SECTION C — CHEMISTRY; METALLURGY

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

Note(s)

1. Biocidal, pest repellant, pest attractant or plant growth regulatory activity of compounds or preparations is further classified in subclass A01P.
2. Processes using enzymes or micro-organisms in order to:
   i. liberate, separate or purify a pre-existing compound or composition, or to
   ii. treat textiles or clean solid surfaces of materials

are further classified in subclass C12S.

C08B POLYSACCHARIDES; DERIVATIVES THEREOF (polysaccharides containing less than six saccharide radicals attached to each other by glycosidic linkages C07H; fermentation or enzyme-using processes C12P 19/00; sugar industry C13; production of cellulose D21) **[4]**

Note(s)

Therapeutic activity of compounds is further classified in subclass A61P.

Subclass index

Preparation

1/00 Preparatory treatment of cellulose for making derivatives thereof

1/02 • Rendering cellulose suitable for esterification
1/04 • • for the preparation of cellulose nitrate
1/06 • Rendering cellulose suitable for etherification
1/08 • Alkali cellulose
1/10 • • Apparatus for the preparation of alkali cellulose
1/12 • • • Steeping devices
1/14 • • • Ripening devices

3/00 Preparation of cellulose esters of organic acids

3/02 • Catalysts used for the esterification
3/04 • Cellulose formate
3/06 • Cellulose acetate
3/08 • of monobasic organic acids with three or more carbon atoms
3/10 • • with five or more carbon atoms
3/12 • of polybasic organic acids
3/14 • in which the organic acid residue contains substituents, e.g. NH_2, Cl
3/16 • Preparation of mixed organic cellulose esters
3/18 • • Aceto-butyrates
3/20 • Esterification with maintenance of the fibrous structure of the cellulose (surface esterification of textiles D06M 13/00)
3/22 • Post-esterification treatments, including purification
3/24 • • Hydrolysis or ripening
3/26 • • Isolation of the cellulose ester
3/28 • • • by precipitation
3/30 • • Stabilisation (by addition of stabilisers C08K)

5/00 Preparation of cellulose esters of inorganic acids

5/02 • Cellulose nitrate
5/04 • • Post-esterification treatments, including purification
5/06 • • • Isolation of the cellulose nitrate

5/08 • • • Stabilisation (by addition of stabilisers C08K)
5/10 • • • Reducing the viscosity
5/12 • • • Replacing the water by organic liquids
5/14 • Cellulose sulfate

7/00 Preparation of cellulose esters of both organic and inorganic acids

9/00 Preparation of cellulose xanthate or viscose
9/02 • Sulfidisers; Dissolvers
9/04 • Continuous processes
9/06 • Single-stage processes

11/00 Preparation of cellulose ethers
11/02 • Alkyl or cycloalkyl ethers
11/04 • • with substituted hydrocarbon radicals
11/06 • • • with halogen-substituted hydrocarbon radicals
11/08 • • • with hydroxylated hydrocarbon radicals; Esters, ethers, or acetals thereof
11/10 • • • substituted with acid radicals
11/12 • • • • substituted with carboxylic radicals
11/14 • • • with nitrogen-containing groups
11/145 • • • • with basic nitrogen, e.g. aminoalkyl ethers **[2]**
11/15 • • • • with carbamoyl groups **[2]**
11/155 • • • • with cyano groups, e.g. cyanoalkyl ethers **[2]**
11/16 • Aryl or aralkyl ethers
11/18 • • with substituted hydrocarbon radicals
11/187 • with olefinic unsaturated groups **[2]**
11/193 • Mixed ethers, i.e. ethers with two or more different etherifying groups **[2]**
11/20 • Post-etherification treatments, including purification
11/22 • • Isolation

13/00 Preparation of cellulose ether-esters
13/02 • Cellulose ether xanthates

15/00 Preparation of other cellulose derivatives or modified cellulose
15/02 • Oxycellulose; Hydrocellulose; Cellulose hydrate
15/04 • • Carboxycellulose, e.g. prepared by oxidation with nitrogen dioxide
15/05 • Derivatives containing elements other than carbon, hydrogen, oxygen, halogen, or sulfur (esters of phosphorus acids C08B 5/00) **[2]**
15/06 • • containing nitrogen **[2]**
15/08 • Fractionation of cellulose, e.g. separation of cellulose crystallites **[2]**
15/10 • Crosslinking of cellulose **[2]**

16/00 Regeneration of cellulose [2]

17/00 Apparatus for esterification or etherification of cellulose
17/02 • for making organic esters of cellulose
17/04 • for making cellulose nitrate
17/06 • for making cellulose ethers

30/00 Preparation of starch, degraded or non-chemically modified starch, amylose, or amylopectin [4]

30/02 • Preparatory treatment, e.g. crushing of raw materials (machines for preliminary washing A23N) **[4]**
30/04 • Extraction or purification **[4]**
30/06 • Drying; Forming **[4]**
30/08 • Concentration of starch suspensions **[4]**
30/10 • Working-up residues from the starch extraction, including pressing water from the starch-extracted material **[4]**
30/12 • Degraded or non-chemically modified starch; Bleaching of starch (preparation of chemical derivatives of starch C08B 31/00) **[4]**
30/14 • • Cold water dispersible or pregelatinised starch **[4]**
30/16 • • Apparatus therefor **[4]**
30/18 • • Dextrin **[4]**
30/20 • Amylose or amylopectin (chemical derivatives thereof C08B 33/00, C08B 35/00) **[4]**

31/00 Preparation of chemical derivatives of starch (chemical derivatives of amylose C08B 33/00; chemical derivatives of amylopectin C08B 35/00) **[2]**
31/02 • Esters **[2]**
31/04 • • of organic acids **[2]**
31/06 • • of inorganic acids **[2]**
31/08 • Ethers **[2]**
31/10 • • Alkyl or cycloalkyl ethers **[2]**
31/12 • • having alkyl or cycloalkyl radicals substituted by hetero atoms **[2]**
31/14 • • Aryl or aralkyl ethers **[2]**
31/16 • Ether-esters **[2]**
31/18 • Oxidised starch **[2]**

33/00 Preparation of chemical derivatives of amylose [2]
33/02 • Esters **[2]**
33/04 • Ethers **[2]**
33/06 • Ether-esters **[2]**
33/08 • Oxidised amylose **[2]**

35/00 Preparation of chemical derivatives of amylopectin [2]
35/02 • Esters **[2]**
35/04 • Ethers **[2]**
35/06 • Ether-esters **[2]**
35/08 • Oxidised amylopectin **[2]**

37/00 Preparation of polysaccharides not provided for in groups C08B 1/00-C08B 35/00; Derivatives thereof (cellulose D21) **[4]**
37/02 • Dextran; Derivatives thereof **[2]**
37/04 • Alginic acid; Derivatives thereof (foodstuff preparations A23L 1/05) **[2]**
37/06 • Pectin; Derivatives thereof **[2]**
37/08 • Chitin; Chondroitin sulfate; Hyaluronic acid; Derivatives thereof **[2]**
37/10 • Heparin; Derivatives thereof **[2]**
37/12 • Agar-agar; Derivatives thereof **[2]**
37/14 • Hemicellulose; Derivatives thereof **[2]**
37/16 • Cyclodextrin; Derivatives thereof **[2]**
37/18 • Reserve carbohydrates, e.g. glycogen, inulin, laminarin; Derivatives thereof **[4]**

C08C TREATMENT OR CHEMICAL MODIFICATION OF RUBBERS

Note(s)

This subclass covers:
- processes directed to natural rubber or to conjugated diene rubbers (synthesis thereof C08F);
- processes directed to rubbers in general (to a specific rubber, other than provided for above, C08F-C08H).

Preparation

1/00 Treatment of rubber latex
- 1/02 • Chemical or physical treatment of rubber latex before or during concentration
- 1/04 • • Purifying; Deproteinising
- 1/06 • • Preservation of rubber latex (preserving ingredients C08K)
- 1/065 • • Increasing the size of dispersed rubber particles **[2]**
- 1/07 • • • characterised by the agglomerating agents used **[2]**
- 1/075 • • Concentrating **[2]**
- 1/08 • • • with the aid of creaming agents **[2]**
- 1/10 • • • by centrifugation **[2]**
- 1/12 • • • by evaporation **[2]**
- 1/14 • Coagulation
- 1/15 • • characterised by the coagulants used **[2]**
- 1/16 • • in floc form

2/00 Treatment of rubber solutions [2]
- 2/02 • Purification **[2]**
- 2/04 • • Removal of catalyst residues **[2]**
- 2/06 • Winning of rubber from solutions **[2]**

3/00 Treatment of coagulated rubber
- 3/02 • Purification **[2]**

4/00 Treatment of rubber before vulcanisation, not provided for in groups C08C 1/00-C08C 3/02 [2]

19/00 Chemical modification of rubber (crosslinking agents, other than provided for by group C08C 19/30, C08K) **[2]**

Note(s)

In groups C08C 19/02-C08C 19/30 in the absence of an indication to the contrary, a process is classified in the last appropriate place.

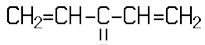
- 19/02 • Hydrogenation **[2]**
- 19/04 • Oxidation **[2]**
- 19/06 • • Epoxidation **[2]**
- 19/08 • Depolymerisation **[2]**
- 19/10 • Isomerisation; Cyclisation **[2]**
- 19/12 • Incorporating halogen atoms into the molecule **[2]**
- 19/14 • • by reaction with halogens **[2]**
- 19/16 • • by reaction with hydrogen halides **[2]**
- 19/18 • • by reaction with hydrocarbons substituted by halogen **[2]**
- 19/20 • Incorporating sulfur atoms into the molecule **[2]**
- 19/22 • Incorporating nitrogen atoms into the molecule **[2]**
- 19/24 • Incorporating phosphorus atoms into the molecule **[2]**
- 19/25 • Incorporating silicon atoms into the molecule **[5]**
- 19/26 • Incorporating metal atoms into the molecule **[2]**
- 19/28 • Reaction with compounds containing carbon-to-carbon unsaturated bonds (graft polymers C08F) **[2]**
- 19/30 • Addition of a reagent which reacts with a hetero atom or a group containing hetero atoms of the macromolecule **[2]**
- 19/32 • • reacting with halogens or halogen-containing groups **[2]**
- 19/34 • • reacting with oxygen or oxygen-containing groups **[2]**
- 19/36 • • • with carboxy radicals **[2]**
- 19/38 • • • with hydroxy radicals **[2]**
- 19/40 • • • with epoxy radicals **[2]**
- 19/42 • • reacting with metals or metal-containing groups **[2]**
- 19/44 • • • of polymers containing metal atoms exclusively at one or both ends of the skeleton **[2]**

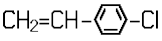
C08F MACROMOLECULAR COMPOUNDS OBTAINED BY REACTIONS ONLY INVOLVING CARBON-TO-CARBON UNSATURATED BONDS (production of liquid hydrocarbon mixtures from lower carbon number hydrocarbons, e.g. by oligomerisation, C10G 50/00; graft polymerisation of monomers containing carbon-to-carbon unsaturated bonds on to fibres, threads, yarns, fabrics or fibrous goods made from such materials D06M 14/00) **[2]**

Note(s)

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, 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; Catalysts

2/00 Processes of polymerisation [2]

2/01 • characterised by special features of the polymerisation apparatus used **[7]**

2/02 • Polymerisation in bulk **[2]**

2/04 • Polymerisation in solution (C08F 2/32 takes precedence) **[2]**

2/06 • • Organic solvent **[2]**

2/08 • • • with the aid of dispersing agents for the polymer **[2]**

2/10 • • Aqueous solvent **[2]**

2/12 • Polymerisation in non-solvents (C08F 2/32 takes precedence) **[2]**

2/14 • • Organic medium **[2]**

2/16 • • Aqueous medium **[2]**

2/18 • • • Suspension polymerisation **[2]**

2/20 • • • • with the aid of macromolecular dispersing agents **[2]**

2/22 • • • Emulsion polymerisation **[2]**

2/24 • • • • with the aid of emulsifying agents **[2]**

2/26 • • • • • anionic **[2]**

2/28 • • • • • cationic **[2]**
2/30 • • • • • non-ionic **[2]**
2/32 • Polymerisation in water-in-oil emulsions **[2]**
2/34 • Polymerisation in gaseous state **[2]**
2/36 • Polymerisation in solid state **[2]**
2/38 • Polymerisation using regulators, e.g. chain terminating agents **[2]**
2/40 • • using retarding agents **[2]**
2/42 • • using short-stopping agents **[2]**
2/44 • Polymerisation in the presence of compounding ingredients, e.g. plasticisers, dyestuffs, fillers **[2]**
2/46 • Polymerisation initiated by wave energy or particle radiation **[2]**
2/48 • • by ultra-violet or visible light **[2]**
2/50 • • • with sensitising agents **[2]**
2/52 • • by electric discharge, e.g. voltolisation **[2]**
2/54 • • by X-rays or electrons **[2]**
2/56 • • by ultrasonic vibrations **[2]**
2/58 • Polymerisation initiated by direct application of electric current (electrolytic processes, e.g. electrophoresis, C25) **[2]**
2/60 • Polymerisation by the diene synthesis **[2]**

4/00 **Polymerisation catalysts** (catalysts in general B01J) **[2]**
4/02 • Carriers therefor **[2]**

Note(s)

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]**
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]**
4/08 • • of alkali metals **[2]**
4/10 • • of alkaline earth metals, zinc, cadmium, mercury, copper, or silver **[2]**
4/12 • • of boron, aluminium, gallium, indium, thallium, or rare earths **[2]**
4/14 • • • Boron halides or aluminium halides; Complexes thereof with organic compounds containing oxygen **[2]**
4/16 • • of silicon, germanium, tin, lead, titanium, zirconium or hafnium **[2]**
4/18 • • • Oxides **[2]**
4/20 • • of antimony, bismuth, vanadium, niobium, or tantalum **[2]**
4/22 • • of chromium, molybdenum, or tungsten **[2]**
4/24 • • • Oxides **[2]**
4/26 • • of manganese, iron group metals, or platinum group metals **[2]**
4/28 • Oxygen or compounds releasing free oxygen (redox systems C08F 4/40) **[2]**
4/30 • • Inorganic compounds **[2]**
4/32 • • Organic compounds **[2]**
4/34 • • • Per-compounds with one peroxy-radical **[2]**
4/36 • • • Per-compounds with more than one peroxy-radical **[2]**
4/38 • • • Mixtures of peroxy-compounds **[2]**
4/40 • Redox systems **[2]**
4/42 • Metals; Metal hydrides; Metallo-organic compounds; Use thereof as catalyst precursors **[2]**
4/44 • • selected from light metals, zinc, cadmium, mercury, copper, silver, gold, boron, gallium, indium, thallium, rare earths, or actinides **[2]**
4/46 • • • selected from alkali metals **[2]**
4/48 • • • • selected from lithium, rubidium, caesium, or francium **[2]**
4/50 • • • selected from alkaline earth metals, zinc, cadmium, mercury, copper, or silver **[2]**
4/52 • • • selected from boron, aluminium, gallium, indium, thallium, or rare earths (C08F 4/14 takes precedence) **[2]**
4/54 • • • together with other compounds thereof **[2]**
4/56 • • • • Alkali metals being the only metals present, e.g. Alfin catalysts **[2]**
4/58 • • • together with silicon, germanium, tin, lead, antimony, bismuth, or compounds thereof **[2]**
4/60 • • • together with refractory metals, iron group metals, platinum group metals, manganese, technetium, rhenium, or compounds thereof **[2, 5]**

Note(s)

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]**
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]**
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]**
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]**
4/607 • • • • Catalysts containing a specific non-metal or metal-free compound **[5]**
4/608 • • • • • inorganic **[5]**
4/609 • • • • • organic **[5]**
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]**
4/611 • • • • • Pretreating with non-metals or metal-free compounds **[5]**
4/612 • • • • • Pretreating with metals or metal-containing compounds **[5]**
4/613 • • • • • • with metals covered by group C08F 4/60 or compounds thereof **[5]**
4/614 • • • • • • with magnesium or compounds thereof **[5]**
4/615 • • • • • • with aluminium or compounds thereof **[5]**
4/616 • • • • • • with silicon or compounds thereof **[5]**
4/617 • • • • • • with metals or metal-containing compounds, not provided for in groups C08F 4/613-C08F 4/616 **[5]**
4/618 • • • • • • with metals or metal-containing compounds, provided for in at least two of the groups C08F 4/613-C08F 4/617 **[5]**

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]**

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

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]**

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]**

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]**

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

4/628 • • • • • • inorganic **[5]**

4/629 • • • • • • organic **[5]**

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]**

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

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

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

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

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

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

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

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

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]**

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

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]**

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]**

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]**

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

4/648 • • • • • • • inorganic **[5]**

4/649 • • • • • • • organic **[5]**

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]**

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

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

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

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

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

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

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

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

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]**

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

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

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

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

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

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

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

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

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

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

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

6/02 • Neutralisation of the polymerisation mass, e.g. killing the catalyst (short-stopping C08F 2/42) **[2]**
6/04 • Fractionation **[2]**
6/06 • Treatment of polymer solutions **[2]**
6/08 • • Removal of catalyst residues **[2]**
6/10 • • Removal of volatile materials, e.g. monomers, solvents **[2]**
6/12 • • Separation of polymers from solutions **[2]**
6/14 • Treatment of polymer emulsions **[2]**
6/16 • • Purification **[2]**
6/18 • • Increasing the size of the dispersed particles **[2]**
6/20 • • Concentration **[2]**
6/22 • • Coagulation **[2]**
6/24 • Treatment of polymer suspensions **[2]**
6/26 • Treatment of polymers prepared in bulk **[2]**
6/28 • • Purification **[2]**

8/00 **Chemical modification by after-treatment** (graft polymers, block polymers, crosslinking with unsaturated monomers or with polymers C08F 251/00-C08F 299/00; of conjugated diene rubbers C08C; crosslinking in general C08J) **[2]**

Note(s)

In groups C08F 8/02-C08F 8/50, in the absence of an indication to the contrary, a process is classified in the last appropriate place.

8/02 • Alkylation **[2]**
8/04 • Reduction, e.g. hydrogenation **[2]**
8/06 • Oxidation **[2]**
8/08 • Epoxidation **[2]**
8/10 • Acylation **[2]**
8/12 • Hydrolysis **[2]**
8/14 • Esterification **[2]**
8/16 • • Lactonisation **[2]**
8/18 • Introducing halogen atoms or halogen-containing groups **[2]**
8/20 • • Halogenation **[2]**
8/22 • • • by reaction with free halogens **[2]**
8/24 • • Haloalkylation **[2]**
8/26 • Removing halogen atoms or halogen-containing groups from the molecule **[2]**
8/28 • Condensation with aldehydes or ketones **[2]**
8/30 • Introducing nitrogen atoms or nitrogen-containing groups (polymeric products of isocyanates or thiocyanates C08G) **[2]**
8/32 • • by reaction with amines **[2]**
8/34 • Introducing sulfur atoms or sulfur-containing groups **[2]**
8/36 • • Sulfonation; Sulfation **[2]**
8/38 • • Sulfohalogenation **[2]**
8/40 • Introducing phosphorus atoms or phosphorus-containing groups **[2]**
8/42 • Introducing metal atoms or metal-containing groups **[2]**
8/44 • Preparation of metal salts or ammonium salts **[2]**
8/46 • Reaction with unsaturated dicarboxylic acids or anhydrides thereof, e.g. maleinisation **[2]**
8/48 • Isomerisation; Cyclisation **[2]**
8/50 • Partial depolymerisation **[2]**

Homopolymers or copolymers [2]

10/00 **Homopolymers or copolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond [2]**

10/02 • Ethene **[2]**
10/04 • Monomers containing three or four carbon atoms **[2]**
10/06 • • Propene **[2]**
10/08 • • Butenes **[2]**
10/10 • • • Isobutene **[2]**
10/14 • Monomers containing five or more carbon atoms **[2]**

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]**

12/02 • Monomers containing only one unsaturated aliphatic radical **[2]**
12/04 • • containing one ring **[2]**
12/06 • • • Hydrocarbons **[2]**
12/08 • • • • Styrene **[2]**
12/12 • • • • containing a branched unsaturated aliphatic radical or an alkyl radical attached to the ring **[2]**
12/14 • • • substituted by hetero atoms or groups containing hetero atoms **[2]**
12/16 • • • • Halogens **[2]**
12/18 • • • • • Chlorine **[2]**
12/20 • • • • • Fluorine **[2]**
12/22 • • • • Oxygen **[2]**
12/24 • • • • • Phenols or alcohols **[2]**
12/26 • • • • Nitrogen **[2]**
12/28 • • • • • Amines **[2]**
12/30 • • • • Sulfur **[2]**
12/32 • • containing two or more rings **[2]**
12/34 • Monomers containing two or more unsaturated aliphatic radicals **[2]**
12/36 • • Divinylbenzene **[2]**

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]**

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

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]**

16/02 • by an alcohol radical **[2]**
16/04 • • Acyclic compounds **[2]**

16/06 • • • Polyvinyl alcohol **[2]**
16/08 • • • Allyl alcohol **[2]**
16/10 • • Carbocyclic compounds **[2]**
16/12 • by an ether radical **[2]**
16/14 • • Monomers containing only one unsaturated aliphatic radical **[2]**
16/16 • • • Monomers containing no hetero atoms other than the ether oxygen **[2]**
16/18 • • • • Acyclic compounds **[2]**
16/20 • • • • • Monomers containing three or more carbon atoms in the unsaturated aliphatic radical **[2]**
16/22 • • • • Carbocyclic compounds **[2]**
16/24 • • • Monomers containing halogen **[2]**
16/26 • • • Monomers containing oxygen atoms in addition to the ether oxygen **[2]**
16/28 • • • Monomers containing nitrogen **[2]**
16/30 • • • Monomers containing sulfur **[2]**
16/32 • • Monomers containing two or more unsaturated aliphatic radicals **[2]**
16/34 • by an aldehydo radical **[2]**
16/36 • by a ketonic radical **[2]**
16/38 • by an acetal or ketal radical **[2]**

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]

18/02 • Esters of monocarboxylic acids **[2]**
18/04 • • Vinyl esters **[2]**
18/06 • • • Vinyl formate **[2]**
18/08 • • • Vinyl acetate **[2]**
18/10 • • • of monocarboxylic acids containing three or more carbon atoms **[2]**
18/12 • • with unsaturated alcohols containing three or more carbon atoms **[2]**
18/14 • Esters of polycarboxylic acids **[2]**
18/16 • • with alcohols containing three or more carbon atoms **[2]**
18/18 • • • Diallyl phthalate **[2]**
18/20 • Esters containing halogen **[2]**
18/22 • Esters containing nitrogen **[2]**
18/24 • Esters of carbonic or haloformic acids **[2]**

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]

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

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]

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

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]**

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]

26/02 • by a single or double bond to nitrogen **[2]**
26/04 • • Diallylamine **[2]**
26/06 • by a heterocyclic ring containing nitrogen **[2]**
26/08 • • N-Vinyl-pyrrolidine **[2]**
26/10 • • N-Vinyl-pyrrolidone **[2]**
26/12 • • N-Vinyl-carbazole **[2]**

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]

28/02 • by a bond to sulfur **[2]**
28/04 • • Thioethers **[2]**
28/06 • by a heterocyclic ring containing sulfur **[2]**

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]**

30/02 • containing phosphorus **[2]**
30/04 • containing a metal **[2]**
30/06 • • containing boron **[2]**
30/08 • • containing silicon **[2]**
30/10 • • containing germanium **[2]**

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]

32/02 • having no condensed rings **[2]**
32/04 • • having one carbon-to-carbon double bond **[2]**
32/06 • • having two or more carbon-to-carbon double bonds **[2]**
32/08 • having condensed rings (coumarone-indene polymers C08F 244/00) **[2]**

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]**

34/02 • in a ring containing oxygen (coumarone-indene polymers C08F 244/00) **[2]**
34/04 • in a ring containing sulfur **[2]**

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]**

36/02 • the radical having only two carbon-to-carbon double bonds **[2]**
36/04 • • conjugated **[2]**
36/06 • • • Butadiene **[2]**
36/08 • • • Isoprene **[2]**
36/14 • • • containing elements other than carbon and hydrogen **[2]**
36/16 • • • • containing halogen **[2]**
36/18 • • • • • containing chlorine **[2]**
36/20 • • unconjugated **[2]**
36/22 • the radical having three or more carbon-to-carbon double bonds **[2]**

38/00 Homopolymers or copolymers of compounds having one or more carbon-to-carbon triple bonds [2]

38/02 • Acetylene **[2]**
38/04 • Vinylacetylene **[2]**

Homopolymers [2]

110/00 Homopolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond [2]

110/02 • Ethene **[2]**
110/04 • Monomers containing three or four carbon atoms **[2]**
110/06 • • Propene **[2]**
110/08 • • Butenes **[2]**
110/10 • • • Isobutene **[2]**
110/14 • Monomers containing five or more carbon atoms **[2]**

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]

112/02 • Monomers containing only one unsaturated aliphatic radical **[2]**
112/04 • • containing one ring **[2]**
112/06 • • • Hydrocarbons **[2]**
112/08 • • • • Styrene **[2]**
112/12 • • • • containing a branched unsaturated aliphatic radical or an alkyl radical attached to the ring **[2]**
112/14 • • • substituted by hetero atoms or groups containing hetero atoms **[2]**
112/32 • • containing two or more rings **[2]**
112/34 • Monomers containing two or more unsaturated aliphatic radicals **[2]**
112/36 • • Divinylbenzene **[2]**

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]

114/02 • Monomers containing chlorine **[2]**
114/04 • • Monomers containing two carbon atoms **[2]**
114/06 • • • Vinyl chloride **[2]**
114/08 • • • Vinylidene chloride **[2]**
114/12 • • • 1,2-Dichloroethene **[2]**
114/14 • • Monomers containing three or more carbon atoms **[2]**
114/16 • Monomers containing bromine or iodine **[2]**
114/18 • Monomers containing fluorine **[2]**
114/20 • • Vinyl fluoride **[2]**
114/22 • • Vinylidene fluoride **[2]**
114/24 • • Trifluorochloroethene **[2]**
114/26 • • Tetrafluoroethene **[2]**
114/28 • • Hexafluoropropene **[2]**

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]

116/02 • by an alcohol radical **[2]**
116/04 • • Acyclic compounds **[2]**

116/06 • • • Polyvinyl alcohol **[2]**
116/08 • • • Allyl alcohol **[2]**
116/10 • • Carbocyclic compounds **[2]**
116/12 • by an ether radical **[2]**
116/14 • • Monomers containing only one unsaturated aliphatic radical **[2]**
116/16 • • • Monomers containing no hetero atoms other than the ether oxygen **[2]**
116/18 • • • • Acyclic compounds **[2]**
116/20 • • • • • Monomers containing three or more carbon atoms in the unsaturated aliphatic radical **[2]**
116/34 • by an aldehydo radical **[2]**
116/36 • by a ketonic radical **[2]**
116/38 • by an acetal or ketal radical **[2]**

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]

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

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]

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

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]

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

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]**

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]

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

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]

128/02 • by a bond to sulfur **[2]**

128/04 • • Thioethers **[2]**

128/06 • by a heterocyclic ring containing sulfur **[2]**

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]**

130/02 • containing phosphorus **[2]**

130/04 • containing a metal **[2]**

130/06 • • containing boron **[2]**

130/08 • • containing silicon **[2]**

130/10 • • containing germanium **[2]**

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]

132/02 • having no condensed rings **[2]**

132/04 • • having one carbon-to-carbon double bond **[2]**

132/06 • • having two or more carbon-to-carbon double bonds **[2]**

132/08 • having condensed rings **[2]**

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]**

134/02 • in a ring containing oxygen **[2]**

134/04 • in a ring containing sulfur **[2]**

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]**

136/02 • the radical having only two carbon-to-carbon double bonds **[2]**

136/04 • • conjugated **[2]**

136/06 • • • Butadiene **[2]**

136/08 • • • Isoprene **[2]**

136/14 • • • containing elements other than carbon and hydrogen **[2]**

136/16 • • • • containing halogen **[2]**

136/18 • • • • • containing chlorine **[2]**

136/20 • • unconjugated **[2]**

136/22 • the radical having three or more carbon-to-carbon double bonds **[2]**

138/00 Homopolymers of compounds having one or more carbon-to-carbon triple bonds [2]

138/02 • Acetylene **[2]**

138/04 • Vinylacetylene **[2]**

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]

210/02 • Ethene **[2]**

210/04 • Monomers containing three or four carbon atoms **[2]**

210/06 • • Propene **[2]**

210/08 • • Butenes **[2]**

210/10 • • • Isobutene **[2]**

210/12 • • • • with conjugated diolefins, e.g. butyl rubber **[2]**

210/14 • Monomers containing five or more carbon atoms **[2]**

210/16 • Copolymers of ethene with alpha-alkenes, e.g. EP rubbers **[2]**

210/18 • • with non-conjugated dienes, e.g. EPT rubbers **[2]**

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]

212/02 • Monomers containing only one unsaturated aliphatic radical **[2]**

212/04 • • containing one ring **[2]**

212/06 • • • Hydrocarbons **[2]**

212/08 • • • • Styrene **[2]**

212/10 • • • • • with nitriles **[2]**

212/12 • • • • containing a branched unsaturated aliphatic radical or an alkyl radical attached to the ring **[2]**

212/14 • • • substituted by hetero atoms or groups containing hetero atoms **[2]**

212/32 • • containing two or more rings **[2]**

212/34 • Monomers containing two or more unsaturated aliphatic radicals **[2]**

212/36 • • Divinylbenzene **[2]**

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]

214/02 • Monomers containing chlorine **[2]**

214/04 • • Monomers containing two carbon atoms **[2]**

214/06 • • • Vinyl chloride **[2]**

214/08 • • • Vinylidene chloride **[2]**

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

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]

216/02 • by an alcohol radical **[2]**
216/04 • • Acyclic compounds **[2]**
216/06 • • • Polyvinyl alcohol **[2]**
216/08 • • • Allyl alcohol **[2]**
216/10 • • Carbocyclic compounds **[2]**
216/12 • by an ether radical **[2]**
216/14 • • Monomers containing only one unsaturated aliphatic radical **[2]**
216/16 • • • Monomers containing no hetero atoms other than the ether oxygen **[2]**
216/18 • • • • Acyclic compounds **[2]**
216/20 • • • • • Monomers containing three or more carbon atoms in the unsaturated aliphatic radical **[2]**
216/34 • by an aldehydo radical **[2]**
216/36 • by a ketonic radical **[2]**
216/38 • by an acetal or ketal radical **[2]**

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]

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

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]

220/02 • Monocarboxylic acids having less than ten carbon atoms; Derivatives thereof **[2]**
220/04 • • Acids; Metals salts or ammonium salts thereof **[2]**
220/06 • • • Acrylic acid; Methacrylic acid; Metal salts or ammonium salts thereof **[2]**
220/08 • • Anhydrides **[2]**
220/10 • • Esters **[2]**
220/12 • • • of monohydric alcohols or phenols **[2]**
220/14 • • • • Methyl esters **[2]**
220/16 • • • • of phenols or of alcohols containing two or more carbon atoms **[2]**
220/18 • • • • • with acrylic or methacrylic acids **[2]**
220/20 • • • of polyhydric alcohols or phenols **[2]**
220/22 • • • Esters containing halogen **[2]**
220/24 • • • • containing perhaloalkyl radicals **[2]**
220/26 • • • Esters containing oxygen in addition to the carboxy oxygen **[2]**
220/28 • • • • containing no aromatic rings in the alcohol moiety **[2]**
220/30 • • • • containing aromatic rings in the alcohol moiety **[2]**
220/32 • • • • containing epoxy radicals **[2]**
220/34 • • • Esters containing nitrogen **[2]**
220/36 • • • • containing oxygen in addition to the carboxy oxygen **[2]**
220/38 • • • Esters containing sulfur **[2]**
220/40 • • • Esters of unsaturated alcohols **[2]**
220/42 • • Nitriles **[2]**
220/44 • • • Acrylonitrile **[2]**
220/46 • • • • with carboxylic acids, sulfonic acids or salts thereof **[2]**
220/48 • • • • with nitrogen-containing monomers **[2]**
220/50 • • • containing four or more carbon atoms **[2]**
220/52 • • Amides or imides **[2]**
220/54 • • • Amides **[2]**
220/56 • • • • Acrylamide; Methacrylamide **[2]**
220/58 • • • • containing oxygen in addition to the carbonamido oxygen **[2]**
220/60 • • • • containing nitrogen in addition to the carbonamido nitrogen **[2]**
220/62 • Monocarboxylic acids having ten or more carbon atoms; Derivatives thereof (copolymers of drying-oils C08F 242/00) **[2]**
220/64 • • Acids; Metal salts or ammonium salts thereof **[2]**
220/66 • • Anhydrides **[2]**
220/68 • • Esters **[2]**
220/70 • • Nitriles; Amides; Imides **[2]**

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]

222/02 • Acids; Metal salts or ammonium salts thereof **[2]**
222/04 • Anhydrides, e.g. cyclic anhydrides **[2]**
222/06 • • Maleic anhydride **[2]**
222/08 • • • with vinyl aromatic monomers **[2]**
222/10 • Esters **[2]**
222/12 • • of phenols or saturated alcohols **[2]**
222/14 • • • Esters having no free carboxylic acid groups **[2]**
222/16 • • • Esters having free carboxylic acid groups **[2]**
222/18 • • • Esters containing halogen **[2]**
222/20 • • • Esters containing oxygen in addition to the carboxy oxygen **[2]**
222/22 • • • Esters containing nitrogen **[2]**
222/24 • • • Esters containing sulfur **[2]**
222/26 • • of unsaturated alcohols **[2]**
222/28 • • • Diallyl maleate **[2]**
222/30 • Nitriles **[2]**
222/32 • • Alpha-cyano-acrylic acid; Esters thereof **[2]**

222/34 • • Vinylidene cyanide **[2]**
222/36 • Amides or imides **[2]**
222/38 • • Amides **[2]**
222/40 • • Imides, e.g. cyclic imides **[2]**

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]**

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]

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

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]

228/02 • by a bond to sulfur **[2]**
228/04 • • Thioethers **[2]**
228/06 • by a heterocyclic ring containing sulfur **[2]**

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]**

230/02 • containing phosphorus **[2]**
230/04 • containing a metal **[2]**
230/06 • • containing boron **[2]**
230/08 • • containing silicon **[2]**
230/10 • • containing germanium **[2]**

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]

232/02 • having no condensed rings **[2]**
232/04 • • having one carbon-to-carbon double bond **[2]**
232/06 • • having two or more carbon-to-carbon double bonds **[2]**
232/08 • having condensed rings (coumarone-indene polymers C08F 244/00) **[2]**

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]**

234/02 • in a ring containing oxygen (coumarone-indene polymers C08F 244/00) **[2]**
234/04 • in a ring containing sulfur **[2]**

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]**

236/02 • the radical having only two carbon-to-carbon double bonds **[2]**
236/04 • • conjugated **[2]**
236/06 • • • Butadiene **[2]**
236/08 • • • Isoprene **[2]**
236/10 • • • with vinyl aromatic monomers **[2]**
236/12 • • • with nitriles **[2]**
236/14 • • • containing elements other than carbon and hydrogen **[2]**
236/16 • • • • containing halogen **[2]**
236/18 • • • • • containing chlorine **[2]**
236/20 • • unconjugated **[2]**
236/22 • the radical having three or more carbon-to-carbon double bonds **[2]**

238/00 Copolymers of compounds having one or more carbon-to-carbon triple bonds [2]

238/02 • Acetylene **[2]**
238/04 • Vinylacetylene **[2]**

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

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

244/00 Coumarone-indene copolymers [2]

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

Graft polymers; Polymers crosslinked with unsaturated monomers [2]

251/00 Macromolecular compounds obtained by polymerising monomers on to polysaccharides or derivatives thereof [2]

251/02 • on to cellulose or derivatives thereof **[2]**

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

255/00 Macromolecular compounds obtained by polymerising monomers on to polymers of hydrocarbons as defined in group C08F 10/00 [2]

255/02 • on to polymers of olefins having two or three carbon atoms **[2]**
255/04 • • on to ethene-propene copolymers **[2]**
255/06 • • on to ethene-propene-diene terpolymers **[2]**
255/08 • on to polymers of olefins having four or more carbon atoms **[2]**
255/10 • • on to butene polymers **[2]**

257/00 Macromolecular compounds obtained by polymerising monomers on to polymers of aromatic monomers as defined in group C08F 12/00 [2]

257/02 • on to polymers of styrene or alkyl-substituted styrenes **[2]**

259/00 Macromolecular compounds obtained by polymerising monomers on to polymers of halogen containing monomers as defined in group C08F 14/00 [2]

259/02 • on to polymers containing chlorine **[2]**

259/04 • • on to polymers of vinyl chloride **[2]**
259/06 • • on to polymers of vinylidene chloride **[2]**
259/08 • on to polymers containing fluorine **[2]**

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

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]
263/02 • on to polymers of vinyl esters with monocarboxylic acids **[2]**
263/04 • • on to polymers of vinyl acetate **[2]**
263/06 • on to polymers of esters with polycarboxylic acids **[2]**
263/08 • • Polymerisation of diallyl phthalate prepolymers **[2]**

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]
265/02 • on to polymers of acids, salts or anhydrides **[2]**
265/04 • on to polymers of esters **[2]**
265/06 • • Polymerisation of acrylate or methacrylate esters on to polymers thereof **[2]**
265/08 • on to polymers of nitriles **[2]**
265/10 • on to polymers of amides or imides **[2]**

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]
267/02 • on to polymers of acids or salts **[2]**
267/04 • on to polymers of anhydrides **[2]**
267/06 • on to polymers of esters **[2]**
267/08 • on to polymers of nitriles **[2]**
267/10 • on to polymers of amides or imides **[2]**

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

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

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

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]

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]

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]
279/02 • on to polymers of conjugated dienes **[2]**
279/04 • • Vinyl aromatic monomers and nitriles as the only monomers **[2]**
279/06 • • Vinyl aromatic monomers and methacrylates as the only monomers **[2]**

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]

283/00 Macromolecular compounds obtained by polymerising monomers on to polymers provided for in subclass C08G [4]
283/01 • on to unsaturated polyesters **[4]**
283/02 • on to polycarbonates or saturated polyesters **[2]**
283/04 • on to polycarbonamides, polyesteramides or polyimides **[2]**
283/06 • on to polyethers, polyoxymethylenes or polyacetals **[2]**
283/08 • • on to polyphenylene oxides **[2]**
283/10 • on to polymers containing more than one epoxy radical per molecule **[2]**
283/12 • on to polysiloxanes **[2]**
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]**

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

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

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

290/00 Macromolecular compounds obtained by polymerising monomers on to polymers modified by introduction of aliphatic unsaturated end or side groups [6]
290/02 • on to polymers modified by introduction of unsaturated end groups **[6]**
290/04 • • Polymers provided for in subclasses C08C or C08F **[6]**
290/06 • • Polymers provided for in subclass C08G **[6]**
290/08 • on to polymers modified by introduction of unsaturated side groups **[6]**
290/10 • • Polymers provided for in subclass C08B **[6]**
290/12 • • Polymers provided for in subclasses C08C or C08F **[6]**
290/14 • • Polymers provided for in subclass C08G **[6]**

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]

291/02 • on to elastomers **[2]**
291/04 • on to halogen-containing macromolecules **[2]**
291/06 • on to oxygen-containing macromolecules **[2]**
291/08 • • on to macromolecules containing hydroxy radicals **[2]**
291/10 • • on to macromolecules containing epoxy radicals **[2]**
291/12 • on to nitrogen-containing macromolecules **[2]**
291/14 • on to sulfur-containing macromolecules **[2]**
291/16 • on to macromolecules containing more than two metal atoms **[2]**
291/18 • on to irradiated or oxidised macromolecules (epoxidised C08F 291/10) **[2]**

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

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]**

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

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]

297/02 • using a catalyst of the anionic type **[2]**
297/04 • • polymerising vinyl aromatic monomers and conjugated dienes **[2]**
297/06 • using a catalyst of the coordination type **[2]**
297/08 • • polymerising mono-olefins **[2]**

299/00 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 C08F 251/00-C08F 291/00; involving other reactions C08G 81/00) **[2, 6]**

299/02 • from unsaturated polycondensates **[2]**
299/04 • • from polyesters **[2]**
299/06 • • from polyurethanes **[2]**
299/08 • • from polysiloxanes **[2]**

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

C08G MACROMOLECULAR COMPOUNDS OBTAINED OTHERWISE THAN BY REACTIONS ONLY INVOLVING CARBON-TO-CARBON UNSATURATED BONDS [2]

Note(s)

1. Therapeutic activity of compounds is further classified in subclass A61P.
2. In this subclass, group C08G 18/00 takes precedence over the other groups. A further classification is given if the polymers are obtained by reactions forming specific linkages for which an appropriate group is provided.
3. Within each main group of this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place.
4. This subclass covers also compositions based on monomers which form macromolecular compounds classifiable in this subclass. In this subclass:
   a. if the monomers are defined, classification is made in groups C08G 2/00-C08G 79/00, C08G 83/00 according to the polymer to be formed;
   b. if the monomers are defined in a way that a composition cannot be classified within one main group of this subclass, the composition is classified in group C08G 85/00;
   c. if the compounding ingredients are of interest per se, classification is also made in subclass C08K.

Subclass index

2/00 Addition polymers of aldehydes or cyclic oligomers thereof or of ketones; Addition copolymers thereof with less than 50 molar percent of other substances [2]

2/02 • Polymerisation initiated by wave energy or by particle radiation **[2]**
2/04 • Polymerisation by using compounds which act upon the molecular weight, e.g. chain-transferring agents **[2]**
2/06 • Catalysts (catalysts in general B01J) **[2]**
2/08 • Polymerisation of formaldehyde **[2]**
2/10 • Polymerisation of cyclic oligomers of formaldehyde **[2]**
2/12 • Polymerisation of acetaldehyde or cyclic oligomers thereof **[2]**
2/14 • Polymerisation of single aldehydes not provided for in groups C08G 2/08-C08G 2/12 **[2]**
2/16 • Polymerisation of single ketones **[2]**
2/18 • Copolymerisation of aldehydes or ketones **[2]**
2/20 • • with other aldehydes or ketones **[2]**
2/22 • • with epoxy compounds **[2]**
2/24 • • with acetals **[2]**
2/26 • • with compounds containing carbon-to-carbon unsaturation **[2]**
2/28 • Post-polymerisation treatments **[2]**
2/30 • Chemical modification by after-treatment **[2]**
2/32 • • by esterification **[2]**
2/34 • • by etherification **[2]**
2/36 • • by depolymerisation **[2]**
2/38 • Block or graft polymers prepared by polymerisation of aldehydes or ketones on to macromolecular compounds **[2]**

4/00 Condensation polymers of aldehydes or ketones with polyalcohols; Addition polymers of heterocyclic oxygen compounds containing in the ring at least once the grouping —O—C—O— (of cyclic oligomers of aldehydes C08G 2/00) **[2]**

6/00 Condensation polymers of aldehydes or ketones only [2]

6/02 • of aldehydes with ketones **[2]**

8/00 Condensation polymers of aldehydes or ketones with phenols only [2]

8/02 • of ketones **[2]**
8/04 • of aldehydes **[2]**
8/06 • • of furfural **[2]**
8/08 • • of formaldehyde, e.g. of formaldehyde formed in situ **[2]**
8/10 • • • with phenol **[2]**
8/12 • • • with monohydric phenols having only one hydrocarbon substituent ortho or para to the OH group, e.g. p-tert.-butyl phenol **[2]**
8/14 • • • with halogenated phenols **[2]**
8/16 • • • with amino- or nitrophenols **[2]**
8/18 • • • with phenols substituted by carboxylic or sulfonic acid groups **[2]**
8/20 • • • with polyhydric phenols **[2]**
8/22 • • • • Resorcinol **[2]**
8/24 • • • with mixtures of two or more phenols which are not covered by only one of the groups C08G 8/10-C08G 8/20 **[2]**
8/26 • from mixtures of aldehydes and ketones **[2]**
8/28 • Chemically modified polycondensates **[2]**
8/30 • • by unsaturated compounds, e.g. terpenes **[2]**
8/32 • • by organic acids or derivatives thereof, e.g. fatty oils **[2]**
8/34 • • by natural resins or resin acids, e.g. rosin **[2]**
8/36 • • by etherifying **[2]**
8/38 • Block or graft polymers prepared by polycondensation of aldehydes or ketones on to macromolecular compounds **[2]**

10/00 Condensation polymers of aldehydes or ketones with aromatic hydrocarbons or halogenated aromatic hydrocarbons only [2]

10/02 • of aldehydes **[2]**
10/04 • • Chemically modified polycondensates **[2]**
10/06 • Block or graft polymers prepared by polycondensation of aldehydes or ketones on to macromolecular compounds **[2]**

12/00 Condensation polymers of aldehydes or ketones with only compounds containing hydrogen attached to nitrogen (amino phenols C08G 8/16) **[2]**

12/02 • of aldehydes **[2]**
12/04 • • with acyclic or carbocyclic compounds **[2]**
12/06 • • • Amines **[2]**
12/08 • • • • aromatic **[2]**
12/10 • • • with acyclic compounds having the moiety X=C(—N<)$_2$ in which X is O, S, or —N **[2]**
12/12 • • • • Ureas; Thioureas **[2]**
12/14 • • • • Dicyandiamides; Dicyandiamidines; Guanidines; Biguanides; Biuret; Semicarbazides **[2]**
12/16 • • • • • Dicyandiamides **[2]**
12/18 • • • with cyanamide **[2]**
12/20 • • • with urethanes or thiourethanes **[2]**
12/22 • • • with carboxylic acid amides (reaction polyamides with aldehydes C08G 69/50) **[2]**
12/24 • • • with sulfonic acid amides **[2]**
12/26 • • with heterocyclic compounds **[2]**
12/28 • • • with substituted diazines, diazoles or triazoles **[2]**
12/30 • • • with substituted triazines **[2]**
12/32 • • • • Melamines **[2]**
12/34 • • • and acyclic or carbocyclic compounds **[2]**
12/36 • • • • Ureas; Thioureas **[2]**
12/38 • • • • • and melamines **[2]**
12/40 • • Chemically modified polycondensates **[2]**
12/42 • • • by etherifying **[2]**
12/44 • • • by esterifying **[2]**
12/46 • Block or graft polymers prepared by polycondensation of aldehydes or ketones on to macromolecular compounds **[2]**

14/00 Condensation polymers of aldehydes or ketones with two or more other monomers covered by at least two of the groups C08G 8/00-C08G 12/00 [2]

14/02 • of aldehydes **[2]**
14/04 • • with phenols **[2]**
14/06 • • • and monomers containing hydrogen attached to nitrogen **[2]**
14/067 • • • • Acyclic or carbocyclic monomers **[5]**
14/073 • • • • • Amines **[5]**
14/08 • • • • • Ureas; Thioureas **[2, 5]**
14/09 • • • • Heterocyclic monomers **[5]**
14/10 • • • • • Melamines **[2, 5]**
14/12 • • • Chemically modified polycondensates **[2]**

14/14 • Block or graft polymers prepared by polycondensation of aldehydes or ketones on to macromolecular compounds **[2]**

16/00 Condensation polymers of aldehydes or ketones with monomers not provided for in the groups C08G 4/00-C08G 14/00 (with polynitriles C08G 69/38) **[2]**

16/02 • of aldehydes **[2]**

16/04 • • Chemically modified polycondensates **[2]**

16/06 • Block or graft polymers prepared by polycondensation of aldehydes or ketones on to macromolecular compounds **[2]**

18/00 Polymeric products of isocyanates or isothiocyanates (preparatory processes of porous or cellular materials, in which the monomers or catalysts are not specific C08J) **[2]**

Note(s)

In this group, it is desirable to add the indexing code of group C08G 101/00.

18/02 • of isocyanates or isothiocyanates only **[2]**

18/04 • with vinyl compounds **[2]**

18/06 • with compounds having active hydrogen **[2]**

18/08 • • Processes **[2]**

18/09 • • • comprising oligomerisation of isocyanates or isothiocyanates involving reaction of a part of the isocyanate or isothiocyanate groups with each other in the reaction mixture (use of preformed oligomers C08G 18/79) **[7]**

18/10 • • • Prepolymer processes involving reaction of isocyanates or isothiocyanates with compounds having active hydrogen in a first reaction step (masked polyisocyanates C08G 18/80) **[2]**

18/12 • • • • using two or more compounds having active hydrogen in the first polymerisation step **[2]**

18/16 • • • Catalysts (catalysts in general B01J) **[2]**

18/18 • • • • containing secondary or tertiary amines or salts thereof **[2]**

18/20 • • • • • Heterocyclic amines; Salts thereof **[2]**

18/22 • • • • containing metal compounds **[2]**

18/24 • • • • • of tin **[2]**

18/26 • • • • • of lead **[2]**

18/28 • • characterised by the compounds used containing active hydrogen **[2]**

Note(s)

For the purpose of this group, the addition of water for the preparation of cellular materials is not taken into consideration.

18/30 • • • Low-molecular-weight compounds **[2]**

18/32 • • • • Polyhydroxy compounds; Polyamines; Hydroxy amines **[2]**

18/34 • • • • Carboxylic acids; Esters thereof with monohydroxyl compounds **[2]**

18/36 • • • • Hydroxylated esters of higher fatty acids **[2]**

18/38 • • • • having hetero atoms other than oxygen (C08G 18/32 takes precedence) **[2]**

18/40 • • • High-molecular-weight compounds **[2]**

18/42 • • • • Polycondensates having carboxylic or carbonic ester groups in the main chain **[2]**

18/44 • • • • • Polycarbonates **[2]**

18/46 • • • • • having hetero atoms other than oxygen **[2]**

18/48 • • • • Polyethers **[2]**

18/50 • • • • • having hetero atoms other than oxygen **[2]**

18/52 • • • • Polythioethers **[2]**

18/54 • • • • Polycondensates of aldehydes **[2]**

18/56 • • • • Polyacetals **[2]**

18/58 • • • • Epoxy resins **[2]**

18/60 • • • • Polyamides or polyester-amides **[2]**

18/61 • • • • Polysiloxanes **[2]**

18/62 • • • • Polymers of compounds having carbon-to-carbon double bonds **[2]**

18/63 • • • • Block or graft polymers obtained by polymerising compounds having carbon-to-carbon double bonds on to polymers **[2]**

18/64 • • • • Macromolecular compounds not provided for by groups C08G 18/42-C08G 18/63 **[2]**

18/65 • • • Low-molecular-weight compounds having active hydrogen with high-molecular-weight compounds having active hydrogen **[2]**

18/66 • • • • Compounds of groups C08G 18/42, C08G 18/48, or C08G 18/52 **[2]**

18/67 • • • Unsaturated compounds having active hydrogen **[2]**

18/68 • • • • Unsaturated polyesters **[2]**

18/69 • • • • Polymers of conjugated dienes **[2]**

18/70 • • characterised by the isocyanates or isothiocyanates used **[2]**

18/71 • • • Monoisocyanates or monoisothiocyanates **[2]**

18/72 • • • Polyisocyanates or polyisothiocyanates **[2]**

18/73 • • • • acyclic **[2]**

18/74 • • • • cyclic **[2]**

18/75 • • • • • cycloaliphatic **[2]**

18/76 • • • • • aromatic **[2]**

18/77 • • • • having hetero atoms in addition to the isocyanate or isothiocyanate nitrogen and oxygen or sulfur **[2]**

18/78 • • • • • Nitrogen **[2]**

18/79 • • • • • • characterised by the polyisocyanates used, these having groups formed by oligomerisation of isocyanates or isothiocyanates **[2]**

18/80 • • • • Masked polyisocyanates **[2]**

18/81 • • • Unsaturated isocyanates or isothiocyanates **[2]**

18/82 • • Post-polymerisation treatment **[2]**

18/83 • • Chemically modified polymers **[2]**

18/84 • • • by aldehydes **[2]**

18/85 • • • by azo compounds **[2]**

18/86 • • • by peroxides **[2]**

18/87 • • • by sulfur **[2]**

59/00 Polycondensates containing more than one epoxy group per molecule (low-molecular-weight polyepoxy compounds C07)**; Macromolecules obtained by reaction of epoxy polycondensates with monofunctional low-molecular-weight compounds; Macromolecules obtained by polymerising compounds containing more than one epoxy group per molecule using curing agents or catalysts which react with the epoxy groups [2]**

59/02 • Polycondensates containing more than one epoxy group per molecule **[2]**

59/04 • • of polyhydroxy compounds with epihalohydrins or precursors thereof **[2]**

59/06 • • • of polyhydric phenols **[2]**

59/08 • • • • from phenol-aldehyde condensates **[2]**

59/10 • • of polyamines with epihalohydrins or precursors thereof **[2]**

59/12 • • of polycarboxylic acids with epihalohydrins or precursors thereof **[2]**

59/14 • Polycondensates modified by chemical after-treatment **[2]**

59/16 • • by monocarboxylic acids or by anhydrides, halides or low-molecular-weight esters thereof **[2]**

59/17 • • • by acrylic or methacrylic acid **[4]**

59/18 • Macromolecules obtained by polymerising compounds containing more than one epoxy group per molecule using curing agents or catalysts which react with the epoxy groups **[2]**

59/20 • • characterised by the epoxy compounds used **[2]**

Note(s)

Preparation and curing of epoxy polycondensates, in which the epoxy polycondensate is not exclusively a low-molecular-weight compound and in which the method of curing is not important, are classified only in group C08G 59/02.

59/22 • • • Di-epoxy compounds **[2]**

59/24 • • • • carbocyclic **[2]**

59/26 • • • • heterocyclic **[2]**

59/28 • • • • containing acyclic nitrogen atoms **[2]**

59/30 • • • • containing atoms other than carbon, hydrogen, oxygen, and nitrogen **[2]**

59/32 • • • Epoxy compounds containing three or more epoxy groups **[2]**

59/34 • • • • obtained by epoxidation of an unsaturated polymer **[2]**

59/36 • • • • together with mono-epoxy compounds **[2]**

59/38 • • • • together with di-epoxy compounds **[2]**

59/40 • • characterised by the curing agents used **[2]**

59/42 • • • Polycarboxylic acids; Anhydrides, halides, or low-molecular-weight esters thereof **[2]**

59/44 • • • Amides **[2]**

59/46 • • • • together with other curing agents **[2]**

59/48 • • • • • with polycarboxylic acids or with anhydrides, halides, or low-molecular-weight esters thereof **[2]**

59/50 • • • Amines **[2]**

59/52 • • • • Amino carboxylic acids **[2]**

59/54 • • • • Amino amides **[2]**

59/56 • • • • together with other curing agents **[2]**

59/58 • • • • • with polycarboxylic acids or with anhydrides, halides, or low-molecular-weight esters thereof **[2]**

59/60 • • • • • with amides **[2]**

59/62 • • • Alcohols or phenols **[2]**

59/64 • • • • Amino alcohols **[2]**

59/66 • • • Mercaptans **[2]**

59/68 • • characterised by the catalysts used **[2]**

59/70 • • • Chelates **[2]**

59/72 • • • Complexes of boron halides **[2]**

Note(s)

In groups C08G 61/00-C08G 79/00, in the absence of an indication to the contrary, macromolecular compounds obtained by reactions forming two different linkages in the main chain are classified only according to the linkage present in excess.

61/00 Macromolecular compounds obtained by reactions forming a carbon-to-carbon link in the main chain of the macromolecule (C08G 2/00-C08G 16/00 take precedence) **[2]**

61/02 • Macromolecular compounds containing only carbon atoms in the main chain of the macromolecule, e.g. polyxylylenes **[2]**

61/04 • • only aliphatic carbon atoms **[2]**

61/06 • • • prepared by ring-opening of carbocyclic compounds **[2]**

61/08 • • • • of carbocyclic compounds containing one or more carbon-to-carbon double bonds in the ring **[2]**

61/10 • • only aromatic carbon atoms, e.g. polyphenylenes **[2]**

61/12 • Macromolecular compounds containing atoms other than carbon in the main chain of the macromolecule **[2]**

63/00 Macromolecular compounds obtained by reactions forming a carboxylic ester link in the main chain of the macromolecule (polyester-amides C08G 69/44; polyester-imides C08G 73/16) **[2, 5]**

Note(s)

Compounds characterised by the chemical constitution of the polyesters are classified in the groups for the type of polyester compound. Compounds characterised by the preparation process of the polyesters are classified in the groups for the process employed (groups C08G 63/78-C08G 63/87). Compounds characterised both by the chemical constitution and by the preparation process are classified according to each of these aspects.

63/02 • Polyesters derived from hydroxy carboxylic acids or from polycarboxylic acids and polyhydroxy compounds **[2]**

63/06 • • derived from hydroxy carboxylic acids **[2]**

63/08 • • • Lactones or lactides **[2]**

63/12 • • derived from polycarboxylic acids and polyhydroxy compounds **[2]**

63/123 • • • the acids or hydroxy compounds containing carbocyclic rings **[5]**

63/127 • • • • Acids containing aromatic rings **[5]**

63/13 • • • • • containing two or more aromatic rings **[5]**

63/133 • • • • Hydroxy compounds containing aromatic rings **[5]**

63/137 • • • • Acids or hydroxy compounds containing cycloaliphatic rings **[5]**

63/16 • • • Dicarboxylic acids and dihydroxy compounds **[2]**

63/18 • • • • the acids or hydroxy compounds containing carbocyclic rings **[2]**

63/181 • • • • • Acids containing aromatic rings **[5]**

63/183 • • • • • • Terephthalic acids **[5]**

63/185 • • • • • • containing two or more aromatic rings **[5]**

63/187 • • • • • • • • containing condensed aromatic rings **[5]**

63/189 • • • • • • • • • containing a naphthalene ring **[5]**

63/19 • • • • • Hydroxy compounds containing aromatic rings **[5]**

63/191 • • • • • • Hydroquinones **[5]**

63/193 • • • • • • containing two or more aromatic rings **[5]**

63/195 • • • • • • • Bisphenol A **[5]**

63/197 • • • • • • • containing condensed aromatic rings **[5]**

63/199 • • • • • Acids or hydroxy compounds containing cycloaliphatic rings **[5]**

63/20 • • • • Polyesters having been prepared in the presence of compounds having one reactive group or more than two reactive groups **[2]**

63/21 • • • • • in the presence of unsaturated monocarboxylic acids or unsaturated monohydric alcohols or reactive derivatives thereof **[5]**

63/40 • • • Polyesters derived from ester-forming derivatives of polycarboxylic acids or of polyhydroxy compounds, other than from esters thereof **[2]**

63/42 • • • • Cyclic ethers (C08G 59/00 takes precedence); Cyclic carbonates; Cyclic sulfites; Cyclic orthoesters **[2, 7]**

63/44 • • • • Polyamides; Polynitriles **[2]**

63/46 • • • Polyesters chemically modified by esterification (C08G 63/20 takes precedence; by after-treatment C08G 63/91) **[2]**

63/47 • • • • by unsaturated monocarboxylic acids or unsaturated monohydric alcohols or reactive derivatives thereof **[5]**

63/48 • • • • by unsaturated higher fatty oils or their acids; by resin acids **[2]**

63/49 • • • • • Alkyd resins **[5]**

63/50 • • • • by monohydric alcohols **[2]**

63/52 • • • Polycarboxylic acids or polyhydroxy compounds in which at least one of the two components contains aliphatic unsaturation **[2]**

63/54 • • • • the acids or hydroxy compounds containing carbocyclic rings **[2]**

63/547 • • • • • Hydroxy compounds containing aromatic rings **[5]**

63/553 • • • • • Acids or hydroxy compounds containing cycloaliphatic rings, e.g. Diels-Alder adducts **[5]**

63/56 • • • • Polyesters derived from ester-forming derivatives of polycarboxylic acids or of polyhydroxy compounds, other than from esters thereof **[2]**

63/58 • • • • • Cyclic ethers (C08G 59/00 takes precedence); Cyclic carbonates; Cyclic sulfites **[2]**

63/60 • • derived from the reaction of a mixture of hydroxy carboxylic acids, polycarboxylic acids and polyhydroxy compounds **[2]**

63/64 • Polyesters containing both carboxylic ester groups and carbonate groups **[2]**

63/66 • Polyesters containing oxygen in the form of ether groups (C08G 63/42, C08G 63/58 take precedence) **[2]**

63/664 • • derived from hydroxycarboxylic acids **[5]**

63/668 • • derived from polycarboxylic acids and polyhydroxy compounds **[5]**

63/672 • • • Dicarboxylic acids and dihydroxy compounds **[5]**

63/676 • • • in which at least one of the two components contains aliphatic unsaturation **[5]**

63/68 • Polyesters containing atoms other than carbon, hydrogen, and oxygen (C08G 63/64 takes precedence) **[4]**

63/682 • • containing halogens **[5]**

63/685 • • containing nitrogen **[5]**

63/688 • • containing sulfur **[5]**

63/692 • • containing phosphorus **[5]**

63/695 • • containing silicon **[5]**

63/698 • • containing boron **[5]**

63/78 • Preparation processes **[5]**

63/79 • • Interfacial processes, i.e. processes involving a reaction at the interface of two non-miscible liquids **[5]**

63/80 • • Solid-state polycondensation **[5]**

63/81 • • using solvents (C08G 63/79 takes precedence) **[5]**

63/82 • • characterised by the catalyst used **[5]**

63/83 • • • Alkali metals, alkaline earth metals, beryllium, magnesium, copper, silver, gold, zinc, cadmium, mercury, manganese, or compounds thereof **[5]**

63/84 • • • Boron, aluminium, gallium, indium, thallium, rare-earth metals, or compounds thereof **[5]**

63/85 • • • Germanium, tin, lead, arsenic, antimony, bismuth, titanium, zirconium, hafnium, vanadium, niobium, tantalum, or compounds thereof **[5]**

63/86 • • • • Germanium, antimony, or compounds thereof **[5]**

63/87 • • • Non-metals or inter-compounds thereof (boron C08G 63/84) **[5]**

63/88 • Post-polymerisation treatment **[5]**

63/89 • • Recovery of the polymer **[5]**

63/90 • • Purification; Drying **[5]**

63/91 • Polymers modified by chemical after-treatment **[5]**

64/00 Macromolecular compounds obtained by reactions forming a carbonic ester link in the main chain of the macromolecule (polycarbonate-amides C08G 69/44; polycarbonate-imides C08G 73/16) **[5]**

Note(s)

Polymers containing both carboxylic ester groups and carbonate groups are always classified in group C08G 63/64, even when the carbonate groups are present in excess.

64/02 • Aliphatic polycarbonates **[5]**

64/04 • Aromatic polycarbonates **[5]**

64/06 • • not containing aliphatic unsaturation **[5]**

64/08 • • • containing atoms other than carbon, hydrogen or oxygen **[5]**

64/10 • • • • containing halogens **[5]**

64/12 • • • • containing nitrogen **[5]**

64/14 • • • containing a chain-terminating or -crosslinking agent **[5]**

64/16 • Aliphatic-aromatic or araliphatic polycarbonates **[5]**

64/18 • Block or graft polymers **[5]**

64/20 • General preparatory processes **[5]**

64/22 • • using carbonyl halides **[5]**

64/24 • • • and phenols **[5]**

64/26 • • using halocarbonates **[5]**

64/28 • • • and phenols **[5]**

64/30 • • using carbonates **[5]**

64/32 • • using carbon dioxide **[5]**

64/34 • • • and cyclic ethers **[5]**

64/36 • • using carbon monoxide **[5]**

64/38 • • using other monomers **[5]**

64/40 • Post-polymerisation treatment **[5]**

64/42 • Chemical after-treatment **[5]**

65/00 Macromolecular compounds obtained by reactions forming an ether link in the main chain of the macromolecule (polyacetals C08G 2/00, C08G 4/00; epoxy resins C08G 59/00; polythioether-ethers C08G 75/12; polyethers containing less than eleven monomer units C07C) **[2]**

65/02 • from cyclic ethers by opening of the heterocyclic ring **[2]**

65/04 • • from cyclic ethers only **[2]**

65/06 • • • Cyclic ethers having no atoms other than carbon and hydrogen outside the ring **[2]**
65/08 • • • • Saturated oxiranes **[2]**
65/10 • • • • • characterised by the catalysts used **[2]**
65/12 • • • • • • containing organo-metallic compounds or metal hydrides **[2]**
65/14 • • • • Unsaturated oxiranes **[2]**
65/16 • • • • Cyclic ethers having four or more ring atoms **[2]**
65/18 • • • • • Oxetanes **[2]**
65/20 • • • • • Tetrahydrofuran **[2]**
65/22 • • • Cyclic ethers having at least one atom other than carbon and hydrogen outside the ring **[2]**
65/24 • • • • Epihalohydrins **[2]**
65/26 • • from cyclic ethers and other compounds **[2]**
65/28 • • • Cyclic ethers and hydroxy compounds **[2]**
65/30 • • Post-polymerisation treatment, e.g. recovery, purification, drying **[2]**
65/32 • • Polymers modified by chemical after-treatment **[2]**
65/321 • • • with inorganic compounds **[7]**
65/322 • • • • containing hydrogen **[7]**
65/323 • • • • containing halogens **[7]**
65/324 • • • • containing oxygen **[7]**
65/325 • • • • containing nitrogen **[7]**
65/326 • • • • containing sulfur **[7]**
65/327 • • • • containing phosphorus **[7]**
65/328 • • • • containing other elements **[7]**
65/329 • • • with organic compounds **[7]**
65/331 • • • • containing oxygen **[7]**
65/332 • • • • • containing carboxyl groups, or halides or esters thereof **[7]**
65/333 • • • • containing nitrogen **[7]**
65/334 • • • • containing sulfur **[7]**
65/335 • • • • containing phosphorus **[7]**
65/336 • • • • containing silicon **[7]**
65/337 • • • • containing other elements (organic compounds containing halogens only as halides of a carboxyl group C08G 65/332) **[7]**
65/338 • • • with inorganic and organic compounds **[7]**
65/34 • from hydroxy compounds or their metallic derivatives (C08G 65/28 takes precedence) **[2]**
65/36 • • Furfuryl alcohol **[2]**
65/38 • • derived from phenols **[2]**
65/40 • • • from phenols and other compounds **[2]**
65/42 • • • • Phenols and polyhydroxy ethers **[2]**
65/44 • • • by oxidation of phenols **[2]**
65/46 • • Post-polymerisation treatment, e.g. recovery, purification, drying **[2]**
65/48 • • Polymers modified by chemical after-treatment **[2]**

67/00 Macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing oxygen or oxygen and carbon, not provided for in groups C08G 2/00-C08G 65/00 [2]

67/02 • Copolymers of carbon monoxide and aliphatic unsaturated compounds **[2]**
67/04 • Polyanhydrides **[2]**

69/00 Macromolecular compounds obtained by reactions forming a carboxylic amide link in the main chain of the macromolecule (products obtained from isocyanates or isothiocyanates C08G 18/00; polyhydrazides C08G 73/08; polyamide acids C08G 73/10; polyamide-imides C08G 73/14) **[2]**

69/02 • Polyamides derived from amino carboxylic acids or from polyamines and polycarboxylic acids **[2]**
69/04 • • Preparatory processes **[2]**
69/06 • • • Solid state polycondensation **[2]**
69/08 • • derived from amino carboxylic acids **[2]**
69/10 • • • Alpha-amino-carboxylic acids **[2]**
69/12 • • • with both amino and carboxylic groups aromatically bound **[2]**
69/14 • • • Lactams **[2]**
69/16 • • • • Preparatory processes **[2]**
69/18 • • • • • Anionic polymerisation **[2]**
69/20 • • • • • • characterised by the catalysts used **[2]**
69/22 • • • • Beta-lactams **[2]**
69/24 • • • • Pyrrolidones or piperidones **[2]**
69/26 • • derived from polyamines and polycarboxylic acids **[2]**
69/28 • • • Preparatory processes **[2]**
69/30 • • • • Solid state polycondensation **[2]**
69/32 • • • from aromatic diamines and aromatic dicarboxylic acids with both amino and carboxylic groups aromatically bound **[2]**
69/34 • • • using polymerised unsaturated fatty acids **[2]**
69/36 • • derived from amino acids, polyamines, and polycarboxylic acids **[2]**
69/38 • Polyamides prepared from aldehydes and polynitriles **[2]**
69/40 • Polyamides containing oxygen in the form of ether groups (C08G 69/12, C08G 69/32 take precedence) **[2]**
69/42 • Polyamides containing atoms other than carbon, hydrogen, oxygen, and nitrogen (C08G 69/12, C08G 69/32 take precedence) **[2]**
69/44 • Polyester-amides **[2]**
69/46 • Post-polymerisation treatment **[2]**
69/48 • Polymers modified by chemical after-treatment **[2]**
69/50 • • with aldehydes **[2]**

71/00 Macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a ureide or urethane link, otherwise than from isocyanate radicals [2]

71/02 • Polyureas **[2]**
71/04 • Polyurethanes **[2]**

73/00 Macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing nitrogen, with or without oxygen or carbon, not provided for in groups C08G 12/00-C08G 71/00 [2]

73/02 • Polyamines (containing less than eleven monomer units C07C) **[2]**
73/04 • • derived from alkyleneimines **[2]**
73/06 • Polycondensates having nitrogen-containing heterocyclic rings in the main chain of the macromolecule; Polyhydrazides; Polyamide acids or similar polyimide precursors **[2]**
73/08 • • Polyhydrazides; Polytriazoles; Polyaminotriazoles; Polyoxadiazoles **[2]**
73/10 • • Polyimides; Polyester-imides; Polyamide-imides; Polyamide acids or similar polyimide precursors **[2]**
73/12 • • • Unsaturated polyimide precursors **[2]**
73/14 • • • Polyamide-imides **[2]**
73/16 • • • Polyester-imides **[2]**
73/18 • • Polybenzimidazoles **[2]**
73/20 • • Pyrrones **[2]**

73/22 • • Polybenzoxazoles **[2]**
73/24 • Copolymers of a fluoronitroso organic compound and another fluoro organic compound, e.g. nitroso rubbers **[2]**
73/26 • • of trifluoronitrosomethane with a fluoro-olefin **[2]**

75/00 Macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing sulfur, with or without nitrogen, oxygen, or carbon [2]
75/02 • Polythioethers **[2]**
75/04 • • from mercapto compounds or metallic derivatives thereof **[2]**
75/06 • • from cyclic thioethers **[2]**
75/08 • • • from thiiranes **[2]**
75/10 • • from sulfur or sulfur-containing compounds and aldehydes or ketones **[2]**
75/12 • Polythioether-ethers **[2]**
75/14 • Polysulfides **[2]**
75/16 • • by polycondensation of organic compounds with inorganic polysulfides **[2]**
75/18 • Polysulfoxides **[2]**
75/20 • Polysulfones **[2]**
75/22 • • Copolymers of sulfur dioxide with unsaturated aliphatic compounds **[2]**
75/23 • • Polyethersulfones **[2]**
75/24 • Polysulfonates **[2]**
75/26 • Polythioesters **[2]**
75/28 • Polythiocarbonates **[2]**
75/30 • Polysulfonamides; Polysulfonimides **[2]**
75/32 • Polythiazoles; Polythiadiazoles **[2]**

77/00 Macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing silicon, with or without sulfur, nitrogen, oxygen, or carbon [2]
77/02 • Polysilicates **[2]**
77/04 • Polysiloxanes **[2]**
77/06 • • Preparatory processes **[2]**
77/08 • • • characterised by the catalysts used **[2]**
77/10 • • • Equilibration processes **[2]**
77/12 • • containing silicon bound to hydrogen **[2]**
77/14 • • containing silicon bound to oxygen-containing groups **[2]**
77/16 • • • to hydroxy groups **[2]**
77/18 • • • to alkoxy or aryloxy groups **[2]**
77/20 • • containing silicon bound to unsaturated aliphatic groups **[2]**
77/22 • • containing silicon bound to organic groups containing atoms other than carbon, hydrogen, and oxygen **[2]**
77/24 • • • halogen-containing groups **[2]**
77/26 • • • nitrogen-containing groups **[2]**
77/28 • • • sulfur-containing groups **[2]**
77/30 • • • phosphorus-containing groups **[2]**
77/32 • • Post-polymerisation treatment (chemical after-treatment C08G 77/38) **[2]**
77/34 • • • Purification **[2]**
77/36 • • • Fractionation **[2]**
77/38 • • Polysiloxanes modified by chemical after-treatment **[2]**
77/382 • • • containing atoms other than carbon, hydrogen, oxygen or silicon **[5]**
77/385 • • • • containing halogens **[5]**
77/388 • • • • containing nitrogen **[5]**
77/392 • • • • containing sulfur **[5]**
77/395 • • • • containing phosphorus **[5]**
77/398 • • • • containing boron or metal atoms **[5]**
77/42 • Block- or graft-polymers containing polysiloxane sequences (polymerising aliphatic unsaturated monomers on to a polysiloxane C08F 283/12) **[2]**
77/44 • • containing only polysiloxane sequences **[2]**
77/442 • • containing vinyl polymer sequences **[5]**
77/445 • • containing polyester sequences **[5]**
77/448 • • containing polycarbonate sequences **[5]**
77/452 • • containing nitrogen-containing sequences **[5]**
77/455 • • • containing polyamide, polyesteramide or polyimide sequences **[5]**
77/458 • • • containing polyurethane sequences **[5]**
77/46 • • containing polyether sequences **[2]**
77/48 • in which at least two but not all the silicon atoms are connected by linkages other than oxygen atoms (C08G 77/42 takes precedence) **[2]**
77/50 • • by carbon linkages **[2]**
77/52 • • • containing aromatic rings **[2]**
77/54 • • Nitrogen-containing linkages **[2]**
77/56 • • Boron-containing linkages **[2]**
77/58 • • Metal-containing linkages **[2]**
77/60 • in which all the silicon atoms are connected by linkages other than oxygen atoms **[2]**
77/62 • • Nitrogen atoms **[2]**

79/00 Macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing atoms other than silicon, sulfur, nitrogen, oxygen, and carbon [2]
79/02 • a linkage containing phosphorus **[2]**
79/04 • • Phosphorus linked to oxygen or to oxygen and carbon **[2]**
79/06 • • Phosphorus linked to carbon only **[2]**
79/08 • a linkage containing boron **[2]**
79/10 • a linkage containing aluminium **[2]**
79/12 • a linkage containing tin **[2]**
79/14 • a linkage containing two or more elements other than carbon, oxygen, nitrogen, sulfur, and silicon **[2]**

81/00 Macromolecular compounds obtained by interreacting polymers in the absence of monomers, e.g. block polymers (involving only carbon-to-carbon unsaturated bond reactions C08F 299/00) **[2]**
81/02 • at least one of the polymers being obtained by reactions involving only carbon-to-carbon unsaturated bonds **[2]**

83/00 Macromolecular compounds not provided for in groups C08G 2/00-C08G 81/00 [2]

85/00 General processes for preparing compounds provided for in this subclass [2]

Indexing scheme associated with group C08G 18/00, relating to cellular products. [5]

101/00 Manufacture of cellular products [5]

C08G

C08H **DERIVATIVES OF NATURAL MACROMOLECULAR COMPOUNDS** (polysaccharides C08B; natural rubber C08C; natural resins or their derivatives C09F; bituminous materials C10)

Note(s)

Therapeutic activity of compounds is further classified in subclass A61P.

1/00 **Macromolecular products derived from proteins** (food proteins A23; glue, gelatine C09H)

1/02 • Protein-aldehyde condensates
1/04 • • Casein-aldehyde condensates
1/06 • derived from horn, hoofs, hair, skin, or leather

3/00 **Vulcanised oils, e.g. factice**

6/00 **Macromolecular compounds derived from lignin [2010.01]**

7/00 ***Lignin; Modified lignin; High-molecular-weight products derived therefrom*** *(low-molecular-weight derivatives of lignin C07G 1/00)* ***[2011.01]***

8/00 **Macromolecular compounds derived from lignocellulosic materials [2010.01]**

99/00 **Subject matter not provided for in other groups of this subclass [2010.01]**

C08J **WORKING-UP; GENERAL PROCESSES OF COMPOUNDING; AFTER-TREATMENT NOT COVERED BY SUBCLASSES C08B, C08C, C08F, C08G or C08H** (working, e.g. shaping, of plastics B29) **[2]**

Note(s)

1. This subclass covers processes, not covered by subclasses C08B-C08H, for treating polymers.
2. In this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place.
3. When classifying in this subclass, additional classification may be made in class C08L relating to the materials used.

3/00 **Processes of treating or compounding macromolecular substances [2]**

3/02 • Making solutions, dispersions, lattices or gels by other methods than by solution, emulsion or suspension polymerisation techniques **[2]**
3/03 • • in aqueous media **[5]**
3/05 • • • from solid polymers **[5]**
3/07 • • • from polymer solutions **[5]**
3/075 • • • Macromolecular gels **[6]**
3/09 • • in organic liquids **[5]**
3/11 • • • from solid polymers **[5]**
3/12 • Powdering or granulating **[2]**
3/14 • • by precipitation from solutions **[2]**
3/16 • • by coagulating dispersions **[2]**
3/18 • Plasticising macromolecular compounds (plasticisers C08K) **[2]**
3/20 • Compounding polymers with additives, e.g. colouring **[2]**
3/205 • • in the presence of a liquid phase **[5]**
3/21 • • • the polymer being premixed with a liquid phase **[5]**
3/215 • • • • at least one additive being also premixed with a liquid phase **[5]**
3/22 • • using masterbatch techniques **[2]**
3/24 • Crosslinking, e.g. vulcanising, of macromolecules (mechanical aspects B29C 35/00; crosslinking agents C08K) **[2]**
3/26 • • of latex **[2]**
3/28 • Treatment by wave energy or particle radiation **[2]**

5/00 **Manufacture of articles or shaped materials containing macromolecular substances** (manufacture of semi-permeable membranes B01D 67/00-B01D 71/00) **[2]**

5/02 • Direct processing of dispersions, e.g. latex, to articles **[2]**
5/04 • Reinforcing macromolecular compounds with loose or coherent fibrous material **[2]**
5/06 • • using pretreated fibrous materials **[2]**
5/08 • • • glass fibres **[2]**
5/10 • • characterised by the additives used in the polymer mixture **[2]**
5/12 • Bonding of a preformed macromolecular material to the same or other solid material such as metal, glass, leather, e.g. using adhesives **[2]**
5/14 • Manufacture of abrasive or friction articles or materials **[2]**
5/16 • Manufacture of articles or materials having reduced friction **[2]**
5/18 • Manufacture of films or sheets **[2]**
5/20 • Manufacture of shaped structures of ion-exchange resins **[2]**
5/22 • • Films, membranes or diaphragms **[2]**
5/24 • Impregnating materials with prepolymers which can be polymerised in situ, e.g. manufacture of prepregs **[2]**

7/00 **Chemical treatment or coating of shaped articles made of macromolecular substances** (coating with metallic material C23C; electrolytic deposition of metals C25) **[2]**

7/02 • with solvents, e.g. swelling agents **[2]**
7/04 • Coating **[2]**
7/06 • • with compositions not containing macromolecular substances **[2]**
7/12 • Chemical modification **[2]**
7/14 • • with acids, their salts or anhydrides **[2]**
7/16 • • with polymerisable compounds **[2]**
7/18 • • • using wave energy or particle radiation **[2]**

9/00 **Working-up of macromolecular substances to porous or cellular articles or materials; After-treatment thereof** (mechanical aspects of shaping of plastics or substances in a plastic state for the production of porous or cellular articles B29C) **[2]**

9/02 • using blowing gases generated by the reacting monomers or modifying agents during the preparation or modification of macromolecules **[2]**

9/04 • using blowing gases generated by a previously added blowing agent **[2]**

9/06 • • by a chemical blowing agent **[2]**

9/08 • • • developing carbon dioxide **[2]**

9/10 • • • developing nitrogen **[2]**

9/12 • • by a physical blowing agent **[2]**

9/14 • • • organic **[2]**

Note(s)

In groups C08J 9/16-C08J 9/22, the following term is used with the meaning indicated:

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

9/16 • Making expandable particles **[2, 5]**

9/18 • • by impregnating polymer particles with the blowing agent **[2]**

9/20 • • by suspension polymerisation in the presence of the blowing agent **[2]**

9/22 • After-treatment of expandable particles; Forming foamed products **[2, 5]**

9/224 • • Surface treatment **[5]**

9/228 • • Forming foamed products **[5]**

9/232 • • • by sintering expandable particles **[5]**

9/236 • • • using binding agents **[5]**

9/24 • by surface fusion and bonding of particles to form voids, e.g. sintering (of expandable particles C08J 9/232) **[2, 5]**

9/26 • by elimination of a solid phase from a macromolecular composition or article, e.g. leaching out **[2]**

9/28 • by elimination of a liquid phase from a macromolecular composition or article, e.g. drying of coagulum **[2]**

9/30 • by mixing gases into liquid compositions or plastisols, e.g. frothing with air **[2]**

9/32 • from compositions containing micro-balloons, e.g. syntactic foams **[2]**

9/33 • Agglomerating foam fragments, e.g. waste foam **[5]**

9/34 • Chemical features in the manufacture of articles consisting of a foamed macromolecular core and a macromolecular surface layer having a higher density than the core **[2]**

9/35 • Composite foams, i.e. continuous macromolecular foams containing discontinuous cellular particles or fragments **[5]**

9/36 • After-treatment (C08J 9/22 takes precedence) **[2, 5]**

9/38 • • Destruction of cell membranes **[2]**

9/40 • • Impregnation **[2]**

9/42 • • • with macromolecular compounds **[2]**

11/00 **Recovery or working-up of waste materials** (recovery of plastics B29B 17/00; polymerisation processes involving purification or recycling of waste polymers or their depolymerisation products C08B, C08C, C08F, C08G, C08H) **[4]**

11/02 • of solvents, plasticisers or unreacted monomers **[4]**

11/04 • of polymers **[2]**

11/06 • • without chemical reactions **[4]**

11/08 • • • using selective solvents for polymer components **[4]**

11/10 • • by chemically breaking down the molecular chains of polymers or breaking of crosslinks, e.g. devulcanisation (depolymerisation to the original monomer C07) **[4]**

11/12 • • • by dry-heat treatment only **[4]**

11/14 • • • by treatment with steam or water **[4]**

11/16 • • • by treatment with inorganic material (C08J 11/14 takes precedence) **[4]**

11/18 • • • by treatment with organic material **[4]**

11/20 • • • • by treatment with hydrocarbons or halogenated hydrocarbons **[4]**

11/22 • • • • by treatment with organic oxygen-containing compounds **[4]**

11/24 • • • • • containing hydroxyl groups **[4]**

11/26 • • • • • containing carboxylic acid groups, their anhydrides or esters **[4]**

11/28 • • • • by treatment with organic compounds containing nitrogen, sulfur or phosphorus **[4]**

99/00 **Subject matter not provided for in other groups of this subclass [2006.01]**

C08K **USE OF INORGANIC OR NON-MACROMOLECULAR ORGANIC SUBSTANCES AS COMPOUNDING INGREDIENTS** (paints, inks, varnishes, dyes, polishes, adhesives C09) **[2]**

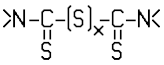
Note(s)

1. In this subclass, in the absence of an indication to the contrary, an ingredient is classified in the last appropriate place.
2. In this subclass:
   - a mixture of ingredients is classified in the most indented group covering all the essential ingredients of the mixture, e.g.:
     a mixture of a monohydroxylic and a polyhydroxylic alcohol C08K 5/05;
     a mixture of two polyhydroxylic alcohols C08K 5/053;
     a mixture of an alcohol and an ether C08K 5/04;
     a mixture of an ether and an amine C08K 5/00;
     a mixture of an amine and a metal C08K 13/02;
   - ammonium salts are classified in the same way as metal salts.
3. In this subclass, any ingredient of a mixture which is not identified by the classification according to Note (2) above, and the use of which is determined to be novel and non-obvious, must also be classified in this subclass according to Note (1). The ingredient can be either a single compound or a composition in itself.

4. Any ingredient of a mixture which is not identified by the classification according to Notes (2) or (3) above, and which is considered to represent information of interest for search, may also be classified in this subclass according to Note (1). This can, for example, be the case when it is considered of interest to enable searching of mixtures using a combination of classification symbols. Such non-obligatory classification should be given as "additional information".

3/00 Use of inorganic ingredients [2]
3/02 • Elements **[2]**
3/04 • • Carbon **[2]**
3/06 • • Sulfur **[2]**
3/08 • • Metals **[2]**
3/10 • Metal compounds **[2]**
3/12 • • Hydrides **[2]**
3/14 • • Carbides **[2]**
3/16 • Halogen-containing compounds **[2]**
3/18 • Oxygen-containing compounds, e.g. metal carbonyls **[2]**
3/20 • • Oxides; Hydroxides **[2]**
3/22 • • • of metals **[2]**
3/24 • • Acids; Salts thereof **[2]**
3/26 • • • Carbonates; Bicarbonates **[2]**
3/28 • Nitrogen-containing compounds **[2]**
3/30 • Sulfur-, selenium-, or tellurium-containing compounds **[2]**
3/32 • Phosphorus-containing compounds **[2]**
3/34 • Silicon-containing compounds **[2]**
3/36 • • Silica **[2]**
3/38 • Boron-containing compounds **[2]**
3/40 • Glass **[2]**

5/00 Use of organic ingredients [2]
5/01 • Hydrocarbons **[2]**
5/02 • Halogenated hydrocarbons **[2]**
5/03 • • aromatic **[2]**
5/04 • Oxygen-containing compounds **[2]**
5/05 • • Alcohols; Metal alcoholates **[2]**
5/053 • • • Polyhydroxylic alcohols **[6]**
5/057 • • • Metal alcoholates **[6]**
5/06 • • Ethers; Acetals; Ketals; Ortho-esters **[2]**
5/07 • • Aldehydes; Ketones **[2]**
5/08 • • • Quinones **[2]**
5/09 • • Carboxylic acids; Metal salts thereof; Anhydrides thereof **[2]**
5/092 • • • Polycarboxylic acids **[6]**
5/095 • • • Carboxylic acids containing halogens **[6]**
5/098 • • • Metal salts of carboxylic acids **[6]**
5/10 • • Esters; Ether-esters **[2]**
5/101 • • • of monocarboxylic acids **[6]**
5/103 • • • • with polyalcohols **[6]**
5/105 • • • • with phenols **[6]**
5/107 • • • • • with polyphenols **[6]**
5/109 • • • of carbonic acid **[6]**
5/11 • • • of acyclic polycarboxylic acids **[2]**
5/12 • • • of cyclic polycarboxylic acids **[2]**
5/13 • • Phenols; Phenolates **[2]**
5/132 • • • Phenols containing keto groups **[6]**
5/134 • • • Phenols containing ester groups **[6]**
5/136 • • • Phenols containing halogens **[6]**
5/138 • • • Phenolates **[6]**
5/14 • • Peroxides **[2]**
5/15 • • Heterocyclic compounds having oxygen in the ring **[2]**
5/151 • • • having one oxygen atom in the ring **[7]**
5/1515 • • • • Three-membered rings **[7]**
5/1525 • • • • Four-membered rings **[7]**
5/1535 • • • • Five-membered rings **[7]**
5/1539 • • • • • Cyclic anhydrides **[7]**
5/1545 • • • • