# SECTION C — CHEMISTRY; METALLURGY

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

**C08F MACROMOLECULAR COMPOUNDS OBTAINED BY REACTIONS ONLY INVOLVING CARBON-TO-CARBON UNSATURATED BONDS** (production of liquid hydrocarbon mixtures from lower carbon number hydrocarbons, e.g. by oligomerisation, C10G 50/00; fermentation or enzyme-using processes to synthesise a desired chemical compound or composition or to separate optical isomers from a racemic mixture C12P; graft polymerisation of monomers containing carbon-to-carbon unsaturated bonds on to fibres, threads, yarns, fabrics or fibrous goods made from such materials D06M 14/00) **[2]**

**Note(s) [2, 7]**

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
   a. $CH_2$ =CH—O—$CH_2$-$CH_2$ —NH—COO—$CH_2$-$CH_2$ —OH are classified in group C08F 16/28;
   b. are classified in group C08F 16/36;
   c. are classified in group C08F 12/18.
3. Therapeutic activity of compounds is further classified in subclass A61P.
4. In this subclass, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, a catalyst or a polymer is classified in the last appropriate place.
5. In this subclass:
   a. macromolecular compounds and their preparation are classified in the groups for the type of compound prepared. General processes for the preparation of macromolecular compounds according to more than one main group are classified in the groups for the processes employed ( C08F 2/00-C08F 8/00). Processes for the preparation of macromolecular compounds are also classified in the groups for the types of reactions employed, if of interest;
   b. subject matter relating to both homopolymers and copolymers is classified in groups C08F 10/00-C08F 38/00;
   c. subject matter limited to homopolymers is classified only in groups C08F 110/00-C08F 138/00;
   d. subject matter limited to copolymers is classified only in groups C08F 210/00-C08F 246/00;
   e. in groups C08F 210/00-C08F 238/00, in the absence of an indication to the contrary, a copolymer is classified according to the major monomeric component.
6. This subclass covers also compositions based on monomers which form macromolecular compounds classifiable in this subclass (paints C09D 4/00; adhesives C09J 4/00).

   In this subclass:
   a. if the monomers are defined, classification is made according to the polymer to be formed:
      - in groups C08F 10/00-C08F 246/00 if no preformed polymer is present;
      - in groups C08F 251/00-C08F 291/00 if a preformed polymer is present, considering the reaction to take place as a graft or cross-linking reaction;
   b. if the presence of compounding ingredients is of interest, classification is made in group C08F 2/44 (sensitising agents C08F 2/50; catalysts C08F 4/00);
   c. if the compounding ingredients are of interest per se, classification is also made in subclass C08K.

**Subclass index**

Processes of polymerisation; Catalysts.....2/00, 4/00
Post-polymerisation treatments; Chemical modification.....6/00, 8/00
Homopolymers and copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond.....10/00-30/00
Homopolymers.....110/00-130/00
Copolymers.....210/00-230/00
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 ring.....32/00, 34/00
Homopolymers.....132/00, 134/00
Copolymers.....232/00, 234/00

Homopolymers and copolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds....36/00
Homopolymers....136/00
Copolymers....236/00
Homopolymers and copolymers of compounds having one or more carbon-to-carbon triple bonds....38/00
Homopolymers....138/00
Copolymers....238/00
Copolymers of hydrocarbons and mineral oils....240/00
Copolymers of drying oils with other monomers....242/00
Coumarone-indene copolymers....244/00
Copolymers in which the nature of only the monomers in minority is defined....246/00
Graft polymers; Polymers cross-linked with unsaturated monomers....251/00-292/00
Block polymers....293/00-297/00
Macromolecular compounds obtained by interreacting polymers involving only carbon-to-carbon unsaturated bond reactions, in the absence of non-macromolecular monomers....299/00
Subject matter not provided for in other groups of this subclass....301/00

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**Processes; Catalysts**

**2/00 Processes of polymerisation [2, 2006.01]**
2/01 • characterised by special features of the polymerisation apparatus used **[7, 2006.01]**
2/02 • Polymerisation in bulk **[2, 2006.01]**
2/04 • Polymerisation in solution (C08F 2/32 takes precedence) **[2, 2006.01]**
2/06 • • Organic solvent **[2, 2006.01]**
2/08 • • • with the aid of dispersing agents for the polymer **[2, 2006.01]**
2/10 • • Aqueous solvent **[2, 2006.01]**
2/12 • Polymerisation in non-solvents (C08F 2/32 takes precedence) **[2, 2006.01]**
2/14 • • Organic medium **[2, 2006.01]**
2/16 • • Aqueous medium **[2, 2006.01]**
2/18 • • • Suspension polymerisation **[2, 2006.01]**
2/20 • • • • with the aid of macromolecular dispersing agents **[2, 2006.01]**
2/22 • • • Emulsion polymerisation **[2, 2006.01]**
2/24 • • • • with the aid of emulsifying agents **[2, 2006.01]**
2/26 • • • • • anionic **[2, 2006.01]**
2/28 • • • • • cationic **[2, 2006.01]**
2/30 • • • • • non-ionic **[2, 2006.01]**
2/32 • Polymerisation in water-in-oil emulsions **[2, 2006.01]**
2/34 • Polymerisation in gaseous state **[2, 2006.01]**
2/36 • Polymerisation in solid state **[2, 2006.01]**
2/38 • Polymerisation using regulators, e.g. chain terminating agents **[2, 2006.01]**
2/40 • • using retarding agents **[2, 2006.01]**
2/42 • • using short-stopping agents **[2, 2006.01]**
2/44 • Polymerisation in the presence of compounding ingredients, e.g. plasticisers, dyestuffs, fillers **[2, 2006.01]**
2/46 • Polymerisation initiated by wave energy or particle radiation **[2, 2006.01]**
2/48 • • by ultra-violet or visible light **[2, 2006.01]**
2/50 • • • with sensitising agents **[2, 2006.01]**
2/52 • • by electric discharge, e.g. voltolisation **[2, 2006.01]**
2/54 • • by X-rays or electrons **[2, 2006.01]**
2/56 • • by ultrasonic vibrations **[2, 2006.01]**
2/58 • Polymerisation initiated by direct application of electric current (electrolytic processes, e.g. electrophoresis, C25) **[2, 2006.01]**
2/60 • Polymerisation by the diene synthesis **[2, 2006.01]**

**4/00 Polymerisation catalysts [2, 2006.01]**
4/02 • Carriers therefor **[2, 2006.01]**

**Note(s) [2]**

When classifying in groups C08F 4/04-C08F 4/42, classification may also be made in group C08F 4/02, if a carrier is of particular interest.

4/04 • Azo-compounds **[2, 2006.01]**
4/06 • Metallic compounds other than hydrides and other than metallo-organic compounds; Boron halide or aluminium halide complexes with organic compounds containing oxygen **[2, 2006.01]**
4/08 • • of alkali metals **[2, 2006.01]**
4/10 • • of alkaline earth metals, zinc, cadmium, mercury, copper, or silver **[2, 2006.01]**
4/12 • • of boron, aluminium, gallium, indium, thallium, or rare earths **[2, 2006.01]**
4/14 • • • Boron halides or aluminium halides; Complexes thereof with organic compounds containing oxygen **[2, 2006.01]**
4/16 • • of silicon, germanium, tin, lead, titanium, zirconium or hafnium **[2, 2006.01]**
4/18 • • • Oxides **[2, 2006.01]**
4/20 • • of antimony, bismuth, vanadium, niobium, or tantalum **[2, 2006.01]**
4/22 • • of chromium, molybdenum, or tungsten **[2, 2006.01]**
4/24 • • • Oxides **[2, 2006.01]**
4/26 • • of manganese, iron group metals, or platinum group metals **[2, 2006.01]**
4/28 • Oxygen or compounds releasing free oxygen (redox systems C08F 4/40) **[2, 2006.01]**
4/30 • • Inorganic compounds **[2, 2006.01]**
4/32 • • Organic compounds **[2, 2006.01]**
4/34 • • • Per-compounds with one peroxy-radical **[2, 2006.01]**
4/36 • • • Per-compounds with more than one peroxy-radical **[2, 2006.01]**
4/38 • • • Mixtures of peroxy-compounds **[2, 2006.01]**
4/40 • Redox systems **[2, 2006.01]**
4/42 • Metals; Metal hydrides; Metallo-organic compounds; Use thereof as catalyst precursors **[2, 2006.01]**

4/44 • • selected from light metals, zinc, cadmium, mercury, copper, silver, gold, boron, gallium, indium, thallium, rare earths, or actinides **[2, 2006.01]**

4/46 • • • selected from alkali metals **[2, 2006.01]**

4/48 • • • • selected from lithium, rubidium, caesium, or francium **[2, 2006.01]**

4/50 • • • selected from alkaline earth metals, zinc, cadmium, mercury, copper, or silver **[2, 2006.01]**

4/52 • • • selected from boron, aluminium, gallium, indium, thallium, or rare earths (C08F 4/14 takes precedence) **[2, 2006.01]**

4/54 • • • together with other compounds thereof **[2, 2006.01]**

4/56 • • • • Alkali metals being the only metals present, e.g. Alfin catalysts **[2, 2006.01]**

4/58 • • • together with silicon, germanium, tin, lead, antimony, bismuth, or compounds thereof **[2, 2006.01]**

4/60 • • • together with refractory metals, iron group metals, platinum group metals, manganese, technetium, rhenium, or compounds thereof **[2, 5, 2006.01]**

**Note(s) [5]**

In groups C08F 4/602-C08F 4/62, the following term is used with the meaning indicated:

- "component" comprises a transition metal or a compound thereof, pretreated or not (pretreatment C08F 4/61, C08F 4/63, C08F 4/65).

4/602 • • • • Component covered by group C08F 4/60 with an organo-aluminium compound **[5, 2006.01]**

4/603 • • • • Component covered by group C08F 4/60 with a metal or compound covered by group C08F 4/44 other than an organo-aluminium compound **[5, 2006.01]**

4/605 • • • • Component covered by group C08F 4/60 with a metal or compound covered by group C08F 4/44, not provided for in a single group of groups C08F 4/602 or C08F 4/603 **[5, 2006.01]**

4/606 • • • • Catalysts comprising at least two different metals, in metallic form or as compounds thereof, in addition to the component covered by group C08F 4/60 **[5, 2006.01]**

4/607 • • • • Catalysts containing a specific non-metal or metal-free compound **[5, 2006.01]**

4/608 • • • • • inorganic **[5, 2006.01]**

4/609 • • • • • organic **[5, 2006.01]**

4/61 • • • • Pretreating the metal or compound covered by group C08F 4/60 before the final contacting with the metal or compound covered by group C08F 4/44 **[5, 2006.01]**

4/611 • • • • • Pretreating with non-metals or metal-free compounds **[5, 2006.01]**

4/612 • • • • • Pretreating with metals or metal-containing compounds **[5, 2006.01]**

4/613 • • • • • • with metals covered by group C08F 4/60 or compounds thereof **[5, 2006.01]**

4/614 • • • • • • with magnesium or compounds thereof **[5, 2006.01]**

4/615 • • • • • • with aluminium or compounds thereof **[5, 2006.01]**

4/616 • • • • • • with silicon or compounds thereof **[5, 2006.01]**

4/617 • • • • • • with metals or metal-containing compounds, not provided for in groups C08F 4/613-C08F 4/616 **[5, 2006.01]**

4/618 • • • • • • with metals or metal-containing compounds, provided for in at least two of the groups C08F 4/613-C08F 4/617 **[5, 2006.01]**

4/619 • • • • Component covered by group C08F 4/60 containing a transition metal-carbon bond **[2006.01]**

4/6192 • • • • • containing at least one cyclopentadienyl ring, condensed or not, e.g. an indenyl or a fluorenyl ring **[2006.01]**

4/62 • • • • Refractory metals or compounds thereof **[2, 2006.01]**

4/622 • • • • • Component covered by group C08F 4/62 with an organo-aluminium compound **[5, 2006.01]**

4/623 • • • • • Component covered by group C08F 4/62 with a metal or compound covered by group C08F 4/44 other than an organo-aluminium compound **[5, 2006.01]**

4/625 • • • • • Component covered by group C08F 4/62 with a metal or compound covered by group C08F 4/44, not provided for in a single group of groups C08F 4/622 or C08F 4/623 **[5, 2006.01]**

4/626 • • • • • Catalysts comprising at least two different metals, in metallic form or as compounds thereof, in addition to the component covered by group C08F 4/62 **[5, 2006.01]**

4/627 • • • • • Catalysts containing a specific non-metal or metal-free compound **[5, 2006.01]**

4/628 • • • • • • inorganic **[5, 2006.01]**

4/629 • • • • • • organic **[5, 2006.01]**

4/63 • • • • • Pretreating the metal or compound covered by group C08F 4/62 before the final contacting with the metal or compound covered by group C08F 4/44 **[5, 2006.01]**

4/631 • • • • • • Pretreating with non-metals or metal-free compounds **[5, 2006.01]**

4/632 • • • • • • Pretreating with metals or metal-containing compounds **[5, 2006.01]**

4/633 • • • • • • • with metals covered by group C08F 4/62 or compounds thereof **[5, 2006.01]**

4/634 • • • • • • • with magnesium or compounds thereof **[5, 2006.01]**

4/635 • • • • • • • with aluminium or compounds thereof **[5, 2006.01]**

4/636 • • • • • • • with silicon or compounds thereof **[5, 2006.01]**

4/637 • • • • • • • with metals or metal-containing compounds, not provided for in groups C08F 4/633-C08F 4/636 **[5, 2006.01]**

4/638 • • • • • • • with metals or metal-containing compounds, not provided for in a single group of groups C08F 4/633-C08F 4/637 **[5, 2006.01]**

4/639 • • • • • Component covered by group C08F 4/62 containing a transition metal-carbon bond **[2006.01]**

4/6392 • • • • • • containing at least one cyclopentadienyl ring, condensed or not, e.g. an indenyl or a fluorenyl ring **[2006.01]**

4/64 • • • • • Titanium, zirconium, hafnium, or compounds thereof **[2, 2006.01]**

4/642 • • • • • • Component covered by group C08F 4/64 with an organo-aluminium compound **[5, 2006.01]**

4/643 • • • • • • Component covered by group C08F 4/64 with a metal or compound covered by group C08F 4/44 other than an organo-aluminium compound **[5, 2006.01]**

4/645 • • • • • • Component covered by group C08F 4/64 with a metal or compound covered by group C08F 4/44, not provided for in a single group of groups C08F 4/642-C08F 4/643 **[5, 2006.01]**

4/646 • • • • • • Catalysts comprising at least two different metals, in metallic form or as compounds thereof, in addition to the component covered by group C08F 4/64 **[5, 2006.01]**

4/647 • • • • • • Catalysts containing a specific non-metal or metal-free compound **[5, 2006.01]**

4/648 • • • • • • • inorganic **[5, 2006.01]**

4/649 • • • • • • • organic **[5, 2006.01]**

4/65 • • • • • • Pretreating the metal or compound covered by group C08F 4/64 before the final contacting with the metal or compound covered by group C08F 4/44 **[5, 2006.01]**

4/651 • • • • • • • Pretreating with non-metals or metal-free compounds **[5, 2006.01]**

4/652 • • • • • • • Pretreating with metals or metal-containing compounds **[5, 2006.01]**

4/653 • • • • • • • • with metals covered by group C08F 4/64 or compounds thereof **[5, 2006.01]**

4/654 • • • • • • • • with magnesium or compounds thereof **[5, 2006.01]**

4/655 • • • • • • • • with aluminium or compounds thereof **[5, 2006.01]**

4/656 • • • • • • • • with silicon or compounds thereof **[5, 2006.01]**

4/657 • • • • • • • • with metals or metal-containing compounds, not provided for in groups C08F 4/653-C08F 4/656 **[5, 2006.01]**

4/658 • • • • • • • • with metals or metal-containing compounds, not provided for in a single group of groups C08F 4/653-C08F 4/657 **[5, 2006.01]**

4/659 • • • • • • Component covered by group C08F 4/64 containing a transition metal-carbon bond **[2006.01]**

4/6592 • • • • • • • containing at least one cyclopentadienyl ring, condensed or not, e.g. an indenyl or a fluorenyl ring **[2006.01]**

4/68 • • • • • Vanadium, niobium, tantalum, or compounds thereof **[2, 2006.01]**

4/685 • • • • • • Vanadium or compounds thereof in combination with titanium or compounds thereof **[5, 2006.01]**

4/69 • • • • • Chromium, molybdenum, tungsten or compounds thereof **[5, 2006.01]**

4/695 • • • • Manganese, technetium, rhenium or compounds thereof **[5, 2006.01]**

4/70 • • • • Iron group metals, platinum group metals, or compounds thereof **[2, 2006.01]**

4/72 • • selected from metals not provided for in group C08F 4/44 (C08F 4/54-C08F 4/70 take precedence) **[2, 2006.01]**

4/74 • • • selected from refractory metals **[2, 2006.01]**

4/76 • • • • selected from titanium, zirconium, hafnium, vanadium, niobium, or tantalum **[2, 2006.01]**

4/78 • • • • selected from chromium, molybdenum, or tungsten **[2, 2006.01]**

4/80 • • • selected from iron group metals or platinum group metals **[2, 2006.01]**

4/82 • • • • pi-Allyl complexes **[2, 2006.01]**

**6/00** **Post-polymerisation treatments** (C08F 8/00 takes precedence; of conjugated diene rubbers C08C) **[2, 2006.01]**

6/02 • Neutralisation of the polymerisation mass, e.g. killing the catalyst (short-stopping C08F 2/42) **[2, 2006.01]**

6/04 • Fractionation **[2, 2006.01]**

6/06 • Treatment of polymer solutions **[2, 2006.01]**

6/08 • • Removal of catalyst residues **[2, 2006.01]**

6/10 • • Removal of volatile materials, e.g. monomers, solvents **[2, 2006.01]**

6/12 • • Separation of polymers from solutions **[2, 2006.01]**

6/14 • Treatment of polymer emulsions **[2, 2006.01]**

6/16 • • Purification **[2, 2006.01]**

6/18 • • Increasing the size of the dispersed particles **[2, 2006.01]**

6/20 • • Concentration **[2, 2006.01]**

6/22 • • Coagulation **[2, 2006.01]**

6/24 • Treatment of polymer suspensions **[2, 2006.01]**

6/26 • Treatment of polymers prepared in bulk **[2, 2006.01]**

6/28 • • Purification **[2, 2006.01]**

**8/00** **Chemical modification by after-treatment** (graft polymers, block polymers, crosslinking with unsaturated monomers or with polymers C08F 251/00-C08F 299/00; of conjugated diene rubbers C08C) **[2, 2006.01]**

**Note(s) [2]**

In groups C08F 8/02-C08F 8/50, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, a process is classified in the last appropriate place.

8/02 • Alkylation **[2, 2006.01]**

8/04 • Reduction, e.g. hydrogenation **[2, 2006.01]**

8/06 • Oxidation **[2, 2006.01]**

8/08 • Epoxidation **[2, 2006.01]**

8/10 • Acylation **[2, 2006.01]**

8/12 • Hydrolysis **[2, 2006.01]**

8/14 • Esterification **[2, 2006.01]**

8/16 • • Lactonisation **[2, 2006.01]**

8/18 • Introducing halogen atoms or halogen-containing groups **[2, 2006.01]**

8/20 • • Halogenation **[2, 2006.01]**

8/22 • • • by reaction with free halogens **[2, 2006.01]**

8/24 • • Haloalkylation **[2, 2006.01]**

8/26 • Removing halogen atoms or halogen-containing groups from the molecule **[2, 2006.01]**
8/28 • Condensation with aldehydes or ketones **[2, 2006.01]**
8/30 • Introducing nitrogen atoms or nitrogen-containing groups **[2, 2006.01]**
8/32 • • by reaction with amines **[2, 2006.01]**
8/34 • Introducing sulfur atoms or sulfur-containing groups **[2, 2006.01]**
8/36 • • Sulfonation; Sulfation **[2, 2006.01]**
8/38 • • Sulfohalogenation **[2, 2006.01]**
8/40 • Introducing phosphorus atoms or phosphorus-containing groups **[2, 2006.01]**
8/42 • Introducing metal atoms or metal-containing groups **[2, 2006.01]**
8/44 • Preparation of metal salts or ammonium salts **[2, 2006.01]**
8/46 • Reaction with unsaturated dicarboxylic acids or anhydrides thereof, e.g. maleinisation **[2, 2006.01]**
8/48 • Isomerisation; Cyclisation **[2, 2006.01]**
8/50 • Partial depolymerisation **[2, 2006.01]**

**Homopolymers or copolymers [2]**

**10/00 Homopolymers or copolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond [2, 2006.01]**
10/02 • Ethene **[2, 2006.01]**
10/04 • Monomers containing three or four carbon atoms **[2, 2006.01]**
10/06 • • Propene **[2, 2006.01]**
10/08 • • Butenes **[2, 2006.01]**
10/10 • • • Isobutene **[2, 2006.01]**
10/14 • Monomers containing five or more carbon atoms **[2, 2006.01]**

**12/00 Homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an aromatic carbocyclic ring [2, 2006.01]**
12/02 • Monomers containing only one unsaturated aliphatic radical **[2, 2006.01]**
12/04 • • containing one ring **[2, 2006.01]**
12/06 • • • Hydrocarbons **[2, 2006.01]**
12/08 • • • • Styrene **[2, 2006.01]**
12/12 • • • • containing a branched unsaturated aliphatic radical or an alkyl radical attached to the ring **[2, 2006.01]**
12/14 • • • substituted by hetero atoms or groups containing hetero atoms **[2, 2006.01]**
12/16 • • • • Halogens **[2, 2006.01]**
12/18 • • • • • Chlorine **[2, 2006.01]**
12/20 • • • • • Fluorine **[2, 2006.01]**
12/22 • • • • Oxygen **[2, 2006.01]**
12/24 • • • • • Phenols or alcohols **[2, 2006.01]**
12/26 • • • • Nitrogen **[2, 2006.01]**
12/28 • • • • • Amines **[2, 2006.01]**
12/30 • • • • Sulfur **[2, 2006.01]**
12/32 • • containing two or more rings **[2, 2006.01]**
12/34 • Monomers containing two or more unsaturated aliphatic radicals **[2, 2006.01]**
12/36 • • Divinylbenzene **[2, 2006.01]**

**14/00 Homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a halogen [2, 2006.01]**
14/02 • Monomers containing chlorine **[2, 2006.01]**
14/04 • • Monomers containing two carbon atoms **[2, 2006.01]**
14/06 • • • Vinyl chloride **[2, 2006.01]**
14/08 • • • Vinylidene chloride **[2, 2006.01]**
14/12 • • • 1, 2-Dichloroethene **[2, 2006.01]**
14/14 • • Monomers containing three or more carbon atoms **[2, 2006.01]**
14/16 • Monomers containing bromine or iodine **[2, 2006.01]**
14/18 • Monomers containing fluorine **[2, 2006.01]**
14/20 • • Vinyl fluoride **[2, 2006.01]**
14/22 • • Vinylidene fluoride **[2, 2006.01]**
14/24 • • Trifluorochloroethene **[2, 2006.01]**
14/26 • • Tetrafluoroethene **[2, 2006.01]**
14/28 • • Hexafluoropropene **[2, 2006.01]**

**16/00 Homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an alcohol, ether, aldehydo, ketonic, acetal, or ketal radical [2, 2006.01]**
16/02 • by an alcohol radical **[2, 2006.01]**
16/04 • • Acyclic compounds **[2, 2006.01]**
16/06 • • • Polyvinyl alcohol **[2, 2006.01]**
16/08 • • • Allyl alcohol **[2, 2006.01]**
16/10 • • Carbocyclic compounds **[2, 2006.01]**
16/12 • by an ether radical **[2, 2006.01]**
16/14 • • Monomers containing only one unsaturated aliphatic radical **[2, 2006.01]**
16/16 • • • Monomers containing no hetero atoms other than the ether oxygen **[2, 2006.01]**
16/18 • • • • Acyclic compounds **[2, 2006.01]**
16/20 • • • • • Monomers containing three or more carbon atoms in the unsaturated aliphatic radical **[2, 2006.01]**
16/22 • • • • Carbocyclic compounds **[2, 2006.01]**
16/24 • • • Monomers containing halogen **[2, 2006.01]**
16/26 • • • Monomers containing oxygen atoms in addition to the ether oxygen **[2, 2006.01]**
16/28 • • • Monomers containing nitrogen **[2, 2006.01]**
16/30 • • • Monomers containing sulfur **[2, 2006.01]**
16/32 • • Monomers containing two or more unsaturated aliphatic radicals **[2, 2006.01]**
16/34 • by an aldehydo radical **[2, 2006.01]**
16/36 • by a ketonic radical **[2, 2006.01]**
16/38 • by an acetal or ketal radical **[2, 2006.01]**

**18/00 Homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an acyloxy radical of a saturated carboxylic acid, of carbonic acid, or of a haloformic acid [2, 2006.01]**
18/02 • Esters of monocarboxylic acids **[2, 2006.01]**
18/04 • • Vinyl esters **[2, 2006.01]**
18/06 • • • Vinyl formate **[2, 2006.01]**
18/08 • • • Vinyl acetate **[2, 2006.01]**
18/10 • • • of monocarboxylic acids containing three or more carbon atoms **[2, 2006.01]**
18/12 • • with unsaturated alcohols containing three or more carbon atoms **[2, 2006.01]**

18/14 • Esters of polycarboxylic acids **[2, 2006.01]**
18/16 • • with alcohols containing three or more carbon atoms **[2, 2006.01]**
18/18 • • • Diallyl phthalate **[2, 2006.01]**
18/20 • Esters containing halogen **[2, 2006.01]**
18/22 • Esters containing nitrogen **[2, 2006.01]**
18/24 • Esters of carbonic or haloformic acids **[2, 2006.01]**

**20/00 Homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and only one being terminated by only one carboxyl radical or a salt, anhydride, ester, amide, imide, or nitrile thereof [2, 2006.01]**
20/02 • Monocarboxylic acids having less than ten carbon atoms; Derivatives thereof **[2, 2006.01]**
20/04 • • Acids; Metal salts or ammonium salts thereof **[2, 2006.01]**
20/06 • • • Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof **[2, 2006.01]**
20/08 • • Anhydrides **[2, 2006.01]**
20/10 • • Esters **[2, 2006.01]**
20/12 • • • of monohydric alcohols or phenols **[2, 2006.01]**
20/14 • • • • Methyl esters **[2, 2006.01]**
20/16 • • • • of phenols or of alcohols containing two or more carbon atoms **[2, 2006.01]**
20/18 • • • • • with acrylic or methacrylic acids **[2, 2006.01]**
20/20 • • • of polyhydric alcohols or phenols **[2, 2006.01]**
20/22 • • • Esters containing halogen **[2, 2006.01]**
20/24 • • • • containing perhaloalkyl radicals **[2, 2006.01]**
20/26 • • • Esters containing oxygen in addition to the carboxy oxygen **[2, 2006.01]**
20/28 • • • • containing no aromatic rings in the alcohol moiety **[2, 2006.01]**
20/30 • • • • containing aromatic rings in the alcohol moiety **[2, 2006.01]**
20/32 • • • • containing epoxy radicals **[2, 2006.01]**
20/34 • • • Esters containing nitrogen **[2, 2006.01]**
20/36 • • • • containing oxygen in addition to the carboxy oxygen **[2, 2006.01]**
20/38 • • • Esters containing sulfur **[2, 2006.01]**
20/40 • • • Esters of unsaturated alcohols **[2, 2006.01]**
20/42 • • Nitriles **[2, 2006.01]**
20/44 • • • Acrylonitrile **[2, 2006.01]**
20/50 • • • containing four or more carbon atoms **[2, 2006.01]**
20/52 • • Amides or imides **[2, 2006.01]**
20/54 • • • Amides **[2, 2006.01]**
20/56 • • • • Acrylamide; Methacrylamide **[2, 2006.01]**
20/58 • • • • containing oxygen in addition to the carbonamido oxygen **[2, 2006.01]**
20/60 • • • • containing nitrogen in addition to the carbonamido nitrogen **[2, 2006.01]**
20/62 • Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof **[2, 2006.01]**
20/64 • • Acids; Metal salts or ammonium salts thereof **[2, 2006.01]**
20/66 • • Anhydrides **[2, 2006.01]**
20/68 • • Esters **[2, 2006.01]**
20/70 • • Nitriles; Amides; Imides **[2, 2006.01]**

**22/00 Homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a carboxyl radical and containing at least one other carboxyl radical in the molecule; Salts, anhydrides, esters, amides, imides, or nitriles thereof [2, 2006.01]**
22/02 • Acids; Metal salts or ammonium salts thereof **[2, 2006.01]**
22/04 • Anhydrides, e.g. cyclic anhydrides **[2, 2006.01]**
22/06 • • Maleic anhydride **[2, 2006.01]**
22/10 • Esters **[2, 2006.01]**
22/12 • • of phenols or saturated alcohols **[2, 2006.01]**
22/14 • • • Esters having no free carboxylic acid groups **[2, 2006.01]**
22/16 • • • Esters having free carboxylic acid groups **[2, 2006.01]**
22/18 • • • Esters containing halogen **[2, 2006.01]**
22/20 • • • Esters containing oxygen in addition to the carboxy oxygen **[2, 2006.01]**
22/22 • • • Esters containing nitrogen **[2, 2006.01]**
22/24 • • • Esters containing sulfur **[2, 2006.01]**
22/26 • • of unsaturated alcohols **[2, 2006.01]**
22/28 • • • Diallyl maleate **[2, 2006.01]**
22/30 • Nitriles **[2, 2006.01]**
22/32 • • Alpha-cyano-acrylic acid; Esters thereof **[2, 2006.01]**
22/34 • • Vinylidene cyanide **[2, 2006.01]**
22/36 • Amides or imides **[2, 2006.01]**
22/38 • • Amides **[2, 2006.01]**
22/40 • • Imides, e.g. cyclic imides **[2, 2006.01]**

**24/00 Homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a heterocyclic ring containing oxygen** (cyclic esters of polyfunctional acids C08F 18/00; cyclic anhydrides of unsaturated acids C08F 20/00, C08F 22/00) **[2, 2006.01]**

**26/00 Homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a single or double bond to nitrogen or by a heterocyclic ring containing nitrogen [2, 2006.01]**
26/02 • by a single or double bond to nitrogen **[2, 2006.01]**
26/04 • • Diallylamine **[2, 2006.01]**
26/06 • by a heterocyclic ring containing nitrogen **[2, 2006.01]**
26/08 • • N-Vinyl-pyrrolidine **[2, 2006.01]**
26/10 • • N-Vinyl-pyrrolidone **[2, 2006.01]**
26/12 • • N-Vinyl-carbazole **[2, 2006.01]**

**28/00 Homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a bond to sulfur or by a heterocyclic ring containing sulfur [2, 2006.01]**
28/02 • by a bond to sulfur **[2, 2006.01]**
28/04 • • Thioethers **[2, 2006.01]**
28/06 • by a heterocyclic ring containing sulfur **[2, 2006.01]**

**30/00** **Homopolymers or 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) **[2, 2006.01]**
30/02 • containing phosphorus **[2, 2006.01]**
30/04 • containing a metal **[2, 2006.01]**
30/06 • • containing boron **[2, 2006.01]**
30/08 • • containing silicon **[2, 2006.01]**
30/10 • • containing germanium **[2, 2006.01]**

**32/00** **Homopolymers or 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 [2, 2006.01]**
32/02 • having no condensed rings **[2, 2006.01]**
32/04 • • having one carbon-to-carbon double bond **[2, 2006.01]**
32/06 • • having two or more carbon-to-carbon double bonds **[2, 2006.01]**
32/08 • having condensed rings **[2, 2006.01]**

**34/00** **Homopolymers or copolymers of cyclic compounds having no unsaturated aliphatic radicals in a side chain and having one or more carbon-to-carbon double bonds in a heterocyclic ring** (cyclic esters of polyfunctional acids C08F 18/00; cyclic anhydrides or imides C08F 22/00) **[2, 2006.01]**
34/02 • in a ring containing oxygen **[2, 2006.01]**
34/04 • in a ring containing sulfur **[2, 2006.01]**

**36/00** **Homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds** (C08F 32/00 takes precedence) **[2, 2006.01]**
36/02 • the radical having only two carbon-to-carbon double bonds **[2, 2006.01]**
36/04 • • conjugated **[2, 2006.01]**
36/06 • • • Butadiene **[2, 2006.01]**
36/08 • • • Isoprene **[2, 2006.01]**
36/14 • • • containing elements other than carbon and hydrogen **[2, 2006.01]**
36/16 • • • • containing halogen **[2, 2006.01]**
36/18 • • • • • containing chlorine **[2, 2006.01]**
36/20 • • unconjugated **[2, 2006.01]**
36/22 • the radical having three or more carbon-to-carbon double bonds **[2, 2006.01]**

**38/00** **Homopolymers or copolymers of compounds having one or more carbon-to-carbon triple bonds [2, 2006.01]**
38/02 • Acetylene **[2, 2006.01]**
38/04 • Vinylacetylene **[2, 2006.01]**

**Homopolymers [2]**

**110/00** **Homopolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond [2, 2006.01]**
110/02 • Ethene **[2, 2006.01]**
110/04 • Monomers containing three or four carbon atoms **[2, 2006.01]**
110/06 • • Propene **[2, 2006.01]**
110/08 • • Butenes **[2, 2006.01]**
110/10 • • • Isobutene **[2, 2006.01]**
110/14 • Monomers containing five or more carbon atoms **[2, 2006.01]**

**112/00** **Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an aromatic carbocyclic ring [2, 2006.01]**
112/02 • Monomers containing only one unsaturated aliphatic radical **[2, 2006.01]**
112/04 • • containing one ring **[2, 2006.01]**
112/06 • • • Hydrocarbons **[2, 2006.01]**
112/08 • • • • Styrene **[2, 2006.01]**
112/12 • • • • containing a branched unsaturated aliphatic radical or an alkyl radical attached to the ring **[2, 2006.01]**
112/14 • • • substituted by hetero atoms or groups containing hetero atoms **[2, 2006.01]**
112/32 • • containing two or more rings **[2, 2006.01]**
112/34 • Monomers containing two or more unsaturated aliphatic radicals **[2, 2006.01]**
112/36 • • Divinylbenzene **[2, 2006.01]**

**114/00** **Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a halogen [2, 2006.01]**
114/02 • Monomers containing chlorine **[2, 2006.01]**
114/04 • • Monomers containing two carbon atoms **[2, 2006.01]**
114/06 • • • Vinyl chloride **[2, 2006.01]**
114/08 • • • Vinylidene chloride **[2, 2006.01]**
114/12 • • • 1,2-Dichloroethene **[2, 2006.01]**
114/14 • • Monomers containing three or more carbon atoms **[2, 2006.01]**
114/16 • Monomers containing bromine or iodine **[2, 2006.01]**
114/18 • Monomers containing fluorine **[2, 2006.01]**
114/20 • • Vinyl fluoride **[2, 2006.01]**
114/22 • • Vinylidene fluoride **[2, 2006.01]**
114/24 • • Trifluorochloroethene **[2, 2006.01]**
114/26 • • Tetrafluoroethene **[2, 2006.01]**
114/28 • • Hexafluoropropene **[2, 2006.01]**

**116/00** **Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an alcohol, ether, aldehydo, ketonic, acetal, or ketal radical [2, 2006.01]**
116/02 • by an alcohol radical **[2, 2006.01]**
116/04 • • Acyclic compounds **[2, 2006.01]**
116/06 • • • Polyvinyl alcohol **[2, 2006.01]**
116/08 • • • Allyl alcohol **[2, 2006.01]**
116/10 • • Carbocyclic compounds **[2, 2006.01]**
116/12 • by an ether radical **[2, 2006.01]**
116/14 • • Monomers containing only one unsaturated aliphatic radical **[2, 2006.01]**
116/16 • • • Monomers containing no hetero atoms other than the ether oxygen **[2, 2006.01]**
116/18 • • • • Acyclic compounds **[2, 2006.01]**
116/20 • • • • • Monomers containing three or more carbon atoms in the unsaturated aliphatic radical **[2, 2006.01]**
116/34 • by an aldehydo radical **[2, 2006.01]**
116/36 • by a ketonic radical **[2, 2006.01]**
116/38 • by an acetal or ketal radical **[2, 2006.01]**

**118/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an acyloxy radical of a saturated carboxylic acid, of carbonic acid, or of a haloformic acid [2, 2006.01]**

118/02 • Esters of monocarboxylic acids **[2, 2006.01]**
118/04 • • Vinyl esters **[2, 2006.01]**
118/06 • • • Vinyl formate **[2, 2006.01]**
118/08 • • • Vinyl acetate **[2, 2006.01]**
118/10 • • • of monocarboxylic acids containing three or more carbon atoms **[2, 2006.01]**
118/12 • • with unsaturated alcohols containing three or more carbon atoms **[2, 2006.01]**
118/14 • Esters of polycarboxylic acids **[2, 2006.01]**
118/16 • • with alcohols containing three or more carbon atoms **[2, 2006.01]**
118/18 • • • Diallyl phthalate **[2, 2006.01]**

**120/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and only one being terminated by only one carboxyl radical or a salt, anhydride, ester, amide, imide, or nitrile thereof [2, 2006.01]**

120/02 • Monocarboxylic acids having less than ten carbon atoms; Derivatives thereof **[2, 2006.01]**
120/04 • • Acids; Metal salts or ammonium salts thereof **[2, 2006.01]**
120/06 • • • Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof **[2, 2006.01]**
120/08 • • Anhydrides **[2, 2006.01]**
120/10 • • Esters **[2, 2006.01]**
120/12 • • • of monohydric alcohols or phenols **[2, 2006.01]**
120/14 • • • • Methyl esters **[2, 2006.01]**
120/16 • • • • of phenols or of alcohols containing two or more carbon atoms **[2, 2006.01]**
120/18 • • • • • with acrylic or methacrylic acids **[2, 2006.01]**
120/20 • • • of polyhydric alcohols or phenols **[2, 2006.01]**
120/22 • • • Esters containing halogen **[2, 2006.01]**
120/24 • • • • containing perhaloalkyl radicals **[2, 2006.01]**
120/26 • • • Esters containing oxygen in addition to the carboxy oxygen **[2, 2006.01]**
120/28 • • • • containing no aromatic rings in the alcohol moiety **[2, 2006.01]**
120/30 • • • • containing aromatic rings in the alcohol moiety **[2, 2006.01]**
120/32 • • • • containing epoxy radicals **[2, 2006.01]**
120/34 • • • Esters containing nitrogen **[2, 2006.01]**
120/36 • • • • containing oxygen in addition to the carboxy oxygen **[2, 2006.01]**
120/38 • • • Esters containing sulfur **[2, 2006.01]**
120/40 • • • Esters of unsaturated alcohols **[2, 2006.01]**
120/42 • • Nitriles **[2, 2006.01]**
120/44 • • • Acrylonitrile **[2, 2006.01]**
120/50 • • • containing four or more carbon atoms **[2, 2006.01]**
120/52 • • Amides or imides **[2, 2006.01]**
120/54 • • • Amides **[2, 2006.01]**
120/56 • • • • Acrylamide; Methacrylamide **[2, 2006.01]**
120/58 • • • • containing oxygen in addition to the carbonamido oxygen **[2, 2006.01]**
120/60 • • • • containing nitrogen in addition to the carbonamido nitrogen **[2, 2006.01]**
120/62 • Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof **[2, 2006.01]**
120/64 • • Acids; Metal salts or ammonium salts thereof **[2, 2006.01]**
120/66 • • Anhydrides **[2, 2006.01]**
120/68 • • Esters **[2, 2006.01]**
120/70 • • Nitriles; Amides; Imides **[2, 2006.01]**

**122/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a carboxyl radical and containing at least one other carboxyl radical in the molecule; Salts, anhydrides, esters, amides, imides, or nitriles thereof [2, 2006.01]**

122/02 • Acids; Metal salts or ammonium salts thereof **[2, 2006.01]**
122/04 • Anhydrides, e.g. cyclic anhydrides **[2, 2006.01]**
122/06 • • Maleic anhydride **[2, 2006.01]**
122/10 • Esters **[2, 2006.01]**
122/12 • • of phenols or saturated alcohols **[2, 2006.01]**
122/14 • • • Esters having no free carboxylic acid groups **[2, 2006.01]**
122/16 • • • Esters having free carboxylic acid groups **[2, 2006.01]**
122/18 • • • Esters containing halogen **[2, 2006.01]**
122/20 • • • Esters containing oxygen in addition to the carboxy oxygen **[2, 2006.01]**
122/22 • • • Esters containing nitrogen **[2, 2006.01]**
122/24 • • • Esters containing sulfur **[2, 2006.01]**
122/26 • • of unsaturated alcohols **[2, 2006.01]**
122/28 • • • Diallyl maleate **[2, 2006.01]**
122/30 • Nitriles **[2, 2006.01]**
122/32 • • Alpha-cyano-acrylic acid; Esters thereof **[2, 2006.01]**
122/34 • • Vinylidene cyanide **[2, 2006.01]**
122/36 • Amides or imides **[2, 2006.01]**
122/38 • • Amides **[2, 2006.01]**
122/40 • • Imides, e.g. cyclic imides **[2, 2006.01]**

**124/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a heterocyclic ring containing oxygen** (cyclic esters of polyfunctional acids C08F 118/00; cyclic anhydrides of unsaturated acids C08F 120/00, C08F 122/00) **[2, 2006.01]**

**126/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a single or double bond to nitrogen or by a heterocyclic ring containing nitrogen [2, 2006.01]**

126/02 • by a single or double bond to nitrogen **[2, 2006.01]**
126/04 • • Diallylamine **[2, 2006.01]**
126/06 • by a heterocyclic ring containing nitrogen **[2, 2006.01]**
126/08 • • N-Vinyl-pyrrolidine **[2, 2006.01]**
126/10 • • N-Vinyl-pyrrolidone **[2, 2006.01]**
126/12 • • N-Vinyl-carbazole **[2, 2006.01]**

**128/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon bond, and at least one being terminated by a bond to sulfur or by a heterocyclic ring containing sulfur [2, 2006.01]**

128/02 • by a bond to sulfur **[2, 2006.01]**
128/04 • • Thioethers **[2, 2006.01]**
128/06 • by a heterocyclic ring containing sulfur **[2, 2006.01]**

**130/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium, or a metal** (metal salts, e.g. phenolates or alcoholates, see the parent compounds) **[2, 2006.01]**
130/02 • containing phosphorus **[2, 2006.01]**
130/04 • containing a metal **[2, 2006.01]**
130/06 • • containing boron **[2, 2006.01]**
130/08 • • containing silicon **[2, 2006.01]**
130/10 • • containing germanium **[2, 2006.01]**

**132/00 Homopolymers of cyclic compounds containing no unsaturated aliphatic radicals in a side chain, and having one or more carbon-to-carbon double bonds in a carbocyclic ring system [2, 2006.01]**
132/02 • having no condensed rings **[2, 2006.01]**
132/04 • • having one carbon-to-carbon double bond **[2, 2006.01]**
132/06 • • having two or more carbon-to-carbon double bonds **[2, 2006.01]**
132/08 • having condensed rings **[2, 2006.01]**

**134/00 Homopolymers of cyclic compounds having no unsaturated aliphatic radicals in a side chain and having one or more carbon-to-carbon double bonds in a heterocyclic ring** (cyclic esters of polyfunctional acids C08F 118/00; cyclic anhydrides or imides C08F 122/00) **[2, 2006.01]**
134/02 • in a ring containing oxygen **[2, 2006.01]**
134/04 • in a ring containing sulfur **[2, 2006.01]**

**136/00 Homopolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds** (C08F 132/00 takes precedence) **[2, 2006.01]**
136/02 • the radical having only two carbon-to-carbon double bonds **[2, 2006.01]**
136/04 • • conjugated **[2, 2006.01]**
136/06 • • • Butadiene **[2, 2006.01]**
136/08 • • • Isoprene **[2, 2006.01]**
136/14 • • • containing elements other than carbon and hydrogen **[2, 2006.01]**
136/16 • • • • containing halogen **[2, 2006.01]**
136/18 • • • • • containing chlorine **[2, 2006.01]**
136/20 • • unconjugated **[2, 2006.01]**
136/22 • the radical having three or more carbon-to-carbon double bonds **[2, 2006.01]**

**138/00 Homopolymers of compounds having one or more carbon-to-carbon triple bonds [2, 2006.01]**
138/02 • Acetylene **[2, 2006.01]**
138/04 • Vinylacetylene **[2, 2006.01]**

**Copolymers [2]**

**Note(s) [2006.01]**

1. When classifying in groups C08F 210/00-C08F 297/00, any monomeric components not identified by the classification according to Note (4) after the title of subclass C08F within this classification range, and where the use of such monomeric components is determined to be novel and non-obvious, must also be classified in the last appropriate place in groups C08F 210/00-C08F 238/00.
2. Any monomeric components not identified by the classification according to Note (4) after the title of subclass C08F or Note (1) above, and where the use of such monomeric components is considered to represent information of interest for search, may also be classified in the last appropriate place in groups C08F 210/00-C08F 238/00. This can for example be the case when it is considered of interest to enable searching of copolymers using a combination of classification symbols. Such non-obligatory classification should be given as "additional information".

**210/00 Copolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond [2, 2006.01]**
210/02 • Ethene **[2, 2006.01]**
210/04 • Monomers containing three or four carbon atoms **[2, 2006.01]**
210/06 • • Propene **[2, 2006.01]**
210/08 • • Butenes **[2, 2006.01]**
210/10 • • • Isobutene **[2, 2006.01]**
210/12 • • • • with conjugated diolefins, e.g. butyl rubber **[2, 2006.01]**
210/14 • Monomers containing five or more carbon atoms **[2, 2006.01]**
210/16 • Copolymers of ethene with alpha-alkenes, e.g. EP rubbers **[2, 2006.01]**
210/18 • • with non-conjugated dienes, e.g. EPT rubbers **[2, 2006.01]**

**212/00 Copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an aromatic carbocyclic ring [2, 2006.01]**
212/02 • Monomers containing only one unsaturated aliphatic radical **[2, 2006.01]**
212/04 • • containing one ring **[2, 2006.01]**
212/06 • • • Hydrocarbons **[2, 2006.01]**
212/08 • • • • Styrene **[2, 2006.01]**
212/10 • • • • • with nitriles **[2, 2006.01]**
212/12 • • • • containing a branched unsaturated aliphatic radical or an alkyl radical attached to the ring **[2, 2006.01]**
212/14 • • • substituted by hetero atoms or groups containing hetero atoms **[2, 2006.01]**
212/32 • • containing two or more rings **[2, 2006.01]**
212/34 • Monomers containing two or more unsaturated aliphatic radicals **[2, 2006.01]**
212/36 • • Divinylbenzene **[2, 2006.01]**

**214/00 Copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a halogen [2, 2006.01]**

214/02 • Monomers containing chlorine **[2, 2006.01]**
214/04 • • Monomers containing two carbon atoms **[2, 2006.01]**
214/06 • • • Vinyl chloride **[2, 2006.01]**
214/08 • • • Vinylidene chloride **[2, 2006.01]**
214/10 • • • • with nitriles **[2, 2006.01]**
214/12 • • • 1,2-Dichloroethene **[2, 2006.01]**
214/14 • • Monomers containing three or more carbon atoms **[2, 2006.01]**
214/16 • Monomers containing bromine or iodine **[2, 2006.01]**
214/18 • Monomers containing fluorine **[2, 2006.01]**
214/20 • • Vinyl fluoride **[2, 2006.01]**
214/22 • • Vinylidene fluoride **[2, 2006.01]**
214/24 • • Trifluorochloroethene **[2, 2006.01]**
214/26 • • Tetrafluoroethene **[2, 2006.01]**
214/28 • • Hexafluoropropene **[2, 2006.01]**

**216/00 Copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an alcohol, ether, aldehydo, ketonic, acetal, or ketal radical [2, 2006.01]**
216/02 • by an alcohol radical **[2, 2006.01]**
216/04 • • Acyclic compounds **[2, 2006.01]**
216/06 • • • Polyvinyl alcohol **[2, 2006.01]**
216/08 • • • Allyl alcohol **[2, 2006.01]**
216/10 • • Carbocyclic compounds **[2, 2006.01]**
216/12 • by an ether radical **[2, 2006.01]**
216/14 • • Monomers containing only one unsaturated aliphatic radical **[2, 2006.01]**
216/16 • • • Monomers containing no hetero atoms other than the ether oxygen **[2, 2006.01]**
216/18 • • • • Acyclic compounds **[2, 2006.01]**
216/20 • • • • • Monomers containing three or more carbon atoms in the unsaturated aliphatic radical **[2, 2006.01]**
216/34 • by an aldehydo radical **[2, 2006.01]**
216/36 • by a ketonic radical **[2, 2006.01]**
216/38 • by an acetal or ketal radical **[2, 2006.01]**

**218/00 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 [2, 2006.01]**
218/02 • Esters of monocarboxylic acids **[2, 2006.01]**
218/04 • • Vinyl esters **[2, 2006.01]**
218/06 • • • Vinyl formate **[2, 2006.01]**
218/08 • • • Vinyl acetate **[2, 2006.01]**
218/10 • • • of monocarboxylic acids containing three or more carbon atoms **[2, 2006.01]**
218/12 • • with unsaturated alcohols containing three or more carbon atoms **[2, 2006.01]**
218/14 • Esters of polycarboxylic acids **[2, 2006.01]**
218/16 • • with alcohols containing three or more carbon atoms **[2, 2006.01]**
218/18 • • • Diallyl phthalate **[2, 2006.01]**

**220/00 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 [2, 2006.01]**
220/02 • Monocarboxylic acids having less than ten carbon atoms; Derivatives thereof **[2, 2006.01]**
220/04 • • Acids; Metals salts or ammonium salts thereof **[2, 2006.01]**
220/06 • • • Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof **[2, 2006.01]**
220/08 • • Anhydrides **[2, 2006.01]**
220/10 • • Esters **[2, 2006.01]**
220/12 • • • of monohydric alcohols or phenols **[2, 2006.01]**
220/14 • • • • Methyl esters **[2, 2006.01]**
220/16 • • • • of phenols or of alcohols containing two or more carbon atoms **[2, 2006.01]**
220/18 • • • • • with acrylic or methacrylic acids **[2, 2006.01]**
220/20 • • • of polyhydric alcohols or phenols **[2, 2006.01]**
220/22 • • • Esters containing halogen **[2, 2006.01]**
220/24 • • • • containing perhaloalkyl radicals **[2, 2006.01]**
220/26 • • • Esters containing oxygen in addition to the carboxy oxygen **[2, 2006.01]**
220/28 • • • • containing no aromatic rings in the alcohol moiety **[2, 2006.01]**
220/30 • • • • containing aromatic rings in the alcohol moiety **[2, 2006.01]**
220/32 • • • • containing epoxy radicals **[2, 2006.01]**
220/34 • • • Esters containing nitrogen **[2, 2006.01]**
220/36 • • • • containing oxygen in addition to the carboxy oxygen **[2, 2006.01]**
220/38 • • • Esters containing sulfur **[2, 2006.01]**
220/40 • • • Esters of unsaturated alcohols **[2, 2006.01]**
220/42 • • Nitriles **[2, 2006.01]**
220/44 • • • Acrylonitrile **[2, 2006.01]**
220/46 • • • • with carboxylic acids, sulfonic acids or salts thereof **[2, 2006.01]**
220/48 • • • • with nitrogen-containing monomers **[2, 2006.01]**
220/50 • • • containing four or more carbon atoms **[2, 2006.01]**
220/52 • • Amides or imides **[2, 2006.01]**
220/54 • • • Amides **[2, 2006.01]**
220/56 • • • • Acrylamide; Methacrylamide **[2, 2006.01]**
220/58 • • • • containing oxygen in addition to the carbonamido oxygen **[2, 2006.01]**
220/60 • • • • containing nitrogen in addition to the carbonamido nitrogen **[2, 2006.01]**
220/62 • Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof **[2, 2006.01]**
220/64 • • Acids; Metal salts or ammonium salts thereof **[2, 2006.01]**
220/66 • • Anhydrides **[2, 2006.01]**
220/68 • • Esters **[2, 2006.01]**
220/70 • • Nitriles; Amides; Imides **[2, 2006.01]**

**222/00 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 carboxyl radical and containing at least one other carboxyl radical in the molecule; Salts, anhydrides, esters, amides, imides, or nitriles thereof [2, 2006.01]**
222/02 • Acids; Metal salts or ammonium salts thereof **[2, 2006.01]**
222/04 • Anhydrides, e.g. cyclic anhydrides **[2, 2006.01]**
222/06 • • Maleic anhydride **[2, 2006.01]**
222/08 • • • with vinyl aromatic monomers **[2, 2006.01]**
222/10 • Esters **[2, 2006.01]**
222/12 • • of phenols or saturated alcohols **[2, 2006.01]**

222/14 • • • Esters having no free carboxylic acid groups **[2, 2006.01]**
222/16 • • • Esters having free carboxylic acid groups **[2, 2006.01]**
222/18 • • • Esters containing halogen **[2, 2006.01]**
222/20 • • • Esters containing oxygen in addition to the carboxy oxygen **[2, 2006.01]**
222/22 • • • Esters containing nitrogen **[2, 2006.01]**
222/24 • • • Esters containing sulfur **[2, 2006.01]**
222/26 • • of unsaturated alcohols **[2, 2006.01]**
222/28 • • • Diallyl maleate **[2, 2006.01]**
222/30 • Nitriles **[2, 2006.01]**
222/32 • • Alpha-cyano-acrylic acid; Esters thereof **[2, 2006.01]**
222/34 • • Vinylidene cyanide **[2, 2006.01]**
222/36 • Amides or imides **[2, 2006.01]**
222/38 • • Amides **[2, 2006.01]**
222/40 • • Imides, e.g. cyclic imides **[2, 2006.01]**

**224/00 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 C08F 218/00; cyclic anhydrides of unsaturated acids C08F 220/00, C08F 222/00) **[2, 2006.01]**

**226/00 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 [2, 2006.01]**
226/02 • by a single or double bond to nitrogen **[2, 2006.01]**
226/04 • • Diallylamine **[2, 2006.01]**
226/06 • by a heterocyclic ring containing nitrogen **[2, 2006.01]**
226/08 • • N-Vinyl-pyrrolidine **[2, 2006.01]**
226/10 • • N-Vinyl-pyrrolidone **[2, 2006.01]**
226/12 • • N-Vinyl-carbazole **[2, 2006.01]**

**228/00 Copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a bond to sulfur or by a heterocyclic ring containing sulfur [2, 2006.01]**
228/02 • by a bond to sulfur **[2, 2006.01]**
228/04 • • Thioethers **[2, 2006.01]**
228/06 • by a heterocyclic ring containing sulfur **[2, 2006.01]**

**230/00 Copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium, or a metal** (metal salts, e.g. phenolates or alcoholates, see the parent compounds) **[2, 2006.01]**
230/02 • containing phosphorus **[2, 2006.01]**
230/04 • containing a metal **[2, 2006.01]**
230/06 • • containing boron **[2, 2006.01]**
230/08 • • containing silicon **[2, 2006.01]**
230/10 • • containing germanium **[2, 2006.01]**

**232/00 Copolymers of cyclic compounds containing no unsaturated aliphatic radicals in a side chain, and having one or more carbon-to-carbon double bonds in a carbocyclic ring system [2, 2006.01]**
232/02 • having no condensed rings **[2, 2006.01]**
232/04 • • having one carbon-to-carbon double bond **[2, 2006.01]**
232/06 • • having two or more carbon-to-carbon double bonds **[2, 2006.01]**
232/08 • having condensed rings **[2, 2006.01]**

**234/00 Copolymers of cyclic compounds having no unsaturated aliphatic radicals in a side chain and having one or more carbon-to-carbon double bonds in a heterocyclic ring** (cyclic esters of polyfunctional acids C08F 218/00; cyclic anhydrides or imides C08F 222/00) **[2, 2006.01]**
234/02 • in a ring containing oxygen **[2, 2006.01]**
234/04 • in a ring containing sulfur **[2, 2006.01]**

**236/00 Copolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds** (C08F 232/00 takes precedence) **[2, 2006.01]**
236/02 • the radical having only two carbon-to-carbon double bonds **[2, 2006.01]**
236/04 • • conjugated **[2, 2006.01]**
236/06 • • • Butadiene **[2, 2006.01]**
236/08 • • • Isoprene **[2, 2006.01]**
236/10 • • • with vinyl aromatic monomers **[2, 2006.01]**
236/12 • • • with nitriles **[2, 2006.01]**
236/14 • • • containing elements other than carbon and hydrogen **[2, 2006.01]**
236/16 • • • • containing halogen **[2, 2006.01]**
236/18 • • • • • containing chlorine **[2, 2006.01]**
236/20 • • unconjugated **[2, 2006.01]**
236/22 • the radical having three or more carbon-to-carbon double bonds **[2, 2006.01]**

**238/00 Copolymers of compounds having one or more carbon-to-carbon triple bonds [2, 2006.01]**
238/02 • Acetylene **[2, 2006.01]**
238/04 • Vinylacetylene **[2, 2006.01]**

**240/00 Copolymers of hydrocarbons and mineral oils, e.g. petroleum resins [2, 2006.01]**

**242/00 Copolymers of drying-oils with other monomers [2, 2006.01]**

**244/00 Coumarone-indene copolymers [2, 2006.01]**

**246/00 Copolymers in which the nature of only the monomers in minority is defined [2, 2006.01]**

**Graft polymers; Polymers crosslinked with unsaturated monomers [2]**

**251/00 Macromolecular compounds obtained by polymerising monomers on to polysaccharides or derivatives thereof [2, 2006.01]**
251/02 • on to cellulose or derivatives thereof **[2, 2006.01]**

**253/00 Macromolecular compounds obtained by polymerising monomers on to natural rubbers or derivatives thereof [2, 2006.01]**

**255/00 Macromolecular compounds obtained by polymerising monomers on to polymers of hydrocarbons as defined in group C08F 10/00 [2, 2006.01]**
255/02 • on to polymers of olefins having two or three carbon atoms **[2, 2006.01]**

255/04 • • on to ethene-propene copolymers **[2, 2006.01]**
255/06 • • on to ethene-propene-diene terpolymers **[2, 2006.01]**
255/08 • on to polymers of olefins having four or more carbon atoms **[2, 2006.01]**
255/10 • • on to butene polymers **[2, 2006.01]**

**257/00 Macromolecular compounds obtained by polymerising monomers on to polymers of aromatic monomers as defined in group C08F 12/00 [2, 2006.01]**
257/02 • on to polymers of styrene or alkyl-substituted styrenes **[2, 2006.01]**

**259/00 Macromolecular compounds obtained by polymerising monomers on to polymers of halogen containing monomers as defined in group C08F 14/00 [2, 2006.01]**
259/02 • on to polymers containing chlorine **[2, 2006.01]**
259/04 • • on to polymers of vinyl chloride **[2, 2006.01]**
259/06 • • on to polymers of vinylidene chloride **[2, 2006.01]**
259/08 • on to polymers containing fluorine **[2, 2006.01]**

**261/00 Macromolecular compounds obtained by polymerising monomers on to polymers of oxygen-containing monomers as defined in group C08F 16/00 [2, 2006.01]**
261/02 • on to polymers of unsaturated alcohols **[2, 2006.01]**
261/04 • • on to polymers of vinyl alcohol **[2, 2006.01]**
261/06 • on to polymers of unsaturated ethers **[2, 2006.01]**
261/08 • on to polymers of unsaturated aldehydes **[2, 2006.01]**
261/10 • on to polymers of unsaturated ketones **[2, 2006.01]**
261/12 • on to polymers of unsaturated acetals or ketals **[2, 2006.01]**

**263/00 Macromolecular compounds obtained by polymerising monomers on to polymers of esters of unsaturated alcohols with saturated acids as defined in group C08F 18/00 [2, 2006.01]**
263/02 • on to polymers of vinyl esters with monocarboxylic acids **[2, 2006.01]**
263/04 • • on to polymers of vinyl acetate **[2, 2006.01]**
263/06 • on to polymers of esters with polycarboxylic acids **[2, 2006.01]**
263/08 • • Polymerisation of diallyl phthalate prepolymers **[2, 2006.01]**

**265/00 Macromolecular compounds obtained by polymerising monomers on to polymers of unsaturated monocarboxylic acids or derivatives thereof as defined in group C08F 20/00 [2, 2006.01]**
265/02 • on to polymers of acids, salts or anhydrides **[2, 2006.01]**
265/04 • on to polymers of esters **[2, 2006.01]**
265/06 • • Polymerisation of acrylate or methacrylate esters on to polymers thereof **[2, 2006.01]**
265/08 • on to polymers of nitriles **[2, 2006.01]**
265/10 • on to polymers of amides or imides **[2, 2006.01]**

**267/00 Macromolecular compounds obtained by polymerising monomers on to polymers of unsaturated polycarboxylic acids or derivatives thereof as defined in group C08F 22/00 [2, 2006.01]**
267/02 • on to polymers of acids or salts **[2, 2006.01]**
267/04 • on to polymers of anhydrides **[2, 2006.01]**
267/06 • on to polymers of esters **[2, 2006.01]**
267/08 • on to polymers of nitriles **[2, 2006.01]**
267/10 • on to polymers of amides or imides **[2, 2006.01]**

**269/00 Macromolecular compounds obtained by polymerising monomers on to polymers of heterocyclic oxygen-containing monomers as defined in group C08F 24/00 [2, 2006.01]**

**271/00 Macromolecular compounds obtained by polymerising monomers on to polymers of nitrogen-containing monomers as defined in group C08F 26/00 [2, 2006.01]**
271/02 • on to polymers of monomers containing heterocyclic nitrogen **[2, 2006.01]**

**273/00 Macromolecular compounds obtained by polymerising monomers on to polymers of sulfur-containing monomers as defined in group C08F 28/00 [2, 2006.01]**

**275/00 Macromolecular compounds obtained by polymerising monomers on to polymers of monomers containing phosphorus, selenium, tellurium, or a metal as defined in group C08F 30/00 [2, 2006.01]**

**277/00 Macromolecular compounds obtained by polymerising monomers on to polymers of carbocyclic or heterocyclic monomers as defined respectively in group C08F 32/00 or in group C08F 34/00 [2, 2006.01]**

**279/00 Macromolecular compounds obtained by polymerising monomers on to polymers of monomers having two or more carbon-to-carbon double bonds as defined in group C08F 36/00 [2, 2006.01]**
279/02 • on to polymers of conjugated dienes **[2, 2006.01]**
279/04 • • Vinyl aromatic monomers and nitriles as the only monomers **[2, 2006.01]**
279/06 • • Vinyl aromatic monomers and methacrylates as the only monomers **[2, 2006.01]**

**281/00 Macromolecular compounds obtained by polymerising monomers on to polymers of monomers having carbon-to-carbon triple bonds as defined in group C08F 38/00 [2, 2006.01]**

**283/00 Macromolecular compounds obtained by polymerising monomers on to polymers provided for in subclass C08G [4, 2006.01]**
283/01 • on to unsaturated polyesters **[4, 2006.01]**
283/02 • on to polycarbonates or saturated polyesters **[2, 2006.01]**
283/04 • on to polycarbonamides, polyesteramides or polyimides **[2, 2006.01]**
283/06 • on to polyethers, polyoxymethylenes or polyacetals **[2, 2006.01]**
283/08 • • on to polyphenylene oxides **[2, 2006.01]**
283/10 • on to polymers containing more than one epoxy radical per molecule **[2, 2006.01]**
283/12 • on to polysiloxanes **[2, 2006.01]**
283/14 • on to polymers obtained by ring-opening polymerisation of carbocyclic compounds having one or more carbon-to-carbon double bonds in the carbocyclic ring, i.e. polyalkeneamers **[2, 2006.01]**

**285/00 Macromolecular compounds obtained by polymerising monomers on to preformed graft polymers [2, 2006.01]**

**287/00 Macromolecular compounds obtained by polymerising monomers on to block polymers [2, 2006.01]**

**289/00 Macromolecular compounds obtained by polymerising monomers on to macromolecular compounds not provided for in groups C08F 251/00-C08F 287/00 [2, 2006.01]**

**290/00 Macromolecular compounds obtained by polymerising monomers on to polymers modified by introduction of aliphatic unsaturated end or side groups [6, 2006.01]**

290/02 • on to polymers modified by introduction of unsaturated end groups **[6, 2006.01]**

290/04 • • Polymers provided for in subclasses C08C or C08F **[6, 2006.01]**

290/06 • • Polymers provided for in subclass C08G **[6, 2006.01]**

290/08 • on to polymers modified by introduction of unsaturated side groups **[6, 2006.01]**

290/10 • • Polymers provided for in subclass C08B **[6, 2006.01]**

290/12 • • Polymers provided for in subclasses C08C or C08F **[6, 2006.01]**

290/14 • • Polymers provided for in subclass C08G **[6, 2006.01]**

**291/00 Macromolecular compounds obtained by polymerising monomers on to macromolecular compounds according to more than one of the groups C08F 251/00-C08F 289/00 [2, 2006.01]**

291/02 • on to elastomers **[2, 2006.01]**

291/04 • on to halogen-containing macromolecules **[2, 2006.01]**

291/06 • on to oxygen-containing macromolecules **[2, 2006.01]**

291/08 • • on to macromolecules containing hydroxy radicals **[2, 2006.01]**

291/10 • • on to macromolecules containing epoxy radicals **[2, 2006.01]**

291/12 • on to nitrogen-containing macromolecules **[2, 2006.01]**

291/14 • on to sulfur-containing macromolecules **[2, 2006.01]**

291/16 • on to macromolecules containing more than two metal atoms **[2, 2006.01]**

291/18 • on to irradiated or oxidised macromolecules (epoxidised C08F 291/10) **[2, 2006.01]**

**292/00 Macromolecular compounds obtained by polymerising monomers on to inorganic materials [3, 2006.01]**

**Block polymers [2]**

**293/00 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 C08F 290/02) **[2, 2006.01]**

**295/00 Macromolecular compounds obtained by polymerisation using successively different catalyst types without deactivating the intermediate polymer [2, 2006.01]**

**297/00 Macromolecular compounds obtained by successively polymerising different monomer systems using a catalyst of the ionic or coordination type without deactivating the intermediate polymer [2, 2006.01]**

297/02 • using a catalyst of the anionic type **[2, 2006.01]**

297/04 • • polymerising vinyl aromatic monomers and conjugated dienes **[2, 2006.01]**

297/06 • using a catalyst of the coordination type **[2, 2006.01]**

297/08 • • polymerising mono-olefins **[2, 2006.01]**

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**299/00 Macromolecular compounds obtained by interreacting polymers involving only carbon-to-carbon unsaturated bond reactions, in the absence of non-macromolecular monomers [2, 6, 2006.01]**

299/02 • from unsaturated polycondensates **[2, 2006.01]**

299/04 • • from polyesters **[2, 2006.01]**

299/06 • • from polyurethanes **[2, 2006.01]**

299/08 • • from polysiloxanes **[2, 2006.01]**

**301/00 Macromolecular compounds not provided for in groups C08F 10/00-C08F 299/00 [2006.01]**