbocyclic compounds	20/20	. . . of polyhydric alcohols or phenols
16/24	. . . Monomers containing halogen	20/22	. . . Esters containing halogen
16/26	. . . Monomers containing oxygen atoms in addition to the ether oxygen	20/24	. . . . containing perhaloalkyl radicals
16/28	. . . Monomers containing nitrogen	20/26	. . . Esters containing oxygen in addition to the carboxy oxygen
16/30	. . . Monomers containing sulfur	20/28	. . . . containing no aromatic rings in the alcohol moiety
16/32	. . Monomers containing two or more unsaturated aliphatic radicals	20/30	. . . . containing aromatic rings in the alcohol moiety
16/34	. by an aldehydo radical	20/32	. . . . containing epoxy radicals
16/36	. by a ketonic radical	20/34	. . . Esters containing nitrogen
16/38	. by an acetal or ketal radical	20/36	. . . . containing oxygen in addition to the carboxy oxygen
<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>	20/38	. . . Esters containing sulfur
18/02	. Esters of monocarboxylic acids	20/40	. . . Esters of unsaturated alcohols
18/04	. . Vinyl esters	20/42	. . Nitriles
18/06	. . . Vinyl formate	20/44	. . . Acrylonitrile
18/08	. . . Vinyl acetate		<b>NOTE</b>
18/10	. . . of monocarboxylic acids containing three or more carbon atoms		In group <a href="#">C08F 20/44</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 20/44</a> , <a href="#">C08F 2/46</a> )
18/12	. . with unsaturated alcohols containing three or more carbon atoms	20/50	. . . containing four or more carbon atoms
18/14	. Esters of polycarboxylic acids	20/52	. . Amides or imides
18/16	. . with alcohols containing three or more carbon atoms	20/54	. . . Amides
18/18	. . . Diallyl phthalate	20/56	. . . . Acrylamide; Methacrylamide
18/20	. Esters containing halogen	20/58	. . . . containing oxygen in addition to the carbonamido oxygen
18/22	. Esters containing nitrogen	20/60	. . . . containing nitrogen in addition to the carbonamido nitrogen
18/24	. Esters of carbonic or haloformic acids	20/62	. Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof
<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>	20/64	. . 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>	<b>30/00</b>	<b>Homopolymers and copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium or a metal (metal salts, e.g. phenolates or alcoholates, see the parent compounds)</b>
22/02	. Acids; Metal salts or ammonium salts thereof	30/02	. containing phosphorus
22/04	. Anhydrides, e.g. cyclic anhydrides	30/04	. containing a metal
22/06	. . Maleic anhydride	30/06	. . containing boron
22/10	. Esters	30/08	. . containing silicon
22/105	. . {of polyhydric alcohols or polyhydric phenols, e.g. ethylene glycol dimethacrylate}	30/10	. . containing germanium
22/12	. . of phenols or saturated alcohols {(C08F 22/105 takes precedence)}	<b>32/00</b>	<b>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</b>
22/14	. . . Esters having no free carboxylic acid groups	32/02	. having no condensed rings
22/16	. . . Esters having free carboxylic acid groups	32/04	. . having one carbon-to-carbon double bond
22/18	. . . Esters containing halogen	32/06	. . having two or more carbon-to-carbon double bonds
22/20	. . . Esters containing oxygen in addition to the carboxy oxygen	32/08	. having two condensed rings (coumarone-indene polymers C08F 244/00)
22/22	. . . Esters containing nitrogen	<b>34/00</b>	<b>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)</b>
22/24	. . . Esters containing sulfur	34/02	. in a ring containing oxygen (coumarone-indene polymers C08F 244/00)
22/26	. . of unsaturated alcohols {(C08F 22/105 takes precedence)}	34/04	. in a ring containing sulfur
22/28	. . . Diallyl maleate	<b>36/00</b>	<b>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)</b>
22/30	. Nitriles	<b>NOTE</b>	
22/32	. . Alpha-cyano-acrylic acid; Esters thereof	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 )	
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		
<b>24/00</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 heterocyclic ring containing oxygen (cyclic esters of polyfunctional acids C08F 18/00; cyclic anhydrides of unsaturated acids C08F 20/00, C08F 22/00)</b>		
<b>26/00</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 single or double bond to nitrogen or by a heterocyclic ring containing nitrogen</b>		
26/02	. by a single or double bond to nitrogen	36/02	. the radical having only two carbon-to-carbon double bonds
26/04	. . Diallylamine	36/04	. . conjugated
26/06	. by a heterocyclic ring containing nitrogen	36/045	. . . {conjugated hydrocarbons other than butadiene or isoprene}
26/08	. . N-Vinyl-pyrrolidine	36/06	. . . Butadiene
26/10	. . N-Vinyl-pyrrolidone	36/08	. . . Isoprene
26/12	. . N-Vinyl-carbazole	36/14	. . . containing elements other than carbon and hydrogen
<b>28/00</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 bond to sulfur or by a heterocyclic ring containing sulfur</b>	36/16	. . . . containing halogen
28/02	. by a bond to sulfur	36/18	. . . . containing chlorine
28/04	. . Thioethers	36/20	. . unconjugated
28/06	. by a heterocyclic ring containing sulfur	36/22	. the radical having three or more carbon-to-carbon double bonds



