

**ECLA****EUROPEAN CLASSIFICATION****C08F****MACROMOLECULAR COMPOUNDS OBTAINED BY REACTIONS ONLY INVOLVING CARBON-TO-CARBON UNSATURATED BONDS****[N: Notes**

[N1207] 1. In this subclass, boron or silicon are considered as metals. 2. In this subclass, the following expression is used with the meaning indicated: - "aliphatic radical" means an acyclic or a non-aromatic carbocyclic carbon skeleton which is considered to be terminated by every bond to: a. an element other than carbon b. a carbon atom having a double bond to one atom other than carbon c. an aromatic carbocyclic ring or a heterocyclic ring. Examples: Polymers of (1) CH<sub>2</sub>=CH-O-CH<sub>2</sub>-CH<sub>2</sub>-NH-C(=O)-O-CH<sub>2</sub>-CH<sub>2</sub>-OH are classified in group [C08F16/28](#) (2) CH<sub>2</sub>=CH-C(=O)-CH=CH<sub>2</sub> are classified in group [C08F16/36](#) (3) para-C<sub>6</sub>H<sub>4</sub>Cl(CH=CH<sub>2</sub>) are classified in group [C08F12/18](#). 3. In this subclass: a. in the absence of an indication to the contrary, a catalyst or a polymer is classified in the last appropriate place. [N: b. From April 2012 onwards, in a copolymer, the monomer in majority is given an Indexing Code and the monomer(s) in minority are given Indexing Code(s) in the form of a C-Set. The Indexing Codes are linked. The monomer in majority is always indicated first in the C-set. Example: a copolymer having ethylene in majority and styrene in minority is classified in ([M08F210/02](#), [M08F212/08](#)).] 4. In this subclass: a. macromolecular compounds and their preparation are classified in the groups for the type of compound prepared. General processes for the preparation of macromolecular compounds according to more than one main group are classified in the groups for the processes employed ([C08F2/00](#) to [C08F8/00](#)). Processes for the preparation of macromolecular compounds are also classified in the groups for the types of reactions employed, if of interest; b. subject matter relating to both homopolymers and copolymers is classified in groups [C08F10/00](#) to [C08F38/00](#); c. subject matter limited to homopolymers is classified only in groups [C08F110/00](#) to [C08F138/00](#); d. subject matter limited to copolymers is classified only in groups [C08F210/00](#) to [C08F246/00](#); e. in groups [C08F210/00](#) to [C08F238/00](#), in the absence of an indication to the contrary, a copolymer is classified according to the major monomeric component. 5. This subclass covers also compositions based on monomers which form macromolecular compounds classifiable in this subclass ([paints C09D4/00](#); [adhesives C09J4/00](#)). In this subclass: a. if the monomers are defined, classification is made according to the polymer to be formed: - in groups [C08F10/00](#) to [C08F246/00](#) if no preformed polymer is present; - in groups [C08F251/00](#) to [C08F291/00](#) if a preformed polymer is present, considering the reaction to take place as a graft or cross-linking reaction; b. if the presence of compounding ingredients is of interest, classification is made in group [C08F2/44](#) ([sensitising agents C08F2/50](#); [catalysts C08F4/00](#)); c. if the compounding ingredients are of interest per se, classification is also made in subclass C08K.

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**Guide heading:****Processes; Catalysts****C08F2/00****Processes of polymerisation****[N: Notes**

[N1207]

Group [C08F2/00](#) 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 [C08F2/00](#);
- in such a case, the classification symbol of [C08F2/00](#) providing for the process of polymerisation may be used in the form of

Combination Set in the groups providing for the polymer, e.g. ([C08F36/04](#), [C08F2/14](#))  
 - this method of classification is applied only when a note after the group providing for the polymer explicitly indicates which symbols of [C08F2/00](#) may be used for forming the Combination Set.  
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- C08F2/00B . [N: Multistage polymerisation processes characterised by a change in reactor conditions without deactivating the intermediate polymer ([C08F295/00](#), [C08F297/00](#) take precedence)] [N9410]
- C08F2/00W . [N: Scale prevention in a polymerisation reactor or its auxiliary parts]
- C08F2/00W2 . . [N: by a prior coating on the reactor walls]
- C08F2/00W4 . . [N: by addition of a scale inhibitor to the polymerisation medium]
- C08F2/00W8 . . [N: Scale prevention in the auxiliary parts]
- C08F2/00Y . [N: cleaning reaction vessels using chemicals (mechanical methods [B08B9/08](#))]
- C08F2/01 . characterised by special features of the polymerisation apparatus used [N9607]
- C08F2/02 . Polymerisation in bulk
- C08F2/04 . Polymerisation in solution ([C08F2/32](#) takes precedence)
- C08F2/06 . . Organic solvent
- C08F2/08 . . . with the aid of dispersing agents for the polymer
- C08F2/10 . . Aqueous solvent
- C08F2/12 . Polymerisation in non-solvents ([C08F2/32](#) takes precedence)
- C08F2/14 . . Organic medium
- C08F2/16 . . Aqueous medium
- C08F2/18 . . . Suspension polymerisation
- C08F2/20 . . . with the aid of macromolecular dispersing agents
- C08F2/22 . . . Emulsion polymerisation
- C08F2/24 . . . . with the aid of emulsifying agents
- C08F2/26 . . . . . anionic
- C08F2/28 . . . . . cationic
- C08F2/30 . . . . . non-ionic
- C08F2/32 . Polymerisation in water-in-oil emulsions
- C08F2/34 . Polymerisation in gaseous state
- C08F2/36 . Polymerisation in solid state
- C08F2/38 . Polymerisation using regulators, e.g. chain terminating agents, [N: e.g. telomerisation]
- C08F2/40 . . using retarding agents

- C08F2/42 . . . using short-stopping agents
- C08F2/44 . Polymerisation in the presence of compounding ingredients, e.g. plasticisers, dyestuffs, fillers
- C08F2/46 . Polymerisation initiated by wave energy or particle radiation
- C08F2/48 . . . by ultra-violet or visible light
- C08F2/50 . . . . with sensitising agents
- C08F2/52 . . . by electric discharge, e.g. voltolisation
- C08F2/54 . . . by X-rays or electrons
- C08F2/56 . . . by ultrasonic vibrations
- C08F2/58 . Polymerisation initiated by direct application of electric current ([electrolytic processes](#), e.g. [electrophoresis C25](#))
- C08F2/60 . Polymerisation by the diene synthesis

#### **C08F4/00 Polymerisation catalysts (catalysts in general B01J)**

[N: **Note**

1. Group [C08F4/00](#) 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 [C08F4/00](#); - in such a case, the classification symbol of [C08F4/00](#) providing for the catalyst may be used as a symbol for a C-Set in the groups providing for the polymer, e.g. ([C08F12/04](#), [C08F4/62](#)) - this method of classification is applied only when a note after the group providing for the polymer explicitly indicates which symbols of [C08F4/00](#) may be used for forming the C-set.

2. When classifying in group [C08F4/00](#), the type of catalyst can be further indexed by using ICO indexing codes chosen from [M08F410/00](#), [M08F420/00](#) or their subgroups ]

- C08F4/00F . [[N: Friedel-Crafts catalysts in general](#)]
- Note**  
Where a carrier is considered of particular interest a further classification may be made in group [C08F4/02](#).
- C08F4/02 . Carriers therefor
- C08F4/02B . . [[N: Magnesium halide as support anhydrous or hydrated or complexed by means of a Lewis base for Ziegler-type catalysts](#)]
- C08F4/02D . . [[N: Metal oxides](#)]
- C08F4/02K . . [[N: Polymers](#)]
- C08F4/04 . Azo-compounds
- C08F4/06 . Metallic compounds other than hydrides and other than metallo-organic compounds; Boron halide or aluminium halide complexes with organic compounds containing oxygen
- C08F4/08 . . of alkali metals
- C08F4/08B . . . [[N: an alkali metal bound to oxygen](#)] [[N9512](#)]
- C08F4/08D . . . [[N: an alkali metal bound to nitrogen, e.g. LiN\(C<sub>2</sub>H<sub>5</sub>\)<sub>2</sub>](#)] [[N9512](#)]

- C08F4/10 . . of alkaline earth metals, zinc, cadmium, mercury, copper or silver
- C08F4/12 . . of boron, aluminium, gallium, indium, thallium or rare earths
- C08F4/14 . . . Boron halides or aluminium halides; Complexes thereof with organic compounds containing oxygen
- C08F4/16 . . of silicon, germanium, tin, lead, titanium, zirconium or hafnium
- C08F4/18 . . . Oxides
- C08F4/20 . . of antimony, bismuth, vanadium, niobium or tantalum
- C08F4/22 . . of chromium, molybdenum or tungsten
- C08F4/24 . . . Oxides
- C08F4/26 . . of manganese, iron group metals or platinum group metals
  
- C08F4/28 . Oxygen or compounds releasing free oxygen ([redox systems C08F4/40](#))
- C08F4/30 . . Inorganic compounds
- C08F4/32 . . Organic compounds
- C08F4/34 . . . Per-compounds with one peroxy-radical
- C08F4/36 . . . Per-compounds with more than one peroxy radical
- C08F4/38 . . . Mixtures of peroxy-compounds
  
- C08F4/40 . Redox systems
  
- C08F4/42 . Metals; Metal hydrides; Metallo-organic compounds; Use thereof as catalyst precursors
- C08F4/44 . . selected from light metals, zinc, cadmium, mercury, copper, silver, gold, boron, gallium, indium, thallium, rare earths or actinides
- C08F4/46 . . . selected from alkali metals
- C08F4/46A . . . . [N: Catalysts containing at least two different components covered by the same or by different subgroups of group [C08F4/46](#), e.g. butyllithium + propylrubidium] [N9512]
- C08F4/46B . . . . [N: selected from sodium or potassium ([C08F4/46A](#) takes precedence)] [N9512]
- C08F4/46B2 . . . . . [N: Metallic sodium or potassium] [N9512]
- C08F4/46B4 . . . . . [N: an alkali metal bound to a cyclic carbon] [N9512]
- C08F4/46B6 . . . . . [N: at least two metal atoms in the same molecule] [N9512]
- C08F4/48 . . . . selected from lithium, rubidium, caesium or francium [N: ([C08F4/46A](#) takes precedence)] [C9512]
- C08F4/48B . . . . . [N: Metallic lithium, rubidium, caesium or francium] [N9512]
- C08F4/48D . . . . . [N: an alkali metal bound to a cyclic carbon] [N9512]
- C08F4/48E . . . . . [N: at least two metal atoms in the same molecule] [N9512]
- C08F4/48E2 . . . . . . [N: at least two lithium atoms in the same molecule] [N9512]
- C08F4/50 . . . selected from alkaline earth metals, zinc, cadmium, mercury, copper or silver
- C08F4/52 . . . selected from boron, aluminium, gallium, indium, thallium or rare earths ([C08F4/14](#) takes precedence)
- C08F4/54 . . . together with other compounds thereof
- C08F4/54D . . . . [N: rare earths being present, e.g. triethylaluminium + neodymium octanoate] [N9910]
- C08F4/56 . . . . Alkali metals being the only metals present, e.g. Alfin catalysts

- C08F4/56B . . . . . [N: Lithium being present, e.g. butyllithium + sodiumphenoxide] [N9512]  
 C08F4/58 . . . together with silicon, germanium, tin, lead, antimony, bismuth or compounds thereof  
 C08F4/60 . . . together with refractory metals, iron group metals, platinum group metals, manganese, rhenium [N: technetium] or compounds thereof

**Note**

In groups [C08F4/60](#) to [C08F4/64](#), the term "component" comprises the transition metal or a compound thereof, pretreated or not [N: (pretreating per se [C08F4/61](#), [C08F4/63](#) and [C08F4/65](#))]

**[N: Notes**

Group [C08F4/60B](#) takes precedence over groups [C08F4/602](#) to [C08F4/619](#) [N1207]  
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- C08F4/60B . . . . . [N: 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) [N1108]

**[N: Note [N1108]**

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  
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- C08F4/60B2 . . . . . [N: Bidentate ligand (not used)] [N1108]  
 C08F4/60B2A . . . . . [N: Neutral ligand] [N1108]  
 C08F4/60B2A1 . . . . . {7 dots} [N: NN] [N1108]  
 C08F4/60B2A2 . . . . . {7 dots} [N: NO] [N1108]  
 C08F4/60B2A3 . . . . . {7 dots} [N: NS] [N1108]  
 C08F4/60B2A4 . . . . . {7 dots} [N: OS] [N1108]  
 C08F4/60B2A5 . . . . . {7 dots} [N: PN] [N1108]  
 C08F4/60B2A6 . . . . . {7 dots} [N: PO] [N1108]  
 C08F4/60B2A7 . . . . . {7 dots} [N: PP] [N1108]  
 C08F4/60B2A8 . . . . . {7 dots} [N: PS] [N1108]  
 C08F4/60B2B . . . . . [N: Monoanionic ligand] [N1108]  
 C08F4/60B2B1 . . . . . {7 dots} [N: NN] [N1108]  
 C08F4/60B2B2 . . . . . {7 dots} [N: NO] [N1108]  
 C08F4/60B2B3 . . . . . {7 dots} [N: NS] [N1108]  
 C08F4/60B2B4 . . . . . {7 dots} [N: ON] [N1108]  
 C08F4/60B2B5 . . . . . {7 dots} [N: OO] [N1108]  
 C08F4/60B2B6 . . . . . {7 dots} [N: PN] [N1108]  
 C08F4/60B2B7 . . . . . {7 dots} [N: PO] [N1108]  
 C08F4/60B2C . . . . . [N: Dianionic ligand] [N1108]  
 C08F4/60B2C1 . . . . . {7 dots} [N: NN] [N1108]  
 C08F4/60B2C2 . . . . . {7 dots} [N: NO] [N1108]  
 C08F4/60B2C3 . . . . . {7 dots} [N: OO] [N1108]  
 C08F4/60B3 . . . . . [N: Tridentate ligand (not used)] [N1108]

C08F4/60B3A	. . . . .	[N: Neutral ligand] [N1108]
C08F4/60B3A1	. . . . .	{7 dots} [N: NNN] [N1108]
C08F4/60B3A2	. . . . .	{7 dots} [N: NNO] [N1108]
C08F4/60B3A3	. . . . .	{7 dots} [N: NNS] [N1108]
C08F4/60B3A4	. . . . .	{7 dots} [N: NSN] [N1108]
C08F4/60B3A5	. . . . .	{7 dots} [N: PNN] [N1108]
C08F4/60B3A6	. . . . .	{7 dots} [N: PNP] [N1108]
C08F4/60B3B	. . . . .	[N: Monoanionic ligand] [N1108]
C08F4/60B3B1	. . . . .	{7 dots} [N: NNN] [N1108]
C08F4/60B3B2	. . . . .	{7 dots} [N: NNO] [N1108]
C08F4/60B3B3	. . . . .	{7 dots} [N: ONN] [N1108]
C08F4/60B3B4	. . . . .	{7 dots} [N: ONO] [N1108]
C08F4/60B3B5	. . . . .	{7 dots} [N: ON*O] [N1108]
C08F4/60B3B6	. . . . .	{7 dots} [N: PNO] [N1108]
C08F4/60B3B7	. . . . .	{7 dots} [N: SNN] [N1108]
C08F4/60B3B8	. . . . .	{7 dots} [N: SNO] [N1108]
C08F4/60B3C	. . . . .	[N: Dianionic ligand] [N1108]
C08F4/60B3C1	. . . . .	{7 dots} [N: NN(R)C] [N1108]
C08F4/60B3C2	. . . . .	{7 dots} [N: NN(R)N] [N1108]
C08F4/60B3C3	. . . . .	{7 dots} [N: NNO] [N1108]
C08F4/60B3C4	. . . . .	{7 dots} [N: ON(R)C] [N1108]
C08F4/60B3C5	. . . . .	{7 dots} [N: ONO] [N1108]
C08F4/60B3C6	. . . . .	{7 dots} [N: O*O*P] [N1108]
C08F4/60B3C7	. . . . .	{7 dots} [N: OSO] [N1108]
C08F4/60B4	. . . . .	[N: Tetra- or multi-dentate ligand (not used)] [N1108]
C08F4/60B4A	. . . . .	[N: Neutral ligand] [N1108]
C08F4/60B4A1	. . . . .	{7 dots} [N: ONNO] [N1108]
C08F4/60B4A2	. . . . .	{7 dots} [N: PNNN] [N1108]
C08F4/60B4B	. . . . .	[N: Monoanionic ligand] [N1108]
C08F4/60B4C	. . . . .	[N: Dianionic ligand] [N1108]
C08F4/60B4C1	. . . . .	{7 dots} [N: ONNO] [N1108]
C08F4/60B4C2	. . . . .	{7 dots} [N: OOOO] [N1108]
C08F4/60B4C3	. . . . .	{7 dots} [N: OSSO] [N1108]
C08F4/602	. . . . .	Component covered by group <a href="#">C08F4/60</a> with an organo-aluminium compound [( <a href="#">C08F4/60B</a> - <a href="#">C08F4/60B4C3</a> take precedence)] [N0404]
C08F4/602D	. . . . .	[N: Component of <a href="#">C08F4/60</a> containing at least two different metals] [N0404]
C08F4/602D4	. . . . .	[N: containing magnesium] [N0404]
C08F4/602D8	. . . . .	[N: containing aluminium] [N0404]
C08F4/602F	. . . . .	[N: with an alumoxane, i.e. a compound containing an -Al-O-Al-group] [N0404]
C08F4/603	. . . . .	Component covered by group <a href="#">C08F4/60</a> with a metal or compound covered by group <a href="#">C08F4/44</a> other than an organo-aluminium compound [( <a href="#">C08F4/60B</a> - <a href="#">C08F4/60B4C3</a> take precedence)] [N0404]

C08F4/603H	. . . . .	[N: Component of <a href="#">C08F4/60</a> containing at least two different metals] [N0404]
C08F4/603H4	. . . . .	[N: containing magnesium] [N0404]
C08F4/603H8	. . . . .	[N: containing aluminium] [N0404]
C08F4/605	. . . . .	Component covered by group <a href="#">C08F4/60</a> with a metal or compound covered by group <a href="#">C08F4/44</a> , not provided for in a single group of groups <a href="#">C08F4/602</a> or <a href="#">C08F4/603</a> [( <a href="#">C08F4/60B</a> - <a href="#">C08F4/60B4C3</a> take precedence)] [N0404]
C08F4/605K	. . . . .	[N: Component of <a href="#">C08F4/60</a> containing at least two different metals] [N0404]
C08F4/605K4	. . . . .	[N: containing magnesium] [N0404]
C08F4/605K8	. . . . .	[N: containing aluminium] [N0404]
C08F4/606	. . . . .	Catalyst comprising at least two different metals, in metallic form or as compounds thereof, in addition to the component covered by group <a href="#">C08F4/60</a> [( <a href="#">C08F4/60B</a> - <a href="#">C08F4/60B4C3</a> take precedence)] [N0404]
C08F4/606L	. . . . .	[N: containing silicium] [N0404]
C08F4/607	. . . . .	Catalyst containing a specific non-metal or metal-free compound [( <a href="#">C08F4/60B</a> - <a href="#">C08F4/60B4C3</a> take precedence)] [N0404]
C08F4/608	. . . . .	inorganic [N0404]
C08F4/609	. . . . .	organic [N0404]
C08F4/609B	. . . . .	[N: hydrocarbon] [N0404]
C08F4/609B2	. . . . .	{7 dots} [N: containing aliphatic unsaturation] [N0404]
C08F4/609D	. . . . .	[N: containing halogen] [N0404]
C08F4/609E	. . . . .	[N: containing oxygen] [N0404]
C08F4/609F	. . . . .	[N: containing nitrogen] [N0404]
C08F4/609K	. . . . .	[N: containing sulfur] [N0404]
C08F4/609L	. . . . .	[N: containing phosphorus] [N0404]
C08F4/609R	. . . . .	[N: containing another heteroatom] [N0404]
C08F4/61	. . . . .	Pretreating the metal or compound covered by group <a href="#">C08F4/60</a> before the final contacting with the metal or compound covered by group <a href="#">C08F4/44</a> [( <a href="#">C08F4/60B</a> - <a href="#">C08F4/60B4C3</a> take precedence)] [N0404]
C08F4/611	. . . . .	Pretreating with non-metals or metal-free compounds [N0404]
C08F4/612	. . . . .	Pretreating with metals or metal-containing compounds [N0404]
C08F4/613	. . . . .	with metals covered by group <a href="#">C08F4/60</a> or compounds thereof [N0404]
C08F4/614	. . . . .	with magnesium or compounds thereof [N0404]
C08F4/614B	. . . . .	{7 dots} [N: and metals of <a href="#">C08F4/60</a> or compounds thereof] [N0404]
C08F4/614D	. . . . .	{7 dots} [N: halides of magnesium] [N0404]
C08F4/614D2	. . . . .	{8 dots} [N: and metals of group <a href="#">C08F4/60</a> or compounds thereof] [N0404]
C08F4/614F	. . . . .	{7 dots} [N: organo-magnesium compounds] [N0404]
C08F4/614K	. . . . .	{7 dots} [N: magnesium or compounds thereof not provided for in <a href="#">C08F4/614D</a> or <a href="#">C08F4/614F</a> ] [N0404]
C08F4/615	. . . . .	with aluminium or compounds thereof [N0404]
C08F4/615B	. . . . .	{7 dots} [N: and metals of <a href="#">C08F4/60</a> or compounds thereof] [N0404]

C08F4/615D	. . . . .	{7 dots} [N: and magnesium or compounds thereof] [N0404]
C08F4/615D2	. . . . .	{8 dots} [N: and metals of <a href="#">C08F4/60</a> or compounds thereof] [N0404]
C08F4/616	. . . . .	with silicon or compounds thereof [N0404]
C08F4/616D	. . . . .	{7 dots} [N: and metals of <a href="#">C08F4/60</a> or compounds thereof] [N0404]
C08F4/616F	. . . . .	{7 dots} [N: and magnesium or compounds thereof] [N0404]
C08F4/616K	. . . . .	{7 dots} [N: and aluminium or compounds thereof] [N0404]
C08F4/617	. . . . .	with metals or metal-containing compounds, not provided for in groups <a href="#">C08F4/613</a> to <a href="#">C08F4/616</a> [N0404]
C08F4/617B	. . . . .	{7 dots} [N: and metals of <a href="#">C08F4/60</a> or compounds thereof] [N0404]
C08F4/617D	. . . . .	{7 dots} [N: and magnesium or compounds thereof] [N0404]
C08F4/617K	. . . . .	{7 dots} [N: and aluminium or compounds thereof] [N0404]
C08F4/617L	. . . . .	{7 dots} [N: and silicon or compounds thereof] [N0404]
C08F4/618	. . . . .	with metals or metal-containing compounds, provided for in at least two of the groups <a href="#">C08F4/613</a> to <a href="#">C08F4/617</a> [N0404]
C08F4/618B	. . . . .	{7 dots} [N: and metals of <a href="#">C08F4/60</a> or compounds thereof] [N0404]
C08F4/618D	. . . . .	{7 dots} [N: and magnesium or compounds thereof] [N0404]
C08F4/618F	. . . . .	{7 dots} [N: and aluminium or compounds thereof] [N0404]
C08F4/618K	. . . . .	{7 dots} [N: and silicon or compounds thereof] [N0404]
C08F4/618L	. . . . .	{7 dots} [N: and metals or metal-containing compounds of <a href="#">C08F4/60P4L</a> ] [N0404]
C08F4/619	. . . . .	Component covered by group <a href="#">C08F4/60</a> containing a transition metal-carbon bond [( <a href="#">C08F4/60B</a> - <a href="#">C08F4/60B4C3</a> take precedence)] [N0404]
C08F4/619B	. . . . .	[N: in combination with another component of <a href="#">C08F4/60</a> ] [N0404]
C08F4/619D	. . . . .	[N: in combination with an ionising compound other than alumoxane, e.g. (C6F5)4B-X+] [N0404]
C08F4/619K	. . . . .	[N: in combination with an organoaluminium compound] [N0404]
C08F4/619L	. . . . .	[N: supported on a carrier, e.g. silica, MgCl <sub>2</sub> , polymer] [N0404]
C08F4/619Z	. . . . .	containing at least one cyclopentadienyl ring, fused or not, e.g. indenyl or a fluorenyl ring [N0404] [C1207]
C08F4/619ZB	. . . . .	[N: containing at least two cyclopentadienyl rings, fused or not] [N0404]
C08F4/619ZB2	. . . . .	{7 dots} [N: two cyclopentadienyl rings being mutually non-bridged] [N0404]
C08F4/619ZB4	. . . . .	{7 dots} [N: two cyclopentadienyl rings being mutually bridged] [N0404]
C08F4/62	. . . . .	Refractory metals or compounds thereof
		[N: <b>Notes</b> Group <a href="#">C08F4/62B</a> takes precedence over groups <a href="#">C08F4/622</a> to <a href="#">C08F4/639</a> [N1207] ]
C08F4/62B	. . . . .	[N: 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) [N1108]

[N: **Note** [N1108]

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

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C08F4/62B2	. . . . .	[N: Bidentate ligand (not used)] [N1108]
C08F4/62B2A	. . . . .	{7 dots} [N: Neutral ligand] [N1108]
C08F4/62B2A1	. . . . .	{8 dots} [N: NN] [N1108]
C08F4/62B2A2	. . . . .	{8 dots} [N: NO] [N1108]
C08F4/62B2A3	. . . . .	{8 dots} [N: NS] [N1108]
C08F4/62B2A4	. . . . .	{8 dots} [N: OS] [N1108]
C08F4/62B2A5	. . . . .	{8 dots} [N: PN] [N1108]
C08F4/62B2A6	. . . . .	{8 dots} [N: PO] [N1108]
C08F4/62B2A7	. . . . .	{8 dots} [N: PP] [N1108]
C08F4/62B2A8	. . . . .	{8 dots} [N: PS] [N1108]
C08F4/62B2B	. . . . .	{7 dots} [N: Monoanionic ligand] [N1108]
C08F4/62B2B1	. . . . .	{8 dots} [N: NN] [N1108]
C08F4/62B2B2	. . . . .	{8 dots} [N: NO] [N1108]
C08F4/62B2B3	. . . . .	{8 dots} [N: NS] [N1108]
C08F4/62B2B4	. . . . .	{8 dots} [N: ON] [N1108]
C08F4/62B2B5	. . . . .	{8 dots} [N: OO] [N1108]
C08F4/62B2B6	. . . . .	{8 dots} [N: PN] [N1108]
C08F4/62B2B7	. . . . .	{8 dots} [N: PO] [N1108]
C08F4/62B2C	. . . . .	{7 dots} [N: Dianionic ligand] [N1108]
C08F4/62B2C1	. . . . .	{8 dots} [N: NN] [N1108]
C08F4/62B2C2	. . . . .	{8 dots} [N: NO] [N1108]
C08F4/62B2C3	. . . . .	{8 dots} [N: OO] [N1108]
C08F4/62B3	. . . . .	[N: Tridentate ligand (not used)] [N1108]
C08F4/62B3A	. . . . .	{7 dots} [N: Neutral ligand] [N1108]
C08F4/62B3A1	. . . . .	{8 dots} [N: NNN] [N1108]
C08F4/62B3A2	. . . . .	{8 dots} [N: NNO] [N1108]
C08F4/62B3A3	. . . . .	{8 dots} [N: NNS] [N1108]
C08F4/62B3A4	. . . . .	{8 dots} [N: NSN] [N1108]
C08F4/62B3A5	. . . . .	{8 dots} [N: PNN] [N1108]
C08F4/62B3A6	. . . . .	{8 dots} [N: PNP] [N1108]
C08F4/62B3B	. . . . .	{7 dots} [N: Monoanionic ligand] [N1108]
C08F4/62B3B1	. . . . .	{8 dots} [N: NNN] [N1108]
C08F4/62B3B2	. . . . .	{8 dots} [N: NNO] [N1108]
C08F4/62B3B3	. . . . .	{8 dots} [N: ONN] [N1108]
C08F4/62B3B4	. . . . .	{8 dots} [N: ONO] [N1108]
C08F4/62B3B5	. . . . .	{8 dots} [N: ON*O] [N1108]
C08F4/62B3B6	. . . . .	{8 dots} [N: PNO] [N1108]

C08F4/62B3B7	. . . . .	{8 dots} [N: SNN] [N1108]
C08F4/62B3B8	. . . . .	{8 dots} [N: SNO] [N1108]
C08F4/62B3C	. . . . .	{7 dots} [N: Dianionic ligand] [N1108]
C08F4/62B3C1	. . . . .	{8 dots} [N: NN(R)C] [N1108]
C08F4/62B3C2	. . . . .	{8 dots} [N: NN(R)N] [N1108]
C08F4/62B3C3	. . . . .	{8 dots} [N: NNO] [N1108]
C08F4/62B3C4	. . . . .	{8 dots} [N: ON(R)C] [N1108]
C08F4/62B3C5	. . . . .	{8 dots} [N: ONO] [N1108]
C08F4/62B3C6	. . . . .	{8 dots} [N: O*O*P] [N1108]
C08F4/62B3C7	. . . . .	{8 dots} [N: OSO] [N1108]
C08F4/62B4	. . . . .	[N: Tetra- or multi-dentate ligand (not used)] [N1108]
C08F4/62B4A	. . . . .	{7 dots} [N: Neutral ligand] [N1108]
C08F4/62B4A1	. . . . .	{8 dots} [N: ONNO] [N1108]
C08F4/62B4A2	. . . . .	{8 dots} [N: PNNN] [N1108]
C08F4/62B4B	. . . . .	{7 dots} [N: Monoanionic ligand] [N1108]
C08F4/62B4C	. . . . .	{7 dots} [N: Dianionic ligand] [N1108]
C08F4/62B4C1	. . . . .	{8 dots} [N: ONNO] [N1108]
C08F4/62B4C2	. . . . .	{8 dots} [N: OOOO] [N1108]
C08F4/62B4C3	. . . . .	{8 dots} [N: OSSO] [N1108]
C08F4/622	. . . . .	Component covered by group <a href="#">C08F4/62</a> with an organo-aluminium compound [( <a href="#">C08F4/62B</a> - <a href="#">C08F4/62B4C3</a> take precedence)] [N0404]
C08F4/622D	. . . . .	[N: Component of <a href="#">C08F4/62</a> containing at least two different metals] [N0404]
C08F4/622D4	. . . . .	{7 dots} [N: containing magnesium] [N0404]
C08F4/622D8	. . . . .	{7 dots} [N: containing aluminium] [N0404]
C08F4/622F	. . . . .	[N: with an alumoxane, i.e. a compound containing an -Al-o-Al-group] [N0404]
C08F4/623	. . . . .	Component covered by group <a href="#">C08F4/62</a> with a metal or compound covered by group <a href="#">C08F4/44</a> other than an organo-aluminium compound [( <a href="#">C08F4/62B</a> - <a href="#">C08F4/62B4C3</a> take precedence)] [N0404]
C08F4/623H	. . . . .	[N: Component of <a href="#">C08F4/62</a> containing at least two different metals] [N0404]
C08F4/623H4	. . . . .	{7 dots} [N: containing magnesium] [N0404]
C08F4/623H8	. . . . .	{7 dots} [N: containing aluminium] [N0404]
C08F4/625	. . . . .	Component covered by group <a href="#">C08F4/62</a> with a metal or compound covered by group <a href="#">C08F4/44</a> , not provided for in a single group of groups <a href="#">C08F4/622</a> or <a href="#">C08F4/623</a> [( <a href="#">C08F4/62B</a> - <a href="#">C08F4/62B4C3</a> take precedence)] [N0404]
C08F4/625K	. . . . .	[N: Component of <a href="#">C08F4/62</a> containing at least two different metals] [N0404]
C08F4/625K4	. . . . .	{7 dots} [N: containing magnesium] [N0404]
C08F4/625K8	. . . . .	{7 dots} [N: containing aluminium] [N0404]
C08F4/626	. . . . .	Catalysts comprising at least two different metals, in metallic form or as compounds thereof, in addition to the component covered by group <a href="#">C08F4/62</a> [( <a href="#">C08F4/62B</a> - <a href="#">C08F4/62B4C3</a> take precedence)] [N0404]
C08F4/626L	. . . . .	[N: containing silicium] [N0404]