<b>38/00</b>	<b>Homopolymers and copolymers of compounds having one or more carbon-to-carbon triple bonds</b>	114/16	• Monomers containing bromine or iodine
38/02	• Acetylene	114/18	• Monomers containing fluorine
38/04	• Vinylacetylene	114/185	• • {Monomers containing fluorine not covered by the groups <a href="#">C08F 114/20</a> - <a href="#">C08F 114/28</a> }
<b>Homopolymers</b>		114/20	• • Vinyl fluoride
<b>110/00</b>	<b>Homopolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond</b>	114/22	• • Vinylidene fluoride
	<b>NOTE</b>	114/24	• • Trifluorochloroethene
	In groups <a href="#">C08F 110/00</a> - <a href="#">C08F 110/14</a> the method of polymerisation or the nature of the catalyst may be indicated using the subdivision of <a href="#">C08F 2/00</a> - <a href="#">C08F 2/58</a> or of <a href="#">C08F 4/00</a> - <a href="#">C08F 4/82</a> in the form of C-Sets.	114/26	• • Tetrafluoroethene
	Example: ( <a href="#">C08F 110/14</a> , <a href="#">C08F 4/6592</a> )	114/28	• • Hexafluoropropene
110/02	• Ethene	<b>116/00</b>	<b>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</b>
110/04	• Monomers containing three or four carbon atoms	116/02	• by an alcohol radical
110/06	• • Propene	116/04	• • Acyclic compounds
110/08	• • Butenes	116/06	• • • Polyvinyl alcohol {; Vinyl alcohol}
110/10	• • • Isobutene	116/08	• • • Allyl alcohol
110/14	• Monomers containing five or more carbon atoms	116/10	• • Carbocyclic compounds
<b>112/00</b>	<b>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</b>	116/12	• by an ether radical
	<b>NOTE</b>	116/14	• • Monomers containing only one unsaturated aliphatic radical
	From April 2012 on, in groups <a href="#">C08F 112/00</a> - <a href="#">C08F 112/36</a> the method of polymerisation may be indicated using the subdivision of <a href="#">C08F 2/00</a> - <a href="#">C08F 2/60</a> in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of <a href="#">C08F 4/00</a> - <a href="#">C08F 4/82</a> in the form of C-Sets.	116/16	• • • Monomers containing no hetero atoms other than the ether oxygen
	Example: ( <a href="#">C08F 112/08</a> , <a href="#">C08F 4/70</a> )	116/18	• • • • Acyclic compounds
112/02	• Monomers containing only one unsaturated aliphatic radical	116/20	• • • • Monomers containing three or more carbon atoms in the unsaturated aliphatic radical
112/04	• • containing one ring	116/34	• by an aldehydo radical
112/06	• • • Hydrocarbons	116/36	• by a ketonic radical
112/08	• • • • Styrene	116/38	• by an acetal or ketal radical
112/12	• • • • Monomers containing a branched unsaturated aliphatic radical or a ring substituted by an alkyl radical	<b>118/00</b>	<b>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</b>
112/14	• • • substituted by hetero atoms or groups containing heteroatoms	118/02	• Esters of monocarboxylic acids
112/32	• • containing two or more rings	118/04	• • Vinyl esters
112/34	• Monomers containing two or more unsaturated aliphatic radicals	118/06	• • • Vinyl formate
112/36	• • Divinylbenzene	118/08	• • • Vinyl acetate
<b>114/00</b>	<b>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</b>	118/10	• • • of monocarboxylic acids containing three or more carbon atoms
114/02	• Monomers containing chlorine	118/12	• • with unsaturated alcohols containing three or more carbon atoms
114/04	• • Monomers containing two carbon atoms	118/14	• Esters of polycarboxylic acids
114/06	• • • Vinyl chloride	118/16	• • with alcohols containing three or more carbon atoms
114/08	• • • Vinylidene chloride	118/18	• • • Diallyl phthalate
114/12	• • • 1,2- Dichloroethene	<b>120/00</b>	<b>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</b>
114/14	• • Monomers containing three or more carbon atoms	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	122/32	. . Alpha-cyano-acrylic acid; Esters thereof
120/14	. . . . Methyl esters	122/34	. . Vinylidene cyanide
120/16	. . . . of phenols or of alcohols containing two or more carbon atoms	122/36	. Amides or imides
120/18	. . . . . with acrylic or methacrylic acids	122/38	. . Amides
120/20	. . . of polyhydric alcohols or phenols	122/385	. . . {Monomers containing two or more (meth)acrylamide groups, e.g. N,N'-methylenebisacrylamide}
120/22	. . . Esters containing halogen	122/40	. . Imides, e.g. cyclic imides
120/24	. . . . containing perhaloalkyl radicals		
120/26	. . . Esters containing oxygen in addition to the carboxy oxygen	<b>124/00</b>	<b>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)</b>
120/28	. . . . containing no aromatic rings in the alcohol moiety		
120/30	. . . . containing aromatic rings in the alcohol moiety	<b>126/00</b>	<b>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</b>
120/32	. . . . containing epoxy radicals	126/02	. by a single or double bond to nitrogen
120/34	. . . Esters containing nitrogen	126/04	. . Diallylamine
120/36	. . . . containing oxygen in addition to the carboxy oxygen	126/06	. by a heterocyclic ring containing nitrogen
120/38	. . . Esters containing sulfur	126/08	. . N-Vinyl-pyrrolidine
120/40	. . . Esters of unsaturated alcohols	126/10	. . N-Vinyl-pyrrolidone
120/42	. . Nitriles	126/12	. . N-Vinyl-carbazole
120/44	. . . Acrylonitrile		
120/50	. . . containing four or more carbon atoms	<b>128/00</b>	<b>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</b>
120/52	. . Amides or imides	128/02	. by a bond to sulfur
120/54	. . . Amides	128/04	. . Thioethers
120/56	. . . . Acrylamide; Methacrylamide	128/06	. by a heterocyclic ring containing sulfur
120/58	. . . . containing oxygen in addition to the carbonamido oxygen		
120/60	. . . . containing nitrogen in addition to the carbonamido nitrogen	<b>130/00</b>	<b>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)</b>
120/62	. Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof	130/02	. containing phosphorus
120/64	. . Acids; Metal salts or ammonium salts thereof	130/04	. containing a metal
120/66	. . Anhydrides	130/06	. . containing boron
120/68	. . Esters	130/08	. . containing silicon
120/70	. . Nitriles; Amides; Imides	130/10	. . containing germanium
<b>122/00</b>	<b>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</b>	<b>132/00</b>	<b>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</b>
122/02	. Acids; Metal salts or ammonium salts thereof	132/02	. having no condensed rings
122/04	. Anhydrides, e.g. cyclic anhydrides	132/04	. . having one carbon-to-carbon double bond
122/06	. . Maleic anhydride	132/06	. . having two or more carbon-to-carbon double bonds
122/10	. Esters	132/08	. having condensed rings
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)}	<b>134/00</b>	<b>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)</b>
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		

- 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 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 hydrocarbons 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 alpha-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	218/10	. . . of monocarboxylic acids containing three or more carbon atoms
214/262	. . . {with fluorinated vinyl ethers}	218/12	. . with unsaturated alcohols containing three or more carbon atoms
214/265	. . . {with non-fluorinated comonomers}	218/14	. Esters of polycarboxylic acids
214/267	. . . . {with non-fluorinated vinyl ethers}	218/16	. . with alcohols containing three or more carbon atoms
214/28	. . Hexafluoropropene	218/18	. . . Diallyl phthalate
214/282	. . . {with fluorinated vinyl ethers}	2218/20	. {Esters containing halogen}
214/285	. . . {with non-fluorinated comonomers}	2218/22	. {Esters containing nitrogen}
214/287	. . . . {with non-fluorinated vinyl ethers}	2218/24	. {Esters of carbonic or haloformic acids}
<b>216/00</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 an alcohol, ether, aldehydo, ketonic, acetal or ketal radical</b>	2218/245	. . {Esters of carbonic or haloformic acids, e.g. allyl carbonate}
216/02	. by an alcohol radical	<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>
216/04	. . Acyclic compounds	220/02	. Monocarboxylic acids having less than ten carbon atoms; Derivatives thereof
216/06	. . . Polyvinyl alcohol {; Vinyl alcohol}	220/04	. . Acids; Metal salts or ammonium salts thereof
216/08	. . . Allyl alcohol	220/06	. . . Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof
2216/085	. . . . {Allyl alcohol alkoxyate}	220/08	. . Anhydrides
216/10	. . Carbocyclic compounds	220/10	. . Esters
216/12	. by an ether radical	220/12	. . . of monohydric alcohols or phenols
216/125	. . {monomers containing two or more unsaturated aliphatic radicals}	220/14	. . . . Methyl esters
216/14	. . Monomers containing only one unsaturated aliphatic radical	220/16	. . . . of phenols or of alcohols containing two or more carbon atoms
216/1408	. . . {Monomers containing halogen}	220/18	. . . . . with acrylic or methacrylic acids
216/1416	. . . {Monomers containing oxygen in addition to the ether oxygen}	2220/1808	. . . . . {Ethyl or undefined short-chain (meth)acrylate}
2216/1425	. . . . {Monomers containing side chains of polyether groups}	2220/1816	. . . . . {Propyl(meth)acrylate}
2216/1433	. . . . . {Monomers containing side chains of polyethyleneoxide groups}	2220/1825	. . . . . {Butyl(meth)acrylate}
2216/1441	. . . . . {Monomers containing side chains of polypropyleneoxide groups}	2220/1833	. . . . . {Pentyl or undefined long chain (meth)acrylate}
2216/145	. . . . . {Monomers containing side chains of polyethylene-co-propyleneoxide groups}	2220/1841	. . . . . {Hexyl(meth)acrylate}
216/1458	. . . {Monomers containing nitrogen}	2220/185	. . . . . {Heptyl(meth)acrylate}
216/1466	. . . {Monomers containing sulfur}	2220/1858	. . . . . {(iso)Octyl(meth)acrylate}
2216/1475	. . . . {Monomers containing sulfur and oxygen}	2220/1866	. . . . . {C9-(meth)Acrylate}
2216/1483	. . . . {Monomers containing sulfur and nitrogen}	2220/1875	. . . . . {(iso)Decyl(meth)acrylate}
2216/1491	. . . . {Monomers containing sulfur, oxygen and nitrogen}	2220/1883	. . . . . {Lauryl(meth)acrylate}
216/16	. . . Monomers containing no hetero atoms other than the ether oxygen	2220/1891	. . . . . {Longer chain (meth)acrylate}
216/165	. . . . {Carbocyclic compounds}	220/20	. . . of polyhydric alcohols or phenols
216/18	. . . . Acyclic compounds	220/22	. . . Esters containing halogen
216/20	. . . . . Monomers containing three or more carbon atoms in the unsaturated aliphatic radical	220/24	. . . . containing perhaloalkyl radicals
216/34	. by an aldehydo radical	220/26	. . . Esters containing oxygen in addition to the carboxy oxygen
216/36	. by a ketonic radical	220/28	. . . . containing no aromatic rings in the alcohol moiety
216/38	. by an acetal or ketal radical	2220/281	. . . . . {and containing only one oxygen}
<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>	2220/282	. . . . . {and containing two or more oxygen atoms}
218/02	. Esters of monocarboxylic acids	2220/283	. . . . . {and containing one or more carboxylic moiety in the chain}
218/04	. . Vinyl esters	2220/285	. . . . . {and containing an ether chain in the alcohol moiety}
218/06	. . . Vinyl formate	2220/286	. . . . . {and containing polyethylenoxide in the alcohol moiety}
218/08	. . . Vinyl acetate	2220/287	. . . . . {and containing polypropylenoxide in the alcohol moiety}



2220/288	. . . . . {and containing polypropylen-co-ethylen oxide in the alcohol moiety}	222/06	. . Maleic anhydride
220/30	. . . . containing aromatic rings in the alcohol moiety	222/08	. . . with vinyl aromatic monomers
2220/301	. . . . . {and one oxygen in the alcohol moiety}	222/10	. Esters
2220/302	. . . . . {and two or more oxygen atoms in the alcohol moiety}	222/1006	. . {of polyhydric alcohols or polyhydric phenols, e.g. ethylene glycol dimethacrylat}
2220/303	. . . . . {and one or more carboxylic moieties in the chain}	2222/1013	. . . {of dialcohols}
2220/305	. . . . . {and ether chain in the alcohol moiety}	2222/102	. . . . {of aromatic dialcohols}
2220/306	. . . . . {and polythylenoxide chain in the alcohol moiety}	2222/1026	. . . {of trialcohols}
2220/307	. . . . . {and polypropylene oxide chain in the alcohol moiety}	2222/1033	. . . . {of aromatic trialcohols}
2220/308	. . . . . {and polyethylene-co-propylene oxide chain in the alcohol moiety}	2222/104	. . . {of tetraalcohols}
220/32	. . . . containing epoxy radicals	2222/1046	. . . . {of aromatic tetraalcohols}
2220/325	. . . . . {containing glycidyl radical}	2222/1053	. . . {of pentaalcohols}
220/34	. . . Esters containing nitrogen	2222/106	. . . . {of aromatic pentaalcohols}
2220/343	. . . . {in the form of urethane links}	2222/1066	. . . {Esters of polycondensation macromers}
2220/346	. . . . . {and further oxygen}	2222/1073	. . . . {of alcohol terminated polyesters or polycarbonates}
220/36	. . . . containing oxygen in addition to the carboxy oxygen	2222/108	. . . . {of alcohol terminated polyethers}
2220/365	. . . . . {containing further carboxylic moieties}	2222/1086	. . . . {of alcohol terminated (poly)urethanes}
220/38	. . . Esters containing sulfur	2222/1093	. . . . {of alcohol terminated epoxy functional polymers}
2220/382	. . . . {and containing oxygen}	222/12	. . of phenols or saturated alcohols {(C08F 222/1006 takes precedence)}
2220/385	. . . . {and containing nitrogen}	222/14	. . . Esters having no free carboxylic acid groups
2220/387	. . . . {and containing nitrogen and oxygen}	2222/145	. . . . {the ester chains containing seven or more carbon atoms}
220/40	. . . Esters of unsaturated alcohols	222/16	. . . Esters having free carboxylic acid groups
220/42	. . Nitriles	2222/165	. . . . {the ester chains containing seven or more carbon atoms}
220/44	. . . Acrylonitrile	222/18	. . . Esters containing halogen
220/46	. . . . with carboxylic acids, sulfonic acids or salts thereof	2222/185	. . . . {the ester chains containing seven or more carbon atoms}
220/48	. . . . with nitrogen-containing monomers	222/20	. . . Esters containing oxygen in addition to the carboxy oxygen
220/50	. . . containing four or more carbon atoms	2222/205	. . . . {the ester chains containing seven or more carbon atoms}
220/52	. . Amides or imides	222/22	. . . Esters containing nitrogen
220/54	. . . Amides	2222/225	. . . . {the ester chains containing seven or more carbon atoms}
220/56	. . . . Acrylamide; Methacrylamide	222/24	. . . Esters containing sulfur
220/58	. . . . containing oxygen in addition to the carbonamido oxygen	2222/245	. . . . {the ester chains containing seven or more carbon atoms}
2220/585	. . . . . {and containing other heteroatoms}	222/26	. . of unsaturated alcohols {(C08F 222/1006 takes precedence)}
220/60	. . . . containing nitrogen in addition to the carbonamido nitrogen	222/28	. . . Diallyl maleate
2220/603	. . . . . {and containing oxygen in addition to the carbonamido oxygen and nitrogen}	222/30	. Nitriles
2220/606	. . . . . {and containing other heteroatoms}	222/32	. . Alpha-cyano-acrylic acid; Esters thereof
220/62	. Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof (copolymers of drying oils C08F 242/00)	2222/321	. . . {alpha-Cyano-acrylic acid methyl ester}
220/64	. . Acids; Metal salts or ammonium salts thereof	2222/322	. . . {alpha-Cyano-acrylic acid ethyl ester}
220/66	. . Anhydrides	2222/323	. . . {alpha-Cyano-acrylic acid propyl ester}
220/68	. . Esters	2222/324	. . . {alpha-Cyano-acrylic acid butyl ester}
220/70	. . Nitriles; Amides; Imides	2222/325	. . . {alpha-Cyano-acrylic acid pentyl ester}
222/00	<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>	2222/326	. . . {alpha-Cyano-acrylic acid longer chain ester}
222/02	. Acids; Metal salts or ammonium salts thereof	2222/327	. . . {alpha-Cyano-acrylic acid alkoxy ester}
222/04	. Anhydrides, e.g. cyclic anhydrides	2222/328	. . . {alpha-Cyano-acrylic acid with more than one oxygen in the ester moiety}
		222/34	. . Vinylidene cyanide
		222/36	. Amides or imides
		222/38	. . Amides
		222/385	. . . {Monomers containing two or more (meth)acrylamide groups, e.g. N,N'-methylenebisacrylamide}
		222/40	. . Imides, e.g. cyclic imides
		2222/402	. . . {Alkyl substituted imides}



2222/404	. . . {the substituted imides comprising oxygen other than the carboxy oxygen}	234/00	<b>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</b> (cyclic esters of polyfunctional acids C08F 218/00; cyclic anhydrides or imides C08F 222/00)
2222/406	. . . {the substituted imides comprising nitrogen other than the imide nitrogen}	234/02	. in a ring containing oxygen (coumarone-indene polymers C08F 244/00)
2222/408	. . . {the substituted imides comprising other heteroatom}	234/04	. in a ring containing sulfur
224/00	<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</b> (cyclic esters of polyfunctional acids C08F 218/00; cyclic anhydrides of unsaturated acids C08F 220/00, C08F 222/00)	236/00	<b>Copolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds</b> (C08F 232/00 takes precedence)
226/00	<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>	<b>NOTE</b>	
226/02	. by a single or double bond to nitrogen	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 )	
226/04	. . Diallylamine	236/02	. the radical having only two carbon-to-carbon double bonds
226/06	. by a heterocyclic ring containing nitrogen	236/04	. . conjugated
226/08	. . N-Vinyl-pyrrolidine	236/045	. . . {conjugated hydrocarbons other than butadiene or isoprene}
226/10	. . N-Vinyl-pyrrolidone	236/06	. . . Butadiene
226/12	. . N-Vinylcarbazole	236/08	. . . Isoprene
228/00	<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 bond to sulfur or by a heterocyclic ring containing sulfur</b>	236/10	. . . with vinyl-aromatic monomers
228/02	. by a bond to sulfur	236/12	. . . with nitriles
228/04	. . Thioethers	236/14	. . . containing elements other than carbon and hydrogen
228/06	. by a heterocyclic ring containing sulfur	236/16	. . . . containing halogen
230/00	<b>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</b> (metal salts, e.g. phenolates or alcoholates, see the parent compounds)	236/18	. . . . containing chlorine
230/02	. containing phosphorus	236/20	. . unconjugated
230/04	. containing a metal	236/22	. the radical having three or more carbon-to-carbon double bonds
230/06	. . containing boron	238/00	<b>Copolymers of compounds having one or more carbon-to-carbon triple bonds</b>
2230/065	. . . {the monomer being a polymerisable additive}	238/02	. Acetylene
230/08	. . containing silicon	238/04	. Vinylacetylene
2230/085	. . . {the monomer being a polymerisable additive}	240/00	<b>Copolymers of hydrocarbons and mineral oils, e.g. petroleum resins</b>
230/10	. . containing germanium	242/00	<b>Copolymers of drying oils with other monomers</b>
232/00	<b>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</b>	244/00	<b>Coumarone-indene copolymers</b>
232/02	. having no condensed rings	246/00	<b>Copolymers in which the nature of only the monomers in minority is defined</b>
232/04	. . having one carbon-to-carbon double bond	<b>Graft polymers; Polymers crosslinked with unsaturated monomers</b>	
232/06	. . having two or more carbon-to-carbon double bonds	<b>NOTE</b>	
232/08	. having condensed rings (coumarone-indene polymers C08F 244/00)	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
- 257/00** Macromolecular compounds obtained by polymerising monomers on to polymers of aromatic monomers as defined in group [C08F 12/00](#)
- 257/02 . on to polymers of styrene or alkyl-substituted styrenes
- 259/00** Macromolecular compounds obtained by polymerising monomers on to polymers of halogen containing monomers as defined in group [C08F 14/00](#)
- 259/02 . on to polymers containing chlorine
- 259/04 . . on to polymers of vinyl chloride
- 259/06 . . on to polymers of vinylidene chloride
- 259/08 . on to polymers containing fluorine
- 261/00** Macromolecular compounds obtained by polymerising monomers on to polymers of oxygen-containing monomers as defined in group [C08F 16/00](#)
- 261/02 . on to polymers of unsaturated alcohols
- 261/04 . . on to polymers of vinyl alcohol
- 261/06 . on to polymers of unsaturated ethers
- 261/08 . on to polymers of unsaturated aldehydes
- 261/10 . on to polymers of unsaturated ketones
- 261/12 . on to polymers of unsaturated acetals or ketals
- 263/00** Macromolecular compounds obtained by polymerising monomers on to polymers of esters of unsaturated alcohols with saturated acids as defined in group [C08F 18/00](#)
- 263/02 . on to polymers of vinyl esters with monocarboxylic acids
- 263/04 . . on to polymers of vinyl acetate
- 263/06 . on to polymers of esters with polycarboxylic acids
- 263/08 . . Polymerisation of diallyl phthalate prepolymers

## 265/00

265/02

265/04

265/06

Macromolecular compounds obtained by polymerising monomers on to polymers of unsaturated monocarboxylic acids or derivatives thereof as defined in group [C08F 20/00](#)

- . on to polymers of acids, salts or anhydrides
- . on to polymers of esters
- . . Polymerisation of acrylate or methacrylate esters on to polymers thereof

**NOTE**

In [C08F 265/06](#) 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 265/06](#), [C08F 2/16](#) )

265/08

265/10

- . on to polymers of nitriles
- . on to polymers of amides or imides

## 267/00

Macromolecular compounds obtained by polymerising monomers on to polymers of unsaturated polycarboxylic acids or derivatives thereof as defined in group [C08F 22/00](#)

267/02

267/04

267/06

267/08

267/10

- . on to polymers of acids or salts
- . on to polymers of anhydrides
- . on to polymers of esters
- . on to polymers of nitriles
- . on to polymers of amides or imides

## 269/00

Macromolecular compounds obtained by polymerising monomers on to polymers of heterocyclic oxygen-containing monomers as defined in group [C08F 24/00](#)

## 271/00

271/02

Macromolecular compounds obtained by polymerising monomers on to polymers of nitrogen-containing monomers as defined in group [C08F 26/00](#)

- . on to polymers of monomers containing heterocyclic nitrogen

## 273/00

Macromolecular compounds obtained by polymerising monomers on to polymers of sulfur-containing monomers as defined in group [C08F 28/00](#)

## 275/00

Macromolecular compounds obtained by polymerising monomers on to polymers of monomers containing phosphorus, selenium, tellurium or a metal as defined in group [C08F 30/00](#)

## 277/00

Macromolecular compounds obtained by polymerising monomers on to polymers of carbocyclic or heterocyclic monomers as defined respectively in group [C08F 32/00](#) or in group [C08F 34/00](#)

## 279/00

Macromolecular compounds obtained by polymerising monomers on to polymers of monomers having two or more carbon-to-carbon double bonds as defined in group [C08F 36/00](#)

**NOTE**

In [C08F 279/02](#) and [C08F 279/04](#) the method of polymerisation may be indicated using the subdivision of [C08F 2/02](#), [C08F 2/16](#), [C08F 2/18](#)

C08F 279/00

(continued)

or [C08F 2/22](#) in the form of C-Sets. Example: ([C08F 279/02](#), [C08F 2/22](#))

- 279/02 . on to polymers of conjugated dienes
- 279/04 . . Vinyl aromatic monomers and nitriles as the only monomers
- 279/06 . . Vinyl aromatic monomers and methacrylates as the only monomers

**281/00 Macromolecular compounds obtained by polymerising monomers on to polymers of monomers having carbon-to-carbon triple bonds as defined in group [C08F 38/00](#)**

**283/00 Macromolecular compounds obtained by polymerising monomers on to polymers provided for in subclass [C08G](#) {(on to polymers modified by introduction of aliphatic unsaturated end or side groups [C08F 290/00](#))}**

- 283/002 . {on to polymers modified by after-treatment}
- 283/004 . . {modified by incorporation of silicon atoms}
- 283/006 . {on to polymers provided for in [C08G 18/00](#) ([C08F 283/004](#) takes precedence)}
- 283/008 . . {on to unsaturated polymers}
- 283/01 . on to unsaturated polyesters {( [C08F 283/004](#) takes precedence)}

**NOTE**

After the symbol of group [C08F 283/01](#) - [C08F 283/14](#) and using the C-Sets, notations concerning the method of 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. polyalkenamers {( [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}	297/048	. . . {polymerising vinyl aromatic monomers, conjugated dienes and polar monomers}
290/147	. . . {Polyurethanes; Polyureas}	297/06	. using a catalyst of the coordination type
290/148	. . . {Polysiloxanes}	297/08	. . polymerising mono-olefins
<b>291/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to macromolecular compounds according to more than one of the groups <a href="#">C08F 251/00</a> - <a href="#">C08F 289/00</a></b>	297/083	. . . {the monomers being ethylene or propylene}
<b>NOTE</b>	In <a href="#">C08F 291/00</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 291/00</a> , <a href="#">C08F 2/16</a> )	297/086	. . . . {the block polymer contains at least three blocks}
291/02	. on to elastomers	<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>
291/04	. on to halogen-containing macromolecules	299/02	. from unsaturated polycondensates
291/06	. on to oxygen-containing macromolecules	299/022	. . {from polycondensates with side or terminal unsaturations}
291/08	. . on to macromolecules containing hydroxy radicals	299/024	. . . {the unsaturation being in acrylic or methacrylic groups}
291/10	. . on to macromolecules containing epoxy radicals	299/026	. . {from the reaction products of polyepoxides and unsaturated monocarboxylic acids, their anhydrides, halogenides or esters with low molecular weight}
291/12	. on to nitrogen-containing macromolecules	299/028	. . . {photopolymerisable compositions}
291/14	. on to sulfur-containing macromolecules	299/04	. . from polyesters
291/16	. on to macromolecules containing more than two metal atoms	299/0407	. . . {Processes of polymerisation}
291/18	. on to irradiated or oxidised macromolecules (epoxidised <a href="#">C08F 291/10</a> )	299/0414	. . . . {Suspension or emulsion polymerisation}
291/185	. . {The monomer(s) not being present during the irradiation or the oxidation of the macromolecule}	299/0421	. . . . {Polymerisation initiated by wave energy or particle radiation}
<b>292/00</b>	<b>Macromolecular compounds obtained by polymerising monomers on to inorganic materials</b>	299/0428	. . . . . {by ultra-violet or visible light}
<b>Block polymers</b>		299/0435	. . . . . {with sensitising agents}
<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>	299/0442	. . . {Catalysts}
293/005	. {using free radical "living" or "controlled" polymerisation, e.g. using a complexing agent}	299/045	. . . . {Peroxy-compounds}
<b>295/00</b>	<b>Macromolecular compounds obtained by polymerisation using successively different catalyst types without deactivating the intermediate polymer</b>	299/0457	. . . . {Nitrogen containing compounds}
<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>	299/0464	. . . . {Metals or metal containing compounds}
297/02	. using a catalyst of the anionic type	299/0471	. . . . {Other compounds}
297/023	. . {using a coupling agent}	299/0478	. . . . {Copolymers from unsaturated polyesters and low molecular monomers characterised by the monomers used}
297/026	. . {polymerising acrylic acid, methacrylic acid or derivatives thereof}	299/0485	. . . . {from polyesters with side or terminal unsaturations}
297/04	. . polymerising vinyl aromatic monomers and conjugated dienes	299/0492	. . . . . {the unsaturation being in acrylic or methacrylic groups}
297/042	. . . {using a polyfunctional initiator}	299/06	. . from polyurethanes
297/044	. . . {using a coupling agent}	299/065	. . . {from polyurethanes with side or terminal unsaturations}
297/046	. . . {polymerising vinyl aromatic monomers and isoprene, optionally with other conjugated dienes}	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>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
- 2420/00 Metalocene catalysts (not used)**
- 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
- 2438/00 Living radical polymerisation**
- 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]
- 2500/00 Characteristics or properties of obtained polymers; Use thereof (not used)**
- 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