C08F4/627	. . . . .	Catalysts containing a specific non-metal or metal-free compound [(C08F4/62B - C08F4/62B4C3 take precedence)] [N0404]
C08F4/628	. . . . .	inorganic [N0404]
C08F4/629	. . . . .	organic [N0404]
C08F4/629B	. . . . .	{7 dots} [N: hydrocarbon] [N0404]
C08F4/629B2	. . . . .	{8 dots} [N: containing aliphatic unsaturation] [N0404]
C08F4/629D	. . . . .	{7 dots} [N: containing halogen] [N0404]
C08F4/629E	. . . . .	{7 dots} [N: containing oxygen] [N0404]
C08F4/629F	. . . . .	{7 dots} [N: containing nitrogen] [N0404]
C08F4/629K	. . . . .	{7 dots} [N: containing sulfur] [N0404]
C08F4/629L	. . . . .	{7 dots} [N: containing phosphorus] [N0404]
C08F4/629R	. . . . .	{7 dots} [N: containing another heteroatom] [N0404]
C08F4/63	. . . . .	Pretreating the metal or compound covered by group <a href="#">C08F4/62</a> before the final contacting with the metal or compound covered by group <a href="#">C08F4/44</a> [(C08F4/62B - C08F4/62B4C3 take precedence)] [N0404] [C1207]
C08F4/631	. . . . .	Pretreating with non-metals or metal-free compounds [N0404]
C08F4/632	. . . . .	Pretreating with metals or metal-containing compounds [N0404]
C08F4/633	. . . . .	{7 dots} with metals covered by group <a href="#">C08F4/62</a> or compounds thereof [N0404]
C08F4/634	. . . . .	{7 dots} with magnesium or compounds thereof [N0404]
C08F4/634B	. . . . .	{8 dots} [N: and metals of <a href="#">C08F4/62</a> or compounds thereof] [N0404]
C08F4/634D	. . . . .	{8 dots} [N: halides of magnesium] [N0404]
C08F4/634D2	. . . . .	{9 dots} [N: and metals of <a href="#">C08F4/62</a> or compounds thereof] [N0404]
C08F4/634F	. . . . .	{8 dots} [N: organo-magnesium compounds] [N0404]
C08F4/634K	. . . . .	{8 dots} [N: magnesium or compounds thereof not provided for in <a href="#">C08F4/634D2</a> or <a href="#">C08F4/634F</a> ] [N0404]
C08F4/635	. . . . .	{7 dots} with aluminium or compounds thereof [N0404]
C08F4/635B	. . . . .	{8 dots} [N: and metals of <a href="#">C08F4/62</a> or compounds thereof] [N0404]
C08F4/635D	. . . . .	{8 dots} [N: and magnesium or compounds thereof] [N0404]
C08F4/635D2	. . . . .	{9 dots} [N: and metals of <a href="#">C08F4/62</a> or compounds thereof] [N0404]
C08F4/636	. . . . .	{7 dots} with silicon or compounds thereof [N0404]
C08F4/636D	. . . . .	{8 dots} [N: and metals of <a href="#">C08F4/62</a> or compounds thereof] [N0404]
C08F4/636F	. . . . .	{8 dots} [N: and magnesium or compounds thereof] [N0404]
C08F4/636K	. . . . .	{8 dots} [N: and aluminium or compounds thereof] [N0404]
C08F4/637	. . . . .	{7 dots} with metals or metal-containing compounds, not provided for in groups <a href="#">C08F4/633</a> to <a href="#">C08F4/636</a> [N0404]
C08F4/637B	. . . . .	{8 dots} [N: and metals of <a href="#">C08F4/62</a> or compounds thereof] [N0404]
C08F4/637D	. . . . .	{8 dots} [N: and magnesium or compounds thereof] [N0404]
C08F4/637K	. . . . .	{8 dots} [N: and aluminium or compounds thereof] [N0404]

C08F4/637L	. . . . .	{8 dots} [N: and silicon or compounds thereof] [N0404]
C08F4/638	. . . . .	{7 dots} with metals or metal-containing compounds, not provided for in a single group of groups <a href="#">C08F4/633</a> to <a href="#">C08F4/637</a> [N0404]
C08F4/638B	. . . . .	{8 dots} [N: and metals or metal-containing compounds of <a href="#">C08F4/62</a> ] [N0404]
C08F4/638D	. . . . .	{8 dots} [N: and magnesium or compounds thereof] [N0404]
C08F4/638F	. . . . .	{8 dots} [N: and aluminium or compounds thereof] [N0404]
C08F4/638K	. . . . .	{8 dots} [N: and silicon or compounds thereof] [N0404]
C08F4/638L	. . . . .	{8 dots} [N: and metals or metal-containing compounds of <a href="#">C08F4/637</a> ] [N0404]
C08F4/639	. . . . .	Component covered by group <a href="#">C08F4/62</a> containing a transition metal-carbon bond [( <a href="#">C08F4/62B</a> - <a href="#">C08F4/62B4C3</a> take precedence)] [N0404]
C08F4/639B	. . . . .	[N: in combination with another component of <a href="#">C08F4/62</a> ] [N0404]
C08F4/639D	. . . . .	[N: in combination with an ionising compound other than alumoxane, e.g. (C6F5)4B-X+] [N0404]
C08F4/639K	. . . . .	[N: in combination with an organoaluminium compound] [N0404]
C08F4/639L	. . . . .	[N: supported on a carrier, e.g. silica, MgCl <sub>2</sub> , polymer] [N0404]
C08F4/639Z	. . . . .	containing at least one cyclopentadienyl ring, condensed or not, e.g. an indenyl or a fluorenyl ring [N0404] [C1207]
C08F4/639ZB	. . . . .	{7 dots} [N: containing at least two cyclopentadienyl rings, fused or not] [N0404]
C08F4/639ZB2	. . . . .	{8 dots} [N: two cyclopentadienyl rings being mutually non-bridged] [N0404]
C08F4/639ZB4	. . . . .	{8 dots} [N: two cyclopentadienyl rings being mutually bridged] [N0404]
C08F4/64	. . . . .	Titanium, zirconium, hafnium or compounds thereof
		[N: <b>Notes</b> Group <a href="#">C08F4/64B</a> takes precedence over groups <a href="#">C08F4/64Z</a> to <a href="#">C08F4/659</a> [N1207] ]
C08F4/64B	. . . . .	[N: 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) [N1108]
		[N: <b>Note</b> [N1108] 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 ]
C08F4/64B2	. . . . .	{7 dots} [N: Bidentate ligand (not used)] [N1108]
C08F4/64B2A	. . . . .	{8 dots} [N: Neutral ligand] [N1108]
C08F4/64B2A1	. . . . .	{9 dots} [N: NN] [N1108]
C08F4/64B2A2	. . . . .	{9 dots} [N: NO] [N1108]
C08F4/64B2A3	. . . . .	{9 dots} [N: NS] [N1108]
C08F4/64B2A4	. . . . .	{9 dots} [N: OS] [N1108]
C08F4/64B2A5	. . . . .	{9 dots} [N: PN] [N1108]

C08F4/64B2A6	. . . . .	{9 dots} [N: PO] [N1108]
C08F4/64B2A7	. . . . .	{9 dots} [N: PP] [N1108]
C08F4/64B2A8	. . . . .	{9 dots} [N: PS] [N1108]
C08F4/64B2B	. . . . .	{8 dots} [N: Monoanionic ligand] [N1108]
C08F4/64B2B1	. . . . .	{9 dots} [N: NN] [N1108]
C08F4/64B2B2	. . . . .	{9 dots} [N: NO] [N1108]
C08F4/64B2B3	. . . . .	{9 dots} [N: NS] [N1108]
C08F4/64B2B4	. . . . .	{9 dots} [N: ON] [N1108]
C08F4/64B2B5	. . . . .	{9 dots} [N: OO] [N1108]
C08F4/64B2B6	. . . . .	{9 dots} [N: PN] [N1108]
C08F4/64B2B7	. . . . .	{9 dots} [N: PO] [N1108]
C08F4/64B2C	. . . . .	{8 dots} [N: Dianionic ligand] [N1108]
C08F4/64B2C1	. . . . .	{9 dots} [N: NN] [N1108]
C08F4/64B2C2	. . . . .	{9 dots} [N: NO] [N1108]
C08F4/64B2C3	. . . . .	{9 dots} [N: OO] [N1108]
C08F4/64B3	. . . . .	{7 dots} [N: Tridentate ligand (not used)] [N1108]
C08F4/64B3A	. . . . .	{8 dots} [N: Neutral ligand] [N1108]
C08F4/64B3A1	. . . . .	{9 dots} [N: NNN] [N1108]
C08F4/64B3A2	. . . . .	{9 dots} [N: NNO] [N1108]
C08F4/64B3A3	. . . . .	{9 dots} [N: NNS] [N1108]
C08F4/64B3A4	. . . . .	{9 dots} [N: NSN] [N1108]
C08F4/64B3A5	. . . . .	{9 dots} [N: PNN] [N1108]
C08F4/64B3A6	. . . . .	{9 dots} [N: PNP] [N1108]
C08F4/64B3B	. . . . .	{8 dots} [N: Monoanionic ligand] [N1108]
C08F4/64B3B1	. . . . .	{9 dots} [N: NNN] [N1108]
C08F4/64B3B2	. . . . .	{9 dots} [N: NNO] [N1108]
C08F4/64B3B3	. . . . .	{9 dots} [N: ONN] [N1108]
C08F4/64B3B4	. . . . .	{9 dots} [N: ONO] [N1108]
C08F4/64B3B5	. . . . .	{9 dots} [N: ON*O] [N1108]
C08F4/64B3B6	. . . . .	{9 dots} [N: PNO] [N1108]
C08F4/64B3B7	. . . . .	{9 dots} [N: SNN] [N1108]
C08F4/64B3B8	. . . . .	{9 dots} [N: SNO] [N1108]
C08F4/64B3C	. . . . .	{8 dots} [N: Dianionic ligand] [N1108]
C08F4/64B3C1	. . . . .	{9 dots} [N: NN(R)C] [N1108]
C08F4/64B3C2	. . . . .	{9 dots} [N: NN(R)N] [N1108]
C08F4/64B3C3	. . . . .	{9 dots} [N: NNO] [N1108]
C08F4/64B3C4	. . . . .	{9 dots} [N: ON(R)C] [N1108]
C08F4/64B3C5	. . . . .	{9 dots} [N: ONO] [N1108]
C08F4/64B3C6	. . . . .	{9 dots} [N: O*O*P] [N1108]
C08F4/64B3C7	. . . . .	{9 dots} [N: OSO] [N1108]
C08F4/64B4	. . . . .	{7 dots} [N: Tetra- or multi-dentate ligand (not used)] [N1108]
C08F4/64B4A	. . . . .	{8 dots} [N: Neutral ligand] [N1108]

C08F4/64B4A1	. . . . .	{9 dots} [N: ONNO] [N1108]
C08F4/64B4A2	. . . . .	{9 dots} [N: PNNN] [N1108]
C08F4/64B4B	. . . . .	{8 dots} [N: Monoanionic ligand] [N1108]
C08F4/64B4C	. . . . .	{8 dots} [N: Dianionic ligand] [N1108]
C08F4/64B4C1	. . . . .	{9 dots} [N: ONNO] [N1108]
C08F4/64B4C2	. . . . .	{9 dots} [N: OOOO] [N1108]
C08F4/64B4C3	. . . . .	{9 dots} [N: OSSO] [N1108]
C08F4/642	. . . . .	Component covered by group <a href="#">C08F4/64</a> with an organo-aluminium compound [( <a href="#">C08F4/64B</a> - <a href="#">C08F4/64B4C3</a> take precedence)] [N0404]
C08F4/642B	. . . . .	{7 dots} [N: Titanium tetrahalides with organo-aluminium compounds] [N0404]
C08F4/642D	. . . . .	{7 dots} [N: Component of <a href="#">C08F4/64</a> containing at least two different metals] [N0404]
C08F4/642D4	. . . . .	{8 dots} [N: containing magnesium] [N0404]
C08F4/642D8	. . . . .	{8 dots} [N: containing aluminium] [N0404]
C08F4/642F	. . . . .	{7 dots} [N: with an alumoxane i.e. a compound containing an -Al-o-Al-group] [N0404]
C08F4/643	. . . . .	Component covered by group <a href="#">C08F4/64</a> with a metal or compound covered by group <a href="#">C08F4/44</a> other than an organo-aluminium compound [( <a href="#">C08F4/64B</a> - <a href="#">C08F4/64B4C3</a> take precedence)] [N0404]
C08F4/643H	. . . . .	{7 dots} [N: Component of <a href="#">C08F4/64</a> containing at least two different metals] [N0404]
C08F4/643H4	. . . . .	{8 dots} [N: containing magnesium] [N0404]
C08F4/643H8	. . . . .	{8 dots} [N: containing aluminium] [N0404]
C08F4/645	. . . . .	Component covered by group <a href="#">C08F4/64</a> with a metal or compound covered by group <a href="#">C08F4/44</a> , not provided for in a single group of groups <a href="#">C08F4/642</a> to <a href="#">C08F4/643</a> [( <a href="#">C08F4/60B</a> - <a href="#">C08F4/60B4C3</a> take precedence)] [N0404]
C08F4/645K	. . . . .	{7 dots} [N: Component of <a href="#">C08F4/64</a> containing at least two different metals] [N0404]
C08F4/645K4	. . . . .	{8 dots} [N: containing magnesium] [N0404]
C08F4/645K8	. . . . .	{8 dots} [N: containing aluminium] [N0404]
C08F4/646	. . . . .	Catalysts comprising at least two different metals, in metallic form or as compounds thereof, in addition to the component covered by group <a href="#">C08F4/64</a> [( <a href="#">C08F4/64B</a> - <a href="#">C08F4/64B4C3</a> take precedence)] [N0404]
C08F4/646L	. . . . .	{7 dots} [N: containing silicium] [N0404]
C08F4/647	. . . . .	Catalysts containing a specific non-metal or metal-free compound [( <a href="#">C08F4/64B</a> - <a href="#">C08F4/64B4C3</a> take precedence)] [N0404]
C08F4/648	. . . . .	{7 dots} inorganic [N0404]
C08F4/649	. . . . .	{7 dots} organic [N0404]
C08F4/649B	. . . . .	{8 dots} [N: hydrocarbon] [N0404]
C08F4/649B2	. . . . .	{9 dots} [N: containing aliphatic unsaturation] [N0404]
C08F4/649D	. . . . .	{8 dots} [N: containing halogen] [N0404]
C08F4/649E	. . . . .	{8 dots} [N: containing oxygen] [N0404]
C08F4/649F	. . . . .	{8 dots} [N: containing nitrogen] [N0404]
C08F4/649K	. . . . .	{8 dots} [N: containing sulfur] [N0404]

C08F4/649L	. . . . .	{8 dots} [N: containing phosphorus] [N0404]
C08F4/649R	. . . . .	{8 dots} [N: containing another heteroatom] [N0404]
C08F4/65	. . . . .	Pretreating the metal or compound covered by group <a href="#">C08F4/64</a> before the final contacting with the metal or compound covered by group <a href="#">C08F4/44</a> [( <a href="#">C08F4/64B</a> - <a href="#">C08F4/64B4C3</a> take precedence)] [N0404] [C1207]
C08F4/651	. . . . .	{7 dots} Pretreating with non-metals or metal-free compounds [N0404]
C08F4/652	. . . . .	{7 dots} Pretreating with metals or metal-containing compounds [N0404]
C08F4/653	. . . . .	{8 dots} with metals of <a href="#">C08F4/64</a> or compounds thereof [N0404]
C08F4/654	. . . . .	{8 dots} with magnesium or compounds thereof [N0404]
C08F4/654B	. . . . .	{9 dots} [N: and metals of <a href="#">C08F4/64</a> or compounds thereof] [N0404]
C08F4/654D	. . . . .	{9 dots} [N: halides of magnesium] [N0404]
C08F4/654D2	. . . . .	{10 dots} [N: and metals of <a href="#">C08F4/64</a> or compounds thereof] [N0404]
C08F4/654F	. . . . .	{9 dots} [N: organo-magnesium compounds] [N0404]
C08F4/654K	. . . . .	{9 dots} [N: magnesium or compounds thereof, not provided for in <a href="#">C08F4/654D</a> or <a href="#">C08F4/654F</a> ] [N0404]
C08F4/655	. . . . .	{8 dots} with aluminium or compounds thereof [N0404]
C08F4/655B	. . . . .	{9 dots} [N: and metals of <a href="#">C08F4/64</a> or compounds thereof] [N0404]
C08F4/655D	. . . . .	{9 dots} [N: and magnesium or compounds thereof]
C08F4/655D2	. . . . .	{10 dots} [N: and metals of <a href="#">C08F4/64</a> or compounds thereof]
C08F4/656	. . . . .	{8 dots} with silicon or compounds thereof [N0404]
C08F4/656D	. . . . .	{9 dots} [N: and metals of <a href="#">C08F4/64</a> or compounds thereof] [N0404]
C08F4/656F	. . . . .	{9 dots} [N: and magnesium or compounds thereof] [N0404]
C08F4/656K	. . . . .	{9 dots} [N: and aluminium or compounds thereof] [N0404]
C08F4/657	. . . . .	{8 dots} with metals or metal-containing compounds, not provided for in groups <a href="#">C08F4/653</a> to <a href="#">C08F4/656</a> [N0404]
C08F4/657B	. . . . .	{9 dots} [N: and metals of <a href="#">C08F4/64</a> or compounds thereof] [N0404]
C08F4/657D	. . . . .	{9 dots} [N: and magnesium or compounds thereof] [N0404]
C08F4/657K	. . . . .	{9 dots} [N: and aluminium or compounds thereof] [N0404]
C08F4/657L	. . . . .	{9 dots} [N: and silicon or compounds thereof] [N0404]
C08F4/658	. . . . .	{8 dots} with metals or metal-containing compounds, not provided for in a single group of groups <a href="#">C08F4/653</a> to <a href="#">C08F4/657</a> [N0404]
C08F4/658B	. . . . .	{9 dots} [N: and metals of <a href="#">C08F4/64</a> or compounds thereof] [N0404]
C08F4/658D	. . . . .	{9 dots} [N: and magnesium or compounds thereof] [N0404]
C08F4/658F	. . . . .	{9 dots} [N: and aluminium or compounds thereof] [N0404]
C08F4/658K	. . . . .	{9 dots} [N: and silicon or compounds thereof] [N0404]
C08F4/658L	. . . . .	{9 dots} [N: and metals or metal-containing compounds of

C08F4/657 [N0404]

C08F4/659	. . . . .	Component covered by group <u>C08F4/64</u> containing a transition metal-carbon bond [( <u>C08F4/64B</u> - <u>C08F4/64B4C3</u> take precedence)] [N0404]
C08F4/659B	. . . . .	{7 dots} [N: in combination with another component of <u>C08F4/64</u> ] [N0404]
C08F4/659D	. . . . .	{7 dots} [N: in combination with an ionising compound other than alumoxane, e.g. (C6F5)4B-X+] [N0404]
C08F4/659K	. . . . .	{7 dots} [N: in combination with an organoaluminium compound] [N0404]
C08F4/659L	. . . . .	{7 dots} [N: supported on a carrier, e.g. silica, MgCl <sub>2</sub> , polymer] [N0404]
C08F4/6592	. . . . .	{7 dots} containing at least one cyclopentadienyl ring, condensed or not, e.g. an indenyl or a fluorenyl ring [N0404] [C1207]
C08F4/6592B	. . . . .	{8 dots} [N: containing at least two cyclopentadienyl rings, fused or not] [N0404]
C08F4/6592B2	. . . . .	{9 dots} [N: two cyclopentadienyl rings being mutually non-bridged] [N0404]
C08F4/6592B4	. . . . .	{9 dots} [N: two cyclopentadienyl rings being mutually bridged] [N0404]
C08F4/68	. . . . .	Vanadium, niobium, tantalum or compounds thereof [C1207]
C08F4/68B	. . . . .	[N: 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) [N1108]

**[N: Note** [N1108]

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

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C08F4/68B2	. . . . .	{7 dots} [N: Bidentate ligand (not used)] [N1108]
C08F4/68B2A	. . . . .	{8 dots} [N: Neutral ligand] [N1108]
C08F4/68B2A1	. . . . .	{9 dots} [N: NN] [N1108]
C08F4/68B2A2	. . . . .	{9 dots} [N: NO] [N1108]
C08F4/68B2A3	. . . . .	{9 dots} [N: NS] [N1108]
C08F4/68B2A4	. . . . .	{9 dots} [N: OS] [N1108]
C08F4/68B2A5	. . . . .	{9 dots} [N: PN] [N1108]
C08F4/68B2A6	. . . . .	{9 dots} [N: PO] [N1108]
C08F4/68B2A7	. . . . .	{9 dots} [N: PP] [N1108]
C08F4/68B2A8	. . . . .	{9 dots} [N: PS] [N1108]
C08F4/68B2B	. . . . .	{8 dots} [N: Monoanionic ligand] [N1108]
C08F4/68B2B1	. . . . .	{9 dots} [N: NN] [N1108]
C08F4/68B2B2	. . . . .	{9 dots} [N: NO] [N1108]
C08F4/68B2B3	. . . . .	{9 dots} [N: NS] [N1108]
C08F4/68B2B4	. . . . .	{9 dots} [N: ON] [N1108]
C08F4/68B2B5	. . . . .	{9 dots} [N: OO] [N1108]
C08F4/68B2B6	. . . . .	{9 dots} [N: PN] [N1108]

C08F4/68B2B7	. . . . .	{9 dots} [N: PO] [N1108]
C08F4/68B2C	. . . . .	{8 dots} [N: Dianionic ligand] [N1108]
C08F4/68B2C1	. . . . .	{9 dots} [N: NN] [N1108]
C08F4/68B2C2	. . . . .	{9 dots} [N: NO] [N1108]
C08F4/68B2C3	. . . . .	{9 dots} [N: OO] [N1108]
C08F4/68B3	. . . . .	{7 dots} [N: Tridentate ligand (not used)] [N1108]
C08F4/68B3A	. . . . .	{8 dots} [N: Neutral ligand] [N1108]
C08F4/68B3A1	. . . . .	{9 dots} [N: NNN] [N1108]
C08F4/68B3A2	. . . . .	{9 dots} [N: NNO] [N1108]
C08F4/68B3A3	. . . . .	{9 dots} [N: NNS] [N1108]
C08F4/68B3A4	. . . . .	{9 dots} [N: NSN] [N1108]
C08F4/68B3A5	. . . . .	{9 dots} [N: PNN] [N1108]
C08F4/68B3A6	. . . . .	{9 dots} [N: PNP] [N1108]
C08F4/68B3B	. . . . .	{8 dots} [N: Monoanionic ligand] [N1108]
C08F4/68B3B1	. . . . .	{9 dots} [N: NNN] [N1108]
C08F4/68B3B2	. . . . .	{9 dots} [N: NNO] [N1108]
C08F4/68B3B3	. . . . .	{9 dots} [N: ONN] [N1108]
C08F4/68B3B4	. . . . .	{9 dots} [N: ONO] [N1108]
C08F4/68B3B5	. . . . .	{9 dots} [N: ON*O] [N1108]
C08F4/68B3B6	. . . . .	{9 dots} [N: PNO] [N1108]
C08F4/68B3B7	. . . . .	{9 dots} [N: SNN] [N1108]
C08F4/68B3B8	. . . . .	{9 dots} [N: SNO] [N1108]
C08F4/68B3C	. . . . .	{8 dots} [N: Dianionic ligand] [N1108]
C08F4/68B3C1	. . . . .	{9 dots} [N: NN(R)C] [N1108]
C08F4/68B3C2	. . . . .	{9 dots} [N: NN(R)N] [N1108]
C08F4/68B3C3	. . . . .	{9 dots} [N: NNO] [N1108]
C08F4/68B3C4	. . . . .	{9 dots} [N: ON(R)C] [N1108]
C08F4/68B3C5	. . . . .	{9 dots} [N: ONO] [N1108]
C08F4/68B3C6	. . . . .	{9 dots} [N: O*O*P] [N1108]
C08F4/68B3C7	. . . . .	{9 dots} [N: OSO] [N1108]
C08F4/68B4	. . . . .	{7 dots} [N: Tetra- or multi-dentate ligand (not used)] [N1108]
C08F4/68B4A	. . . . .	{8 dots} [N: Neutral ligand] [N1108]
C08F4/68B4A1	. . . . .	{9 dots} [N: ONNO] [N1108]
C08F4/68B4A2	. . . . .	{9 dots} [N: PNNN] [N1108]
C08F4/68B4B	. . . . .	{8 dots} [N: Monoanionic ligand] [N1108]
C08F4/68B4C	. . . . .	{8 dots} [N: Dianionic ligand] [N1108]
C08F4/68B4C1	. . . . .	{9 dots} [N: ONNO] [N1108]
C08F4/68B4C2	. . . . .	{9 dots} [N: OOOO] [N1108]
C08F4/68B4C3	. . . . .	{9 dots} [N: OSSO] [N1108]
C08F4/685	. . . . .	Vanadium or compounds thereof in combination with titanium or compounds thereof [N9412]
C08F4/69	. . . . .	Chromium, molybdenum, tungsten or compounds thereof [N9412]

C08F4/69B	. . . . .	[N: 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) [N1108]
		[N: <b>Note</b> [N1108] 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 ]
C08F4/69B2	. . . . .	{7 dots} [N: Bidentate ligand (not used)] [N1108]
C08F4/69B2A	. . . . .	{8 dots} [N: Neutral ligand] [N1108]
C08F4/69B2A1	. . . . .	{9 dots} [N: NN] [N1108]
C08F4/69B2A2	. . . . .	{9 dots} [N: NO] [N1108]
C08F4/69B2A3	. . . . .	{9 dots} [N: NS] [N1108]
C08F4/69B2A4	. . . . .	{9 dots} [N: OS] [N1108]
C08F4/69B2A5	. . . . .	{9 dots} [N: PN] [N1108]
C08F4/69B2A6	. . . . .	{9 dots} [N: PO] [N1108]
C08F4/69B2A7	. . . . .	{9 dots} [N: PP] [N1108]
C08F4/69B2A8	. . . . .	{9 dots} [N: PS] [N1108]
C08F4/69B2B	. . . . .	{8 dots} [N: Monoanionic ligand] [N1108]
C08F4/69B2B1	. . . . .	{9 dots} [N: NN] [N1108]
C08F4/69B2B2	. . . . .	{9 dots} [N: NO] [N1108]
C08F4/69B2B3	. . . . .	{9 dots} [N: NS] [N1108]
C08F4/69B2B4	. . . . .	{9 dots} [N: ON] [N1108]
C08F4/69B2B5	. . . . .	{9 dots} [N: OO] [N1108]
C08F4/69B2B6	. . . . .	{9 dots} [N: PN] [N1108]
C08F4/69B2B7	. . . . .	{9 dots} [N: PO] [N1108]
C08F4/69B2C	. . . . .	{8 dots} [N: Dianionic ligand] [N1108]
C08F4/69B2C1	. . . . .	{9 dots} [N: NN] [N1108]
C08F4/69B2C2	. . . . .	{9 dots} [N: NO] [N1108]
C08F4/69B2C3	. . . . .	{9 dots} [N: OO] [N1108]
C08F4/69B3	. . . . .	{7 dots} [N: Tridentate ligand (not used)] [N1108]
C08F4/69B3A	. . . . .	{8 dots} [N: Neutral ligand] [N1108]
C08F4/69B3A1	. . . . .	{9 dots} [N: NNN] [N1108]
C08F4/69B3A2	. . . . .	{9 dots} [N: NNO] [N1108]
C08F4/69B3A3	. . . . .	{9 dots} [N: NNS] [N1108]
C08F4/69B3A4	. . . . .	{9 dots} [N: NSN] [N1108]
C08F4/69B3A5	. . . . .	{9 dots} [N: PNN] [N1108]
C08F4/69B3A6	. . . . .	{9 dots} [N: PNP] [N1108]
C08F4/69B3B	. . . . .	{8 dots} [N: Monoanionic ligand] [N1108]
C08F4/69B3B1	. . . . .	{9 dots} [N: NNN] [N1108]
C08F4/69B3B2	. . . . .	{9 dots} [N: NNO] [N1108]
C08F4/69B3B3	. . . . .	{9 dots} [N: ONN] [N1108]
C08F4/69B3B4	. . . . .	{9 dots} [N: ONO] [N1108]

C08F4/69B3B5	. . . . .	{9 dots} [N: ON*O] [N1108]
C08F4/69B3B6	. . . . .	{9 dots} [N: PNO] [N1108]
C08F4/69B3B7	. . . . .	{9 dots} [N: SNN] [N1108]
C08F4/69B3B8	. . . . .	{9 dots} [N: SNO] [N1108]
C08F4/69B3C	. . . . .	{8 dots} [N: Dianionic ligand] [N1108]
C08F4/69B3C1	. . . . .	{9 dots} [N: NN(R)C] [N1108]
C08F4/69B3C2	. . . . .	{9 dots} [N: NN(R)N] [N1108]
C08F4/69B3C3	. . . . .	{9 dots} [N: NNO] [N1108]
C08F4/69B3C4	. . . . .	{9 dots} [N: ON(R)C] [N1108]
C08F4/69B3C5	. . . . .	{9 dots} [N: ONO] [N1108]
C08F4/69B3C6	. . . . .	{9 dots} [N: O*O*P] [N1108]
C08F4/69B3C7	. . . . .	{9 dots} [N: OSO] [N1108]
C08F4/69B4	. . . . .	{7 dots} [N: Tetra- or multi-dentate ligand (not used)] [N1108]
C08F4/69B4A	. . . . .	{8 dots} [N: Neutral ligand] [N1108]
C08F4/69B4A1	. . . . .	{9 dots} [N: ONNO] [N1108]
C08F4/69B4A2	. . . . .	{9 dots} [N: PNNN] [N1108]
C08F4/69B4B	. . . . .	{8 dots} [N: Monoanionic ligand] [N1108]
C08F4/69B4C	. . . . .	{8 dots} [N: Dianionic ligand] [N1108]
C08F4/69B4C1	. . . . .	{9 dots} [N: ONNO] [N1108]
C08F4/69B4C2	. . . . .	{9 dots} [N: OOOO] [N1108]
C08F4/69B4C3	. . . . .	{9 dots} [N: OSSO] [N1108]
C08F4/695	. . . . .	Manganese, technetium, rhenium or compounds thereof [N9412]
C08F4/70	. . . . .	Iron group metals, platinum group metals or compounds thereof
C08F4/70B	. . . . .	[N: 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) [N1108]
		[N: <b>Note</b> [N1108] 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 ]
C08F4/70B2	. . . . .	[N: Bidentate ligand (not used)] [N1108]
C08F4/70B2A	. . . . .	{7 dots} [N: Neutral ligand] [N1108]
C08F4/70B2A1	. . . . .	{8 dots} [N: NN] [N1108]
C08F4/70B2A2	. . . . .	{8 dots} [N: NO] [N1108]
C08F4/70B2A3	. . . . .	{8 dots} [N: NS] [N1108]
C08F4/70B2A4	. . . . .	{8 dots} [N: OS] [N1108]
C08F4/70B2A5	. . . . .	{8 dots} [N: PN] [N1108]
C08F4/70B2A6	. . . . .	{8 dots} [N: PO] [N1108]
C08F4/70B2A7	. . . . .	{8 dots} [N: PP] [N1108]
C08F4/70B2A8	. . . . .	{8 dots} [N: PS] [N1108]
C08F4/70B2B	. . . . .	{7 dots} [N: Monoanionic ligand] [N1108]
C08F4/70B2B1	. . . . .	{8 dots} [N: NN] [N1108]

C08F4/70B2B2	. . . . .	{8 dots} [N: NO] [N1108]
C08F4/70B2B3	. . . . .	{8 dots} [N: NS] [N1108]
C08F4/70B2B4	. . . . .	{8 dots} [N: ON] [N1108]
C08F4/70B2B5	. . . . .	{8 dots} [N: OO] [N1108]
C08F4/70B2B6	. . . . .	{8 dots} [N: PN] [N1108]
C08F4/70B2B7	. . . . .	{8 dots} [N: PO] [N1108]
C08F4/70B2C	. . . . .	{7 dots} [N: Dianionic ligand] [N1108]
C08F4/70B2C1	. . . . .	{8 dots} [N: NN] [N1108]
C08F4/70B2C2	. . . . .	{8 dots} [N: NO] [N1108]
C08F4/70B2C3	. . . . .	{8 dots} [N: OO] [N1108]
C08F4/70B3	. . . . .	[N: Tridentate ligand (not used)] [N1108]
C08F4/70B3A	. . . . .	{7 dots} [N: Neutral ligand] [N1108]
C08F4/70B3A1	. . . . .	{8 dots} [N: NNN] [N1108]
C08F4/70B3A2	. . . . .	{8 dots} [N: NNO] [N1108]
C08F4/70B3A3	. . . . .	{8 dots} [N: NNS] [N1108]
C08F4/70B3A4	. . . . .	{8 dots} [N: NSN] [N1108]
C08F4/70B3A5	. . . . .	{8 dots} [N: PNN] [N1108]
C08F4/70B3A6	. . . . .	{8 dots} [N: PNP] [N1108]
C08F4/70B3B	. . . . .	{7 dots} [N: Monoanionic ligand] [N1108]
C08F4/70B3B1	. . . . .	{8 dots} [N: NNN] [N1108]
C08F4/70B3B2	. . . . .	{8 dots} [N: NNO] [N1108]
C08F4/70B3B3	. . . . .	{8 dots} [N: ONN] [N1108]
C08F4/70B3B4	. . . . .	{8 dots} [N: ONO] [N1108]
C08F4/70B3B5	. . . . .	{8 dots} [N: ON*O] [N1108]
C08F4/70B3B6	. . . . .	{8 dots} [N: PNO] [N1108]
C08F4/70B3B7	. . . . .	{8 dots} [N: SNN] [N1108]
C08F4/70B3B8	. . . . .	{8 dots} [N: SNO] [N1108]
C08F4/70B3C	. . . . .	{7 dots} [N: Dianionic ligand] [N1108]
C08F4/70B3C1	. . . . .	{8 dots} [N: NN(R)C] [N1108]
C08F4/70B3C2	. . . . .	{8 dots} [N: NN(R)N] [N1108]
C08F4/70B3C3	. . . . .	{8 dots} [N: NNO] [N1108]
C08F4/70B3C4	. . . . .	{8 dots} [N: ON(R)C] [N1108]
C08F4/70B3C5	. . . . .	{8 dots} [N: ONO] [N1108]
C08F4/70B3C6	. . . . .	{8 dots} [N: O*O*P] [N1108]
C08F4/70B3C7	. . . . .	{8 dots} [N: OSO] [N1108]
C08F4/70B4	. . . . .	[N: Tetra- or multi-dentate ligand (not used)] [N1108]
C08F4/70B4A	. . . . .	{7 dots} [N: Neutral ligand] [N1108]
C08F4/70B4A1	. . . . .	{8 dots} [N: ONNO] [N1108]
C08F4/70B4A2	. . . . .	{8 dots} [N: PNNN] [N1108]
C08F4/70B4B	. . . . .	{7 dots} [N: Monoanionic ligand] [N1108]
C08F4/70B4C	. . . . .	{7 dots} [N: Dianionic ligand] [N1108]
C08F4/70B4C1	. . . . .	{8 dots} [N: ONNO] [N1108]

- C08F4/70B4C2 . . . . . {8 dots} [N: OOOO] [N1108]
- C08F4/70B4C3 . . . . . {8 dots} [N: OSSO] [N1108]
- C08F4/70D . . . . . [N: Cobalt, nickel or compounds thereof ([C08F4/70B](#) to [C08F4/70B4C3](#) take precedence)] [C1207]
- C08F4/70D2 . . . . . [N: Cobalt or compounds thereof]
- C08F4/70D3 . . . . . [N: Nickel or compounds thereof]
- C08F4/72 . . . . . selected from metals not provided for in group [C08F4/44](#) ([C08F4/54](#) to [C08F4/70](#) take precedence)
- C08F4/74 . . . . . selected from refractory metals
- C08F4/76 . . . . . selected from titanium, zirconium, hafnium, vanadium, niobium or tantalum
- C08F4/78 . . . . . selected from chromium, molybdenum or tungsten
- C08F4/80 . . . . . selected from iron group metals or platinum group metals
- C08F4/82 . . . . . Pi-Allyl complexes
- C08F6/00** **Post-polymerisation treatments** ([C08F8/00](#) takes precedence; of conjugated diene rubbers [C08C](#))
- [N: **Notes**  
[C1207]  
1. In groups [C08F6/00](#) to [C08F6/28](#) the treatment of specific polymers is indicated using the subdivision of [C08L23/00](#) to [C08L57/12](#) in the form of C-Sets. Example: ([C08F6/12](#), [C08L25/06](#)) 2. Groups [C08F6/00B](#), [C08F6/00D](#), [C08F6/00W](#), [C08F6/02](#), [C08F6/04](#) take precedence over the other groups.  
]
- C08F6/00B . [N: Removal of residual monomers by physical means]
- C08F6/00B2 . . [N: from polymer solutions, suspensions, dispersions or emulsions without recovery of the polymer therefrom]
- C08F6/00B4 . . [N: from solid polymers]
- C08F6/00D . [N: Removal of residual monomers by chemical reaction, e.g. scavenging]
- C08F6/00W . [N: Treatment of solid polymer wetted by water or organic solvents, e.g. coagulum, filter cakes]
- C08F6/02 . Neutralisation of the polymerisation mass, e.g. killing the catalyst ([short-stopping C08F2/42](#)) [N: also removal of catalyst residues]
- C08F6/04 . Fractionation
- C08F6/06 . Treatment of polymer solutions
- C08F6/08 . . Removal of catalyst residues [N: not used, see [C08F6/02](#)]
- C08F6/10 . . Removal of volatile materials, e.g. monomers, solvents
- C08F6/12 . . Separation of polymers from solutions
- C08F6/14 . Treatment of polymer emulsions
- C08F6/16 . . Purification
- C08F6/18 . . Increasing the size of the dispersed particles
- C08F6/20 . . Concentration

- C08F6/22 . . Coagulation
- C08F6/24 . Treatment of polymer suspensions
- C08F6/26 . Treatment of polymers prepared in bulk [N: also solid polymers or polymer melts]
- C08F6/28 . . Purification
  
- C08F8/00** **Chemical modification by after-treatment** (graft polymers, block polymers, cross-linking with unsaturated monomers or with polymers [C08F251/00](#) to [C08F299/00](#); of conjugated diene rubbers C08C; cross-linking in general C08J)
  
- [N: **Notes**  
 [N1208]Classification is given in the form of C-Sets when sufficient information is provided concerning the polymer to be modified. In groups [C08F8/00](#) to [C08F8/50](#), the chemical modification of specific polymers is indicated using the subdivisions of [C08F10/00](#) to [C08F34/04](#), [C08F38/00](#) to [C08F38/04](#), [C08F110/00](#) to [C08F134/04](#), [C08F138/00](#) to [C08F138/04](#), [C08F210/00](#) to [C08F234/04](#), [C08F238/00](#) to [C08F299/08](#). Example: ([C08F8/44](#), [C08F16/06](#)) Otherwise, only the [C08F8/00-C08F8/50](#) symbol(s) is (are) given.  
 ]
  
- C08F8/02 . Alkylation
- C08F8/04 . Reduction, e.g. hydrogenation
- C08F8/06 . Oxidation
- C08F8/08 . Epoxidation
- C08F8/10 . Acylation
- C08F8/12 . Hydrolysis
- C08F8/14 . Esterification
- C08F8/16 . . Lactonisation
  
- C08F8/18 . Introducing halogen atoms or halogen-containing groups
- C08F8/20 . . Halogenation
- C08F8/22 . . . by reaction with free halogens
- C08F8/24 . . Haloalkylation
  
- C08F8/26 . Removing halogen atoms or halogen-containing groups from the molecule
- C08F8/28 . Condensation with aldehydes or ketones
  
- C08F8/30 . Introducing nitrogen atoms or nitrogen-containing groups (polymeric products of isocyanates or thiocyanates [C08G](#))
- C08F8/32 . . by reaction with amines
  
- C08F8/34 . Introducing sulfur atoms or sulfur-containing groups
- C08F8/36 . . Sulfonation; Sulfation

- C08F8/38 . . Sulfohalogenation
- C08F8/40 . Introducing phosphorus atoms or phosphorus-containing groups
- C08F8/42 . Introducing metal atoms or metal-containing groups
- C08F8/44 . Preparation of metal salts or ammonium salts
- C08F8/46 . Reaction with unsaturated dicarboxylic acids or anhydrides thereof, e.g. maleinisation
- C08F8/48 . Isomerisation; Cyclisation

**[N: Notes**

**[N1208]**When the cyclisation is an epoxidation, [C08F8/08](#) takes precedence. When the cyclisation is a lactonisation, [C08F8/16](#) takes precedence.

**]**

- C08F8/50 . Partial depolymerisation

**Guide heading:** **Homopolymers and copolymers**

**C08F10/00 Homopolymers and copolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond**

**[N: Notes**

**[N1208]**In groups [C08F10/00](#) to [C08F10/14](#) the method of polymerisation or the nature of the catalyst may be indicated using the subdivision of [C08F2/00](#) to [C08F2/58](#) or of [C08F4/00](#) to [C08F4/82](#) in the form of C-Sets. Example: ([C08F10/02](#), [C08F4/651](#))

**]**

- C08F10/02 . Ethene
- C08F10/04 . Monomers containing three or four carbon atoms
- C08F10/06 . . Propene
- C08F10/08 . . Butenes
- C08F10/10 . . . Isobutene
- C08F10/14 . Monomers containing five or more carbon atoms

**C08F12/00 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**

**[N: Notes**

**[N1208]**1. Until March 2012, in groups [C08F12/04](#) to [C08F12/08](#) the method of polymerisation might be indicated using the subdivision of [C08F2/02](#) to [C08F2/06](#), [C08F2/16](#) to [C08F2/30](#), [C08F2/34](#) or [C08F2/38](#) to [C08F2/46](#) in the form of C-sets; the nature of the catalyst might be indicated using the subdivision of [C08F4/00](#) to [C08F4/60](#), [C08F4/62](#), [C08F4/64](#) or [C08F4/68](#) to [C08F4/82](#) in the form of C-Sets. Example: ([C08F12/08](#), [C08F2/20](#)) 2. From April 2012 on, in groups [C08F12/00](#) to [C08F12/36](#) the method of polymerisation may be indicated using the subdivision of [C08F2/00](#) to

[C08F2/60](#) in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of [C08F4/00](#) to [C08F4/82](#) in the form of C-Sets. Example: ([C08F12/08](#), [C08F2/56](#))

]

- C08F12/02 . Monomers containing only one unsaturated aliphatic radical
- C08F12/04 . . containing one ring
- C08F12/06 . . . Hydrocarbons
- C08F12/08 . . . . Styrene
- C08F12/12 . . . . Monomers containing a branched unsaturated aliphatic radical or a ring substituted by an alkyl radical
- C08F12/14 . . . substituted by hetero atoms or groups containing heteroatoms
- C08F12/16 . . . . Halogens
- C08F12/18 . . . . . Chlorine
- C08F12/20 . . . . . Fluorine
- C08F12/22 . . . . . Oxygen
- C08F12/24 . . . . . Phenols or alcohols
- C08F12/26 . . . . . Nitrogen
- C08F12/28 . . . . . Amines
- C08F12/30 . . . . . Sulfur
- C08F12/32 . . containing two or more rings
- C08F12/34 . Monomers containing two or more unsaturated aliphatic radicals
- C08F12/36 . . Divinylbenzene

**C08F14/00 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**

- C08F14/02 . Monomers containing chlorine
- C08F14/04 . . Monomers containing two carbon atoms
- C08F14/06 . . . Vinyl chloride

**[N: Notes**

[N1208]In group [C08F14/06](#) the method of polymerisation may be indicated using the subdivision of [C08F2/02](#) to [C08F2/06](#), [C08F2/16](#) to [C08F2/30](#), [C08F2/34](#) or [C08F2/38](#) to [C08F2/46](#) in the form of C-Sets. Example: ([C08F14/06](#), [C08F2/44](#))

]

- C08F14/08 . . . Vinylidene chloride
- C08F14/12 . . . 1,2- Dichloroethene
- C08F14/14 . . Monomers containing three or more carbon atoms
- C08F14/16 . Monomers containing bromine or iodine
- C08F14/18 . Monomers containing fluorine

**[N: WARNING**

**[N1208]**In group [C08F14/18](#) and subgroups, the method of polymerisation may be indicated using the subdivision of [C08F2/02](#), [C08F2/04](#), [C08F2/16](#), [C08F2/38](#), [C08F2/44](#) and [C08F2/46](#) in the form of C-Sets. Example: ([C08F14/22](#), [C08F2/38](#)) ]

- C08F14/18B . . [N: Monomers containing fluorine not covered by the groups [C08F14/20](#) to [C08F14/28](#)]
- C08F14/20 . . Vinyl fluoride
- C08F14/22 . . Vinylidene fluoride
- C08F14/24 . . Trifluorochloroethene
- C08F14/26 . . Tetrafluoroethene
- C08F14/28 . . Hexafluoropropene

**C08F16/00**

**Homopolymers and copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an alcohol, ether, aldehydo, ketonic, acetal or ketal radical**

- C08F16/02 . by an alcohol radical
- C08F16/04 . . Acyclic compounds
- C08F16/06 . . . Polyvinyl alcohol; [N: Vinyl alcohol] [C0107]
- C08F16/08 . . . Allyl alcohol
- C08F16/10 . . Carbocyclic compounds
- C08F16/12 . by an ether radical
- C08F16/14 . . Monomers containing only one unsaturated aliphatic radical
- C08F16/16 . . . Monomers containing no hetero atoms other than the ether oxygen
- C08F16/18 . . . . Acyclic compounds
- C08F16/20 . . . . . Monomers containing three or more carbon atoms in the unsaturated aliphatic radical
- C08F16/22 . . . . Carbocyclic compounds
- C08F16/24 . . . Monomers containing halogen
- C08F16/26 . . . Monomers containing oxygen atoms in addition to the ether oxygen
- C08F16/28 . . . Monomers containing nitrogen
- C08F16/30 . . . Monomers containing sulfur
- C08F16/32 . . Monomers containing two or more unsaturated aliphatic radicals
- C08F16/34 . by an aldehydo radical
- C08F16/36 . by a ketonic radical
- C08F16/38 . by an acetal or ketal radical

**C08F18/00**

**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 acyloxy radical of a saturated carboxylic acid, of carbonic acid or of a haloformic acid**

- C08F18/02 . Esters of monocarboxylic acids
- C08F18/04 . . Vinyl esters
- C08F18/06 . . . Vinyl formate
- C08F18/08 . . . Vinyl acetate
- C08F18/10 . . . of monocarboxylic acids containing three or more carbon atoms
- C08F18/12 . . with unsaturated alcohols containing three or more carbon atoms
  
- C08F18/14 . Esters of polycarboxylic acids
- C08F18/16 . . with alcohols containing three or more carbon atoms
- C08F18/18 . . . Diallyl phthalate
  
- C08F18/20 . Esters containing halogen
  
- C08F18/22 . Esters containing nitrogen
  
- C08F18/24 . Esters of carbonic or haloformic acids

**C08F20/00 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**

- C08F20/02 . Monocarboxylic acids having less than ten carbon atoms, Derivatives thereof
- C08F20/04 . . Acids, Metal salts or ammonium salts thereof
- C08F20/06 . . . Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof
- C08F20/08 . . Anhydrides
- C08F20/10 . . Esters

[N: **Notes**

[N1208]In groups [C08F20/12](#) to [C08F20/14](#) the method of polymerisation may be indicated using the subdivision of [C08F2/02](#) to [C08F2/06](#), [C08F2/16](#) to [C08F2/30](#), [C08F2/34](#) or [C08F2/38](#) to [C08F2/46](#) in the form of C-Sets. Example: ([C08F20/12](#), [C08F2/26](#))

]

- C08F20/12 . . . of monohydric alcohols or phenols
- C08F20/14 . . . . Methyl esters
- C08F20/16 . . . . of phenols or of alcohols containing two or more carbon atoms
- C08F20/18 . . . . . with acrylic or methacrylic acids
- C08F20/20 . . . of polyhydric alcohols or phenols
- C08F20/22 . . . Esters containing halogen
- C08F20/24 . . . . containing perhaloalkyl radicals
- C08F20/26 . . . . Esters containing oxygen in addition to the carboxy oxygen
- C08F20/28 . . . . . containing no aromatic rings in the alcohol moiety
- C08F20/30 . . . . . containing aromatic rings in the alcohol moiety
- C08F20/32 . . . . . containing epoxy radicals
- C08F20/34 . . . . Esters containing nitrogen

- C08F20/36 . . . . containing oxygen in addition to the carboxy oxygen
- C08F20/38 . . . Esters containing sulfur
- C08F20/40 . . . Esters of unsaturated alcohols
- C08F20/42 . . Nitriles
- C08F20/44 . . . Acrylonitrile

**[N: Notes**

**[N1208]**In group [C08F20/44](#) the method of polymerisation may be indicated using the subdivision of [C08F2/02](#) to [C08F2/06](#), [C08F2/16](#) to [C08F2/30](#), [C08F2/34](#) or [C08F2/38](#) to [C08F2/46](#) in the form of C-Sets. Example: ([C08F20/44](#), [C08F2/46](#)) ]

- C08F20/50 . . . containing four or more carbon atoms
- C08F20/52 . . Amides or imides
- C08F20/54 . . . Amides
- C08F20/56 . . . . Acrylamide; Methacrylamide
- C08F20/58 . . . . containing oxygen in addition to the carbonamido oxygen
- C08F20/60 . . . . containing nitrogen in addition to the carbonamido nitrogen
- C08F20/62 . Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof
- C08F20/64 . . Acids; Metal salts or ammonium salts thereof
- C08F20/66 . . Anhydrides
- C08F20/68 . . Esters
- C08F20/70 . . Nitriles; Amides; Imides

**C08F22/00 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 carboxyl radical and containing at least one other carboxyl radical in the molecule; Salts, anhydrides, esters, amides, imides or nitriles thereof**

- C08F22/02 . Acids; Metal salts or ammonium salts thereof
- C08F22/04 . Anhydrides, e.g. cyclic anhydrides
- C08F22/06 . . Maleic anhydride
- C08F22/10 . Esters
- C08F22/10B . . **[N: of polyhydric alcohols or polyhydric phenols, e.g. ethylene glycol dimethacrylate] [N9708]**
- C08F22/12 . . of phenols or saturated alcohols **[N: ([C08F22/10B](#) takes precedence)] [C9708]**
- C08F22/14 . . . Esters having no free carboxylic acid groups
- C08F22/16 . . . Esters having free carboxylic acid groups
- C08F22/18 . . . Esters containing halogen
- C08F22/20 . . . Esters containing oxygen in addition to the carboxy oxygen
- C08F22/22 . . . Esters containing nitrogen
- C08F22/24 . . . Esters containing sulfur
- C08F22/26 . . of unsaturated alcohols **[N: ([C08F22/10B](#) takes precedence)] [C9708]**

- C08F22/28 . . . Diallyl maleate
- C08F22/30 . Nitriles
- C08F22/32 . . alfa-Cyano-acrylic acid; Esters thereof
- C08F22/34 . . Vinylidene cyanide
- C08F22/36 . Amides or imides
- C08F22/38 . . Amides
- C08F22/38B . . . [N: Monomers containing two or more (meth)acrylamide groups, e.g. N,N'-methylenebisacrylamide] [N9708]
- C08F22/40 . . Imides, e.g. cyclic imides
  
- C08F24/00** **Homopolymers and copolymers of compounds having one ore 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 [C08F18/00](#); cyclic anhydrides of unsaturated acids [C08F20/00](#), [C08F22/00](#))**
  
- C08F26/00** **Homopolymers and copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a single or double bond to nitrogen or by a heterocyclic ring containing nitrogen**
- C08F26/02 . by a single or double bond to nitrogen
- C08F26/04 . . Diallylamine
- C08F26/06 . by a heterocyclic ring containing nitrogen
- C08F26/08 . . N-vinyl-pyrrolidine
- C08F26/10 . . N-Vinyl-pyrrolidone
- C08F26/12 . . N-Vinyl-carbazole
  
- C08F28/00** **Homopolymers and copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a bond to sulfur or by a heterocyclic ring containing sulfur**
- C08F28/02 . by a bond to sulfur
- C08F28/04 . . Thioethers
- C08F28/06 . by a heterocyclic ring containing sulfur
  
- C08F30/00** **Homopolymers and copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium or a metal (metal salts, e.g. phenolates or alcoholates, see the parent compounds)**
- C08F30/02 . containing phosphorus
- C08F30/04 . containing a metal

- C08F30/06 . . containing boron
- C08F30/08 . . containing silicon
- C08F30/10 . . containing germanium
- C08F32/00 Homopolymers and copolymers of cyclic compounds having no unsaturated aliphatic radicals in a side chain, and having one or more carbon-to-carbon double bonds in a carbocyclic ring system**
- C08F32/02 . having no condensed rings
- C08F32/04 . . having one carbon-to-carbon double bond
- C08F32/06 . . having two or more carbon-to-carbon double bonds
- C08F32/08 . having two condensed rings ([coumarone-indene polymers C08F244/00](#))
- C08F34/00 Homopolymers and copolymers of cyclic compounds having no unsaturated aliphatic radicals in a side chain and having one or more carbon-to-carbon double bonds in a heterocyclic ring** ([cyclic esters of polyfunctional acids C08F18/00](#); [cyclic anhydrides or imides C08F22/00](#))
- C08F34/02 . in a ring containing oxygen ([coumarone-indene polymers C08F244/00](#))
- C08F34/04 . in a ring containing sulfur
- C08F36/00 Homopolymers and copolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds** ([C08F32/00](#) takes precedence)
- [N: **Notes**  
 [C1207]In [C08F36/00](#) to [C08F36/22](#) the method of polymerisation may be indicated using the subdivision of [C08F2/00](#) to [C08F2/58](#) in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of 4/00 to 4/60, 4/62, 4/64, 4/642, 4/642B, 4/643 or 4/68 to 4/82 in the form of C-Sets. Example: ([C08F36/04](#), [C08F4/642](#))  
 ]
- C08F36/02 . the radical having only two carbon-to-carbon double bonds
- C08F36/04 . . conjugated
- C08F36/04B . . . [N: conjugated hydrocarbons other than butadiene or isoprene]
- C08F36/06 . . . Butadiene
- C08F36/08 . . . Isoprene
- C08F36/14 . . . containing elements other than carbon and hydrogen
- C08F36/16 . . . . containing halogen
- C08F36/18 . . . . containing chlorine
- C08F36/20 . . unconjugated
- C08F36/22 . the radical having three or more carbon-to-carbon double bonds
- C08F38/00 Homopolymers and copolymers of compounds having one or more carbon-to-carbon triple bonds**

- C08F38/02 . Acetylene
- C08F38/04 . Vinylacetylene

**Guide heading:** **Homopolymers**

**C08F110/00 Homopolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond**

[N: **Notes**

[N1208]In groups [C08F110/00](#) to [C08F110/14](#) the method of polymerisation or the nature of the catalyst may be indicated using the subdivision of [C08F2/00](#) to [C08F2/58](#) or of [C08F4/00](#) to [C08F4/82](#) in the form of C-Sets. Example: ([C08F110/14](#), [C08F4/6592](#)) ]

- C08F110/02 . Ethene
- C08F110/04 . monomers containing three or four carbon atoms
- C08F110/06 . . Propene
- C08F110/08 . . Butenes
- C08F110/10 . . . Isobutene
- C08F110/14 . Monomers containing five or more carbon atoms

**C08F112/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an aromatic carbocyclic ring**

[N: **Notes**

[N1208]From April 2012 on, in groups [C08F112/00](#) to [C08F112/36](#) the method of polymerisation may be indicated using the subdivision of [C08F2/00](#) to [C08F2/60](#) in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of [C08F4/00](#) to [C08F4/82](#) in the form of C-Sets. Example: ([C08F112/08](#), [C08F4/70](#)) ]

- C08F112/02 . Monomers containing only one unsaturated aliphatic radical
- C08F112/04 . . containing one ring
- C08F112/06 . . . Hydrocarbons
- C08F112/08 . . . . Styrene
- C08F112/12 . . . . Monomers containing a branched unsaturated aliphatic radical or a ring substituted by an alkyl radical
- C08F112/14 . . . substituted by hetero atoms or groups containing heteroatoms
- C08F112/32 . . containing two or more rings
- C08F112/34 . Monomers containing two or more unsaturated aliphatic radicals
- C08F112/36 . . Divinylbenzene

**C08F114/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a halogen**

- C08F114/02 . Monomers containing chlorine
- C08F114/04 . . Monomers containing two carbon atoms
- C08F114/06 . . . Vinyl chloride
- C08F114/08 . . . Vinylidene chloride
- C08F114/12 . . . 1,2- Dichloroethene
- C08F114/14 . . Monomers containing three or more carbon atoms
  
- C08F114/16 . Monomers containing bromine or iodine
  
- C08F114/18 . Monomers containing fluorine
- C08F114/18B . . [N: Monomers containing fluorine not covered by the groups [C08F114/20](#) to [C08F114/28](#)]
- C08F114/20 . . Vinyl fluoride
- C08F114/22 . . Vinylidene fluoride
- C08F114/24 . . Trifluorochloroethene
- C08F114/26 . . Tetrafluoroethene
- C08F114/28 . . Hexafluoropropene
  
- C08F116/00** **Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an alcohol, ether, aldehydo, ketonic, acetal or ketal radical**
  
- C08F116/02 . by an alcohol radical
- C08F116/04 . . Acyclic compounds
- C08F116/06 . . . Polyvinyl alcohol; [N: Vinyl alcohol] [C0107]
- C08F116/08 . . . Allyl alcohol
- C08F116/10 . . Carbocyclic compounds
  
- C08F116/12 . by an ether radical
- C08F116/14 . . Monomers containing only one unsaturated aliphatic radical
- C08F116/16 . . . Monomers containing no hetero atoms other than the ether oxygen
- C08F116/18 . . . . Acyclic compounds
- C08F116/20 . . . . . Monomers containing three or more carbon atoms in the unsaturated aliphatic radical
  
- C08F116/34 . by an aldehydo radical
  
- C08F116/36 . by a ketonic radical
  
- C08F116/38 . by a acetal or ketal radical
  
- C08F118/00** **Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an acyloxy radical of a saturated carboxylic acid, of carbonic acid or of a haloformic acid**
  
- C08F118/02 . Esters of monocarboxylic acids

- C08F118/04 . . Vinyl esters
- C08F118/06 . . . Vinyl formate
- C08F118/08 . . . Vinyl acetate
- C08F118/10 . . . of monocarboxylic acids containing three or more carbon atoms
- C08F118/12 . . with unsaturated alcohols containing three or more carbon atoms
  
- C08F118/14 . Esters of polycarboxylic acids
- C08F118/16 . . with alcohols containing three or more carbon atoms
- C08F118/18 . . . Diallyl phthalate

**C08F120/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and only one being terminated by only one carboxyl radical or a salt, anhydride, ester, amide, imide or nitrile thereof**

- C08F120/02 . Monocarboxylic acids having less than ten carbon atoms; Derivatives thereof
- C08F120/04 . . Acids; Metal salts or ammonium salts thereof
- C08F120/06 . . . Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof
- C08F120/08 . . Anhydrides
- C08F120/10 . . Esters
- C08F120/12 . . . of monohydric alcohols or phenols
- C08F120/14 . . . . Methyl esters
- C08F120/16 . . . . of phenols or of alcohols containing two or more carbon atoms
- C08F120/18 . . . . with acrylic or methacrylic acids
- C08F120/20 . . . of polyhydric alcohols or phenols
- C08F120/22 . . . Esters containing halogen
- C08F120/24 . . . . containing perhaloalkyl radicals
- C08F120/26 . . . Esters containing oxygen in addition to the carboxy oxygen
- C08F120/28 . . . . containing no aromatic rings in the alcohol moiety
- C08F120/30 . . . . containing aromatic rings in the alcohol moiety
- C08F120/32 . . . . containing epoxy radicals
- C08F120/34 . . . Esters containing nitrogen
- C08F120/36 . . . . containing oxygen in addition to the carboxy oxygen
- C08F120/38 . . . Esters containing sulfur
- C08F120/40 . . . Esters of unsaturated alcohols
- C08F120/42 . . Nitriles
- C08F120/44 . . . Acrylonitrile
- C08F120/50 . . . containing four or more carbon atoms
- C08F120/52 . . Amides or imides
- C08F120/54 . . . Amides
- C08F120/56 . . . . Acrylamide; Methacrylamide
- C08F120/58 . . . . containing oxygen in addition to the carbonamido oxygen
- C08F120/60 . . . . containing nitrogen in addition to the carbonamido nitrogen

- C08F120/62 . Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof
- C08F120/64 . . Acids; Metal salts or ammonium salts thereof
- C08F120/66 . . Anhydrides
- C08F120/68 . . Esters
- C08F120/70 . . Nitriles; Amides; Imides
  
- C08F122/00** **Homopolymers of compounds having one or more unsaturated aliphatic radicals each having only one carbon-to-carbon double bond, and at least one being terminated by a carboxyl radical and containing at least one other carboxyl radical in the molecule; Salts, anhydrides, esters, amides, imides or nitriles thereof**
  
- C08F122/02 . Acids; Metal salts or ammonium salts thereof
- C08F122/04 . Anhydrides, e.g. cyclic anhydrides
- C08F122/06 . . Maleic anhydride
  
- C08F122/10 . Esters
- C08F122/10B . . [N: of polyhydric alcohols or polyhydric phenols, e.g. ethylene glycol dimethacrylat] [N9708]
- C08F122/12 . . of phenols or saturated alcohols [N: (C08F122/10B takes precedence)] [C9708]
- C08F122/14 . . . Esters having no free carboxylic acid groups
- C08F122/16 . . . Esters having free carboxylic acid groups
- C08F122/18 . . . Esters containing halogen
- C08F122/20 . . . Esters containing oxygen in addition to the carboxy oxygen
- C08F122/22 . . . Esters containing nitrogen
- C08F122/24 . . . Esters containing sulfur
- C08F122/26 . . of unsaturated alcohols [N: (C08F122/10B takes precedence)] [C9708]
- C08F122/28 . . . Diallyl maleate
  
- C08F122/30 . Nitriles
- C08F122/32 . . alfa-Cyano-acrylic acid; Esters thereof
- C08F122/34 . . Vinylidene cyanide
  
- C08F122/36 . Amides or imides
- C08F122/38 . . Amides
- C08F122/38B . . . [N: Monomers containing two or more (meth)acrylamide groups, e.g. N,N'-methylenebisacrylamide] [N9708]
- C08F122/40 . . Imides, e.g. cyclic imides
  
- C08F124/00** **Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a heterocyclic ring containing oxygen (cyclic esters of polyfunctional acids C08F118/00; cyclic anhydrides of unsaturated acids C08F120/00, C08F122/00)**
  
- C08F126/00** **Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a single or double bond to nitrogen or by a heterocyclic ring**

**containing nitrogen**

- C08F126/02 . by a single or double bond to nitrogen
- C08F126/04 . . Diallylamine
- C08F126/06 . by a heterocyclic ring containing nitrogen
- C08F126/08 . . N-Vinyl-pyrrolidine
- C08F126/10 . . N-Vinyl-pyrrolidone
- C08F126/12 . . N-Vinyl-carbazole

**C08F128/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a bond to sulfur or by a heterocyclic ring containing sulfur**

- C08F128/02 . by a bond to sulfur
- C08F128/04 . . Thioethers
- C08F128/06 . by a heterocyclic ring containing sulfur

**C08F130/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium or a metal (metal salts, e.g. phenolates or alcoholates, see the parent compounds)**

- C08F130/02 . containing phosphorus
- C08F130/04 . containing a metal
- C08F130/06 . . containing boron
- C08F130/08 . . containing silicon
- C08F130/10 . . containing germanium

**C08F132/00 Homopolymers of cyclic compounds containing no unsaturated aliphatic radicals in a side chain, and having one or more carbon-to-carbon double bonds in a carbocyclic ring system**

- C08F132/02 . having no condensed rings
- C08F132/04 . . having one carbon-to-carbon double bond
- C08F132/06 . . having two or more carbon-to-carbon double bonds
- C08F132/08 . having condensed rings

**C08F134/00 Homopolymers of cyclic compounds having no unsaturated aliphatic radicals in a side chain and having one or more carbon-to-carbon double bonds in a heterocyclic ring (cyclic esters of polyfunctional acids [C08F118/00](#); cyclic anhydrides or imides [C08F122/00](#))**

- C08F134/02 . in a ring containing oxygen

- C08F134/04 . in a ring containing sulfur
- C08F136/00** **Homopolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds ([C08F132/00](#) takes precedence)**
- [N: **Notes**  
 [C1207]In [C08F136/00](#) to [C08F136/22](#) the method of polymerisation may be indicated using the subdivision of [C08F2/00](#) to [C08F2/58](#) in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of [C08F4/00](#) to [C08F4/60](#), [C08F4/62](#), [C08F4/64](#), [C08F4/642](#), [C08F4/642B](#), [C08F4/643](#) or [C08F4/68](#) to [C08F4/82](#) in the form of C-Sets. Example: ([C08F136/18](#), [C08F2/26](#))  
 ]
- C08F136/02 . the radical having only two carbon-to-carbon double bonds
- C08F136/04 . . conjugated
- C08F136/04B . . . [N: conjugated hydrocarbons other than butadiene or isoprene]
- C08F136/06 . . . Butadiene
- C08F136/08 . . . Isoprene
- C08F136/14 . . . containing elements other than carbon and hydrogen
- C08F136/16 . . . . containing halogen
- C08F136/18 . . . . . containing chlorine
- C08F136/20 . . unconjugated
- C08F136/22 . the radical having three or more carbon-to-carbon double bonds
- C08F138/00** **Homopolymers of compounds having one or more carbon-to-carbon triple bonds**
- C08F138/02 . Acetylene
- C08F138/04 . Vinylacetylene
- Guide heading:** **Copolymers**
- C08F210/00** **Copolymers of unsaturated aliphatic hydrocarbon having only one carbon-to-carbon double bond**
- [N: **Note**  
 In [C08F210/00](#) to [C08F210/18](#) the method of polymerisation or the nature of the catalyst may be indicated using the subdivision of [C08F2/00](#) to [C08F2/58](#) or of [C08F4/00](#) to [C08F4/82](#) in the form of C-Sets. Example: ([C08F210/06](#), [C08F4/04](#))  
 ]
- C08F210/02 . Ethene
- C08F210/04 . Monomers containing three or four carbon atoms
- C08F210/06 . . Propene
- C08F210/08 . . Butenes

- C08F210/10 . . . Isobutene
- C08F210/12 . . . . with conjugated diolefins, e.g. butyl rubber
- C08F210/14 . Monomers containing five or more carbon atoms
- C08F210/16 . Copolymers of ethene with alfa-alkenes, e.g. EP rubbers
- C08F210/18 . . with non-conjugated dienes, e.g. EPT rubbers

**C08F212/00 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**

[N: **Notes**

[N1208]From April 2012 on, in groups [C08F212/00](#) to [C08F212/36](#) the method of polymerisation may be indicated using the subdivision of [C08F2/00](#) to [C08F2/60](#) in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of [C08F4/00](#) to [C08F4/82](#) in the form of C-Sets. Example: ([C08F212/08](#), [C08F4/16](#)) ]

- C08F212/02 . Monomers containing only one unsaturated aliphatic radical
- C08F212/04 . . containing one ring
- C08F212/06 . . . Hydrocarbons
- C08F212/08 . . . . Styrene
- C08F212/10 . . . . . with nitriles
- C08F212/12 . . . . Monomers containing a branched unsaturated aliphatic radical or a ring substituted by an alkyl radical
- C08F212/14 . . . substituted by heteroatoms or groups containing heteroatoms
- C08F212/14E . . . . [N: the heteroatoms being part of ester groups derived from unsaturated acids] [N9910]
- C08F212/32 . . containing two or more rings
- C08F212/34 . Monomers containing two or more unsaturated aliphatic radicals
- C08F212/36 . . Divinylbenzene

**C08F214/00 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**

- C08F214/02 . Monomers containing chlorine
- C08F214/04 . . Monomers containing two carbon atoms
- C08F214/06 . . . Vinyl chloride
- C08F214/08 . . . Vinylidene chloride
- C08F214/10 . . . . with nitriles
- C08F214/12 . . . . 1,2-Dichloroethene
- C08F214/14 . . Monomers containing three or more carbon atoms
- C08F214/16 . Monomers containing bromine or iodine
- C08F214/18 . Monomers containing fluorine

- C08F214/18B . . [N: Monomers containing fluorine not covered by the groups [C08F214/20](#) to [C08F214/28](#)]
- C08F214/18D . . [N: with fluorinated vinyl ethers] [N9605]
- C08F214/18F . . [N: with non-fluorinated comonomers] [N9605]
- C08F214/18F2 . . . [N: with non-fluorinated vinyl ethers] [N9605]
- C08F214/20 . . Vinyl fluoride
- C08F214/20D . . . [N: with fluorinated vinyl ethers] [N9605]
- C08F214/20F . . . [N: with non-fluorinated comonomers] [N9605]
- C08F214/20F2 . . . . [N: with non-fluorinated vinyl ethers] [N9605]
- C08F214/22 . . Vinylidene fluoride
- C08F214/22D . . . [N: with fluorinated vinyl ethers] [N9605]
- C08F214/22F . . . [N: with non-fluorinated comonomers] [N9605]
- C08F214/22F2 . . . . [N: with non-fluorinated vinyl ethers] [N9605]
- C08F214/24 . . Trifluorochloroethene
- C08F214/24D . . . [N: with fluorinated vinyl ethers] [N9605]
- C08F214/24F . . . [N: with non-fluorinated comonomers] [N9605]
- C08F214/24F2 . . . . [N: with non-fluorinated vinyl ethers] [N9605]
- C08F214/26 . . Tetrafluoroethene
- C08F214/26D . . . [N: with fluorinated vinyl ethers] [N9605]
- C08F214/26F . . . [N: with non-fluorinated comonomers] [N9605]
- C08F214/26F2 . . . . [N: with non-fluorinated vinyl ethers] [N9605]
- C08F214/28 . . Hexyfluoropropene
- C08F214/28D . . . [N: with fluorinated vinyl ethers] [N9605]
- C08F214/28F . . . [N: with non-fluorinated comonomers] [N9605]
- C08F214/28F2 . . . . [N: with non-fluorinated vinyl ethers] [N9605]

**C08F216/00**      **Copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an alcohol, ether, aldehydo, ketonic, acetal or ketal radical**

- C08F216/02 . . by an alcohol radical
- C08F216/04 . . Acyclic compounds
- C08F216/06 . . . Polyvinyl alcohol; [N: Vinyl alcohol] [C0107]
- C08F216/08 . . . Allyl alcohol
- C08F216/10 . . Carbocyclic compounds
  
- C08F216/12 . . by an ether radical
- C08F216/12B . . [N: monomers containing two or more unsaturated aliphatic radicals]
- C08F216/14 . . Monomers containing only one unsaturated aliphatic radical
- C08F216/14B . . . [N: Monomers containing halogen]
- C08F216/14D . . . [N: Monomers containing oxygen in addition to the ether oxygen]
- C08F216/14F . . . [N: Monomers containing nitrogen]
- C08F216/14H . . . [N: Monomers containing sulfur]

- C08F216/16 . . . Monomers containing no hetero atoms other than the ether oxygen
- C08F216/16B . . . . [N: Carbocyclic compounds]
- C08F216/18 . . . . Acyclic compounds
- C08F216/20 . . . . . Monomers containing three or more carbon atoms in the unsaturated aliphatic radical
  
- C08F216/34 . by an aldehydo radical
- C08F216/36 . by a ketonic radical
- C08F216/38 . by an acetal or ketal radical
  
- C08F218/00** **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**
  
- C08F218/02 . Esters of monocarboxylic acids
- C08F218/04 . . Vinyl esters
- C08F218/06 . . . Vinyl formate
- C08F218/08 . . . Vinyl acetate
- C08F218/10 . . . of monocarboxylic acids containing three or more carbon atoms
- C08F218/12 . . with unsaturated alcohols containing three or more carbon atoms
  
- C08F218/14 . Esters of polycarboxylic acids
- C08F218/16 . . with alcohols containing three or more carbon atoms
- C08F218/18 . . . Diallyl phtalate
  
- C08F220/00** **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**
  
- C08F220/02 . Monocarboxylic acids having less than ten carbon atoms; Derivatives thereof
- C08F220/04 . . Acids; Metal salts or ammonium salts thereof
- C08F220/06 . . . Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof
- C08F220/08 . . Anhydrides
- C08F220/10 . . Esters
- C08F220/12 . . . of monohydric alcohols or phenols
- C08F220/14 . . . . Methyl esters
- C08F220/16 . . . . of phenols or of alcohols containing two or more carbon atoms
- C08F220/18 . . . . . with acrylic or methacrylic acids
- C08F220/20 . . . of polyhydric alcohols or phenols
- C08F220/22 . . . Esters containing halogen
- C08F220/24 . . . . containing perhaloalkyl radicals
- C08F220/26 . . . Esters containing oxygen in addition to the carboxy oxygen

- C08F220/28 . . . . containing no aromatic rings in the alcohol moiety
- C08F220/30 . . . . containing aromatic rings in the alcohol moiety
- C08F220/32 . . . . containing epoxy radicals
- C08F220/34 . . . Esters containing nitrogen
- C08F220/36 . . . . containing oxygen in addition to the carboxy oxygen
- C08F220/38 . . . Esters containing sulfur
- C08F220/40 . . . Esters of unsaturated alcohols
- C08F220/42 . . Nitriles
- C08F220/44 . . . Acrylonitrile
- C08F220/46 . . . . with carboxylic acids, sulfonic acids or salts thereof
- C08F220/48 . . . . with nitrogen-containing monomers
- C08F220/50 . . . containing four or more carbon atoms
- C08F220/52 . . Amides or imides
- C08F220/54 . . . Amides
- C08F220/56 . . . . Acrylamide; Methacrylamide
- C08F220/58 . . . . containing oxygen in addition to the carbonamido oxygen
- C08F220/60 . . . . containing nitrogen in addition to the carbonamido nitrogen
  
- C08F220/62 . Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof  
([copolymers of drying oils C08F242/00](#))
- C08F220/64 . . Acids; Metal salts or ammonium salts thereof
- C08F220/66 . . Anhydrides
- C08F220/68 . . Esters
- C08F220/70 . . Nitriles; Amides; Imides
  
- C08F222/00** **Copolymers of compounds having one or more unsaturated aliphatic radicals each having only one carbon-to-carbon double bond, at least one being terminated by a carboxyl radical and containing at least one other other carboxyl radical in the molecule; Salts, anhydrides, esters, amides, imides or nitriles thereof**
  
- C08F222/02 . Acids; Metal salts or ammonium salts thereof
- C08F222/04 . Anhydrides, e.g. cyclic anhydrides
- C08F222/06 . . Maleic anhydride
- C08F222/08 . . . with vinyl aromatic monomers
  
- C08F222/10 . Esters
- C08F222/10B . . [N: of polyhydric alcohols or polyhydric phenols, e.g. ethylene glycol dimethacrylat] [N9708]
- C08F222/12 . . of phenols or saturated alcohols [N: ([C08F222/10B takes precedence](#))] [C9708]
- C08F222/14 . . . Esters having no free carboxylic acid groups
- C08F222/16 . . . Esters having free carboxylic acid groups
- C08F222/18 . . . Esters containing halogen
- C08F222/20 . . . Esters containing oxygen in addition to the carboxy oxygen
- C08F222/22 . . . Esters containing nitrogen

- C08F222/24 . . . Esters containing sulfur
- C08F222/26 . . of unsaturated alcohols [N: ([C08F222/10B](#) takes precedence)] [C9708]
- C08F222/28 . . . Diallyl maleate
  
- C08F222/30 . Nitriles
- C08F222/32 . . alfa-Cyano-acrylic acid; Esters thereof
- C08F222/34 . . Vinylidene cyanide
  
- C08F222/36 . Amides or imides
- C08F222/38 . . Amides
- C08F222/38B . . . [N: Monomers containing two or more (meth)acrylamide groups, e.g. N,N'-methylenebisacrylamide] [N9708]
- C08F222/40 . . Imides, e.g. cyclic imides
  
- C08F224/00** **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 heterocyclic ring containing oxygen (cyclic esters of polyfunctional acids [C08F218/00](#); cyclic anhydrides of unsaturated acids [C08F220/00](#), [C08F222/00](#))**
  
- C08F226/00** **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 single or double bond to nitrogen or by a heterocyclic ring containing nitrogen**
  
- C08F226/02 . by a single or double bond to nitrogen
- C08F226/04 . . Diallylamine
  
- C08F226/06 . by a heterocyclic ring containing nitrogen
- C08F226/08 . . N-Vinyl-pyrrolidine
- C08F226/10 . . N-Vinyl-pyrrolidone [M1207]
- C08F226/12 . . N-Vinylcarbazole
  
- C08F228/00** **Copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a bond to sulfur or by a heterocyclic ring containing sulfur**
  
- C08F228/02 . by a bond to sulfur
- C08F228/04 . . Thioethers
  
- C08F228/06 . by a heterocyclic ring containing sulfur
  
- C08F230/00** **Copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium or a metal (metal salts, e.g. phenolates or alcoholates, see the parent compounds)**
  
- C08F230/02 . containing phosphorus

- C08F230/04 . containing a metal
- C08F230/06 . . containing boron
- C08F230/08 . . containing silicon
- C08F230/10 . . containing germanium

**C08F232/00 Copolymers of cyclic compounds containing no unsaturated aliphatic radicals in a side chain, and having one or more carbon-to-carbon double bonds in a carbocyclic ring system**

- C08F232/02 . having no condensed rings
- C08F232/04 . . having one carbon-to-carbon double bond
- C08F232/06 . . having two or more carbon-to-carbon double bonds
- C08F232/08 . having condensed rings ([coumarone-indene polymers C08F244/00](#))

**C08F234/00 Copolymers of cyclic compounds having no unsaturated aliphatic radicals in a side chain and having one or more carbon-to-carbon double bonds in a heterocyclic ring ([cyclic esters of polyfunctional acids C08F218/00](#); [cyclic anhydrides or imides C08F222/00](#))**

- C08F234/02 . in a ring containing oxygen ([coumarone-indene polymers C08F244/00](#))
- C08F234/04 . in a ring containing sulfur

**C08F236/00 Copolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds ([C08F232/00 takes precedence](#))**

[N: **Notes**

[C1207]In [C08F236/00](#) to [C08F236/22](#) the method of polymerisation may be indicated using the subdivision of [C08F2/00](#) to [C08F2/58](#) in the form of C-Sets; the nature of the catalyst may be indicated using the subdivision of 4/00 to 4/60, 4/62, 4/64, 4/642, 4/642B, 4/643 or 4/68 to 4/82 in the form of C-Sets. Example: ([C08F236/10](#), [C08F4/46](#))  
]

- C08F236/02 . the radical having only two carbon-to-carbon double bonds
- C08F236/04 . . conjugated
- C08F236/04B . . . [N: [conjugated hydrocarbons other than butadiene or isoprene](#)]
- C08F236/06 . . . Butadiene
- C08F236/08 . . . Isoprene
- C08F236/10 . . . with vinyl-aromatic monomers
- C08F236/12 . . . with nitriles
- C08F236/14 . . . containing elements other than carbon and hydrogen
- C08F236/16 . . . . containing halogen
- C08F236/18 . . . . . containing chlorine
- C08F236/20 . . unconjugated
- C08F236/22 . the radical having three or more carbon-to-carbon double bonds

- C08F238/00** Copolymers of compounds having one or more carbon-to-carbon triple bonds
- C08F238/02 . Acetylene
- C08F238/04 . Vinylacetylene
- C08F240/00** Copolymers of hydrocarbons and mineral oils, e.g. petroleum resins
- C08F242/00** Copolymers of drying oils with other monomers
- C08F244/00** Coumarone-indene copolymers
- C08F246/00** Copolymers in which the nature of only the monomers in minority is defined
- Guide heading:** Graft polymers; Polymers crosslinked with unsaturated monomers
- [N: **Note**  
In [C08F251/00](#) to [C08F292/00](#) the grafted monomer may be indicated using the subdivision of [C08F210/00](#) to [C08F238/04](#) preceded by a "+" sign.
- Example: [C08F265/06](#)+[220/06](#)  
]
- C08F251/00** Macromolecular compounds obtained by polymerising monomers on to polysaccharides or derivatives thereof
- C08F251/02 . on to cellulose or derivatives thereof
- C08F253/00** Macromolecular compounds obtained by polymerising monomers on to natural rubbers or derivatives thereof
- C08F255/00** Macromolecular compounds obtained by polymerising monomers on to polymers of hydrocarbons as defined in group [C08F10/00](#)
- C08F255/02 . on to polymers of olefins having two or three carbon atoms
- C08F255/02B . . [N: On to modified polymers, e.g. chlorinated polymers]
- C08F255/02C . . [N: on to ethylene-vinylester copolymers]
- C08F255/04 . . on to ethene-propene copolymers [N: ([C08F255/02B](#) takes precedence)]
- C08F255/06 . . on to ethene-propene-diene terpolymers [N: ([C08F255/02B](#) takes precedence)]
- C08F255/08 . on to polymers of olefins having four or more carbon atoms
- C08F255/10 . . on to butene polymers
- C08F257/00** Macromolecular compounds obtained by polymerising monomers on to polymers of aromatic monomers as defined in group [C08F12/00](#)

- C08F257/02 . on to polymers of styrene or alkyl-substituted styrenes
- C08F259/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of halogen containing monomers as defined in group [C08F14/00](#)**
- C08F259/02 . on to polymers containing chlorine
- C08F259/04 . . on to polymers of vinyl chloride
- C08F259/06 . . on to polymers of vinylidene chloride
- C08F259/08 . on to polymers containing fluorine
- C08F261/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of oxygen-containing monomers as defined in group [C08F16/00](#)**
- C08F261/02 . on to polymers of unsaturated alcohols
- C08F261/04 . . on to polymers of vinyl alcohol
- C08F261/06 . on to polymers of unsaturated ethers
- C08F261/08 . on to polymers of unsaturated aldehydes
- C08F261/10 . on to polymers of unsaturated ketones
- C08F261/12 . on to polymers of unsaturated acetals or ketals
- C08F263/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of esters of unsaturated alcohols with saturated acids as defined in group [C08F18/00](#)**
- C08F263/02 . on to polymers of vinyl esters with monocarboxylic acids
- C08F263/04 . . on to polymers of vinyl acetate
- C08F263/06 . on to polymers of esters with polycarboxylic acids
- C08F263/08 . . Polymerisation of diallyl phthalate prepolymers
- C08F265/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of unsaturated monocarboxylic acids or derivatives thereof as defined in group [C08F20/00](#)**
- C08F265/02 . on to polymers of acids, salts or anhydrides
- C08F265/04 . on to polymers of esters
- C08F265/06 . . Polymerisation of acrylate or methacrylate esters on to polymers thereof

**[N: Notes**

[C1208]In [C08F265/06](#) the method of polymerisation may be indicated using the subdivision of [C08F2/02](#), [C08F2/16](#), [C08F2/18](#) or [C08F2/22](#) in the form of C-Sets. Example: ([C08F265/06](#), [C08F2/16](#))

]

- C08F265/08 . on to polymers of nitriles
- C08F265/10 . on to polymers of amides or imides
- C08F267/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of unsaturated polycarboxylic acids or derivatives thereof as defined in group [C08F22/00](#)**
- C08F267/02 . on to polymers of acids or salts
- C08F267/04 . on to polymers of anhydrides
- C08F267/06 . on to polymers of esters
- C08F267/08 . on to polymers of nitriles
- C08F267/10 . on to polymers of amides or imides
- C08F269/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of heterocyclic oxygen-containing monomers as defined in group [C08F24/00](#)**
- C08F271/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of nitrogen-containing monomers as defined in group [C08F26/00](#)**
- C08F271/02 . on to polymers of monomers containing heterocyclic nitrogen
- C08F273/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of sulfur-containing monomers as defined in group [C08F28/00](#)**
- C08F275/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of monomers containing phosphorus, selenium, tellurium or a metal as defined in group [C08F30/00](#)**
- C08F277/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of carbocyclic or heterocyclic monomers as defined respectively in group [C08F32/00](#) or in group [C08F34/00](#)**
- C08F279/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of monomers having two or more carbon-to-carbon double bonds as defined in group [C08F36/00](#)**
- [N: **Notes**  
 [C1208]In [C08F279/02](#) and [C08F279/04](#) the method of polymerisation may be indicated using the subdivision of [C08F2/02](#), [C08F2/16](#), [C08F2/18](#) or [C08F2/22](#) in the form of C-Sets. Example: ([C08F279/02](#), [C08F2/22](#))  
 ]
- C08F279/02 . on to polymers of conjugated dienes

- C08F279/04 . . Vinyl aromatic monomers and nitriles as the only monomers
- C08F279/06 . . Vinyl aromatic monomers and methacrylates as the only monomers
- C08F281/00** **Macromolecular compounds obtained by polymerising monomers on to polymers of monomers having carbon-to-carbon triple bonds as defined in group [C08F38/00](#)**
- C08F283/00** **Macromolecular compounds obtained by polymerising monomers on to polymers provided for in subclass [C08G](#) [N: (on to polymers modified by introduction of aliphatic unsaturated end or side groups [C08F290/00](#))]**
- C08F283/00A . [N: on to polymers modified by after-treatment]
- C08F283/00A2 . . [N: modified by incorporation of silicium atoms]
- C08F283/00B . [N: on to polymers provided for in [C08G18/00](#) ([C08F283/00A2](#) takes precedence)]
- C08F283/00B2 . . [N: on to unsaturated polymers]
- C08F283/01 . on to unsaturated polyesters [N: ([C08F283/00A2](#) takes precedence)]
- [N: **Notes**  
[C1208]After the symbol of group [C08F283/01-C08F283/14](#) 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 [C08F2/00](#), [C08F2/16](#), [C08F2/46](#), [C08F2/48](#), [C08F2/50](#), [C08F4/00](#), [C08F4/04](#), [C08F4/06](#), [C08F4/28](#) and [C08F4/42](#).  
Example: ([C08F283/01](#), [C08F2/16](#))  
]
- C08F283/02 . on to polycarbonates or saturated polyesters [N: ([C08F283/00A2](#) takes precedence)]
- C08F283/04 . on to polycarbonamides, polyesteramides or polyimides [N: ([C08F283/00A2](#) takes precedence)]
- C08F283/04B . . [N: on to unsaturated polycarbonamides, polyesteramides or polyimides]
- C08F283/06 . on to polyethers, polyoxymethylenes or polyacetals [N: ([C08F283/00A2](#) takes precedence)]
- C08F283/06B . . [N: on to unsaturated polyethers, polyoxymethylenes or polyacetals]
- C08F283/08 . . on to polyphenylene oxides
- C08F283/08B . . . [N: on to unsaturated polyphenylene oxides]
- C08F283/10 . on to polymers containing more than one epoxy radical per molecule [N: ([C08F283/00A2](#) takes precedence)]
- C08F283/10B . . [N: on to unsaturated polymers containing more than one epoxy radical per molecule]
- C08F283/12 . on to polysiloxanes
- C08F283/12B . . [N: on to saturated polysiloxanes containing hydrolysable groups, e.g. alkoxy-, thio-, hydroxy-] [C9410]
- C08F283/12D . . [N: on to polysiloxanes having carbon-to-carbon double bonds] [C9410]
- C08F283/12F . . [N: on to polysiloxanes being the result of polycondensation and radical polymerisation reactions] [N9410]
- C08F283/12G . . [N: on to reaction products of polysiloxanes having at least one Si-H bond and

compounds having carbon-to-carbon double bonds] [N9410]

- C08F283/14 . on to polymers obtained by ring-opening polymerisation of carbocyclic compounds having one or more carbon-to-carbon double bonds in the carbocyclic ring, i.e. polyalkeneamers [N: ([C08F283/00A2](#) takes precedence)]
  
- C08F285/00** **Macromolecular compounds obtained by polymerising monomers on to preformed graft polymers** [N: ([C08F283/00](#) takes precedence)]
  
- C08F287/00** **Macromolecular compounds obtained by polymerising monomers on to block polymers** [N: ([C08F283/00](#) takes precedence)]
  
- C08F289/00** **Macromolecular compounds obtained by polymerising monomers on to macromolecular compounds not provided for in groups [C08F251/00](#) to [C08F287/00](#)**
  
- C08F290/00** **Macromolecular compounds obtained by polymerising monomers on to polymers modified by introduction of aliphatic unsaturated end or side groups**
  
- C08F290/02 . on to polymers modified by introduction of unsaturated end groups
- C08F290/04 . . Polymers provided for in subclasses [C08C](#) or [C08E](#)
- C08F290/04A . . . [N: Polymers of hydrocarbons as defined in group [C08F10/00](#)]
- C08F290/04B . . . [N: Polymers of aromatic monomers as defined in group [C08F12/00](#)]
- C08F290/04C . . . [N: Polymers of unsaturated carboxylic acids or derivatives thereof]
- C08F290/04D . . . [N: Polymers of monomers having two or more carbon-to-carbon double bonds as defined in group [C08F36/00](#)]
  
- C08F290/06 . . Polymers provided for in subclass [C08G](#)
- C08F290/06A . . . [N: Polyesters; Polycarbonates]
- C08F290/06B . . . [N: Polyethers]
- C08F290/06C . . . [N: Polymers containing more than one epoxy group per molecule]
- C08F290/06D . . . [N: Polyamides; Polyesteramides; Polyimides]
- C08F290/06E . . . [N: Polyurethanes; Polyureas]
- C08F290/06F . . . [N: Polysiloxanes]
  
- C08F290/08 . on to polymers modified by introduction of unsaturated side groups
- C08F290/10 . . Polymers provided for in subclass [C08B](#)
- C08F290/12 . . Polymers provided for in subclasses [C08C](#) or [C08E](#)
- C08F290/12A . . . [N: Polymers of hydrocarbons as defined in group [C08F10/00](#)]
- C08F290/12B . . . [N: Polymers of aromatic monomers as defined in group [C08F12/00](#)]
- C08F290/12C . . . [N: Polymers of unsaturated carboxylic acids or derivatives thereof]
- C08F290/12D . . . [N: Polymers of monomers having two or more carbon-to-carbon double bonds as defined in group [C08F36/00](#)]
  
- C08F290/14 . . Polymers provided for in subclass [C08G](#)
- C08F290/14A . . . [N: Polyesters; Polycarbonates]
- C08F290/14B . . . [N: Polyethers]
- C08F290/14C . . . [N: Polymers containing more than one epoxy group per molecule]

- C08F290/14D . . . [N: Polyamides; Polyesteramides; Polyimides]
- C08F290/14E . . . [N: Polyurethanes; Polyureas]
- C08F290/14F . . . [N: Polysiloxanes]
- C08F291/00** **Macromolecular compounds obtained by polymerising monomers on to macromolecular compounds according to more than one of the groups [C08F251/00](#) to [C08F289/00](#)**
- [N: **Notes**  
 [C1208]In [C08F291/00](#) the method of polymerisation may be indicated using the subdivision of [C08F2/02](#), [C08F2/16](#), [C08F2/18](#) or [C08F2/22](#) in the form of C-Sets.  
 Example: ([C08F291/00](#), [C08F2/16](#))  
 ]
- C08F291/02 . on to elastomers
- C08F291/04 . on to halogen-containing macromolecules
- C08F291/06 . on to oxygen-containing macromolecules
- C08F291/08 . . on to macromolecules containing hydroxy radicals
- C08F291/10 . . on to macromolecules containing epoxy radicals
- C08F291/12 . on to nitrogen-containing macromolecules
- C08F291/14 . on to sulfur-containing macromolecules
- C08F291/16 . on to macromolecules containing more than two metal atoms
- C08F291/18 . on to irradiated or oxidised macromolecules (epoxidised [C08F291/10](#))
- C08F291/18B . . [N: The monomer(s) not being present during the irradiation or the oxidation of the macromolecule]
- C08F292/00** **Macromolecular compounds obtained by polymerising monomers on to inorganic materials**
- Guide heading:** **Block polymers**
- C08F293/00** **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 [C08F290/02](#))**
- C08F293/00B . [N: using free radical "living" or "controlled" polymerisation, e.g using a complexing agent] [N9611] [C1106]
- C08F295/00** **Macromolecular compounds obtained by polymerisation using successively different catalyst types without deactivating the intermediate polymer**
- C08F297/00** **Macromolecular compounds obtained by successively polymerising different monomer systems using a catalyst of the ionic or coordination type without**

**deactivating the intermediate polymer**

- C08F297/02 . using a catalyst of the anionic type
- C08F297/02K . . [N: using a coupling agent] [N9701]
- C08F297/02P . . [N: polymerising acrylic acid, methacrylic acid or derivatives thereof] [N9701]
- C08F297/04 . . polymerising vinyl aromatic monomers and conjugated dienes
- C08F297/04D . . . [N: using a polyfunctional initiator] [N9701]
- C08F297/04K . . . [N: using a coupling agent] [N9701]
- C08F297/04N . . . [N: polymerising vinyl aromatic monomers and isoprene, optionally with other conjugated dienes] [N9701]
- C08F297/04P . . . [N: polymerising vinyl aromatic monomers, conjugated dienes and polar monomers] [N9701]
  
- C08F297/06 . using a catalyst of the coordination type
- C08F297/08 . . polymerising mono-olefins
- C08F297/08B . . . [N: the monomers being ethylene or propylene]
- C08F297/08B3 . . . . [N: the block polymer contains at least three blocks]
  
- C08F299/00** **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 [C08F251/00](#) to [C08F291/00](#); involving other reactions [C08G81/00](#))
  
- C08F299/02 . from unsaturated polycondensates
- C08F299/02B . . [N: from polycondensates with side or terminal unsaturations]
- C08F299/02B3 . . . [N: the unsaturation being in acrylic or methacrylic groups]
- C08F299/02C . . [N: from the reaction products of polyepoxides and unsaturated monocarboxylic acids, their anhydrides, halogenides or esters with low molecular weight]
- C08F299/02C3 . . . [N: photopolymerisable compositions]
- C08F299/04 . . from polyesters
- C08F299/04B . . . [N: Processes of polymerisation]
- C08F299/04B2 . . . . [N: Suspension or emulsion polymerisation]
- C08F299/04B6 . . . . [N: Polymerisation initiated by wave energy or particle radiation]
- C08F299/04B6B . . . . . [N: by ultra-violet or visible light]
- C08F299/04B6B2 . . . . . [N: with sensitising agents]
- C08F299/04D . . . [N: Catalysts]
- C08F299/04D4 . . . . [N: Peroxy-compounds]
- C08F299/04D6 . . . . [N: Nitrogen containing compounds]
- C08F299/04D8 . . . . [N: Metals or metal containing compounds]
- C08F299/04D10 . . . . [N: Other compounds]
- C08F299/04F . . . [N: Copolymers from unsaturated polyesters and low molecular monomers characterised by the monomers used]
- C08F299/04G . . . [N: from polyesters with side or terminal unsaturations]
- C08F299/04G3 . . . . [N: the unsaturation being in acrylic or methacrylic groups]

- C08F299/06 . . from polyurethanes
- C08F299/06B . . . [N: from polyurethanes with side or terminal unsaturations]
- C08F299/08 . . from polysiloxanes
  
- C08F301/00** **Macromolecular compounds not provided for in groups C08F10/00 to C08F299/00**  
[N0704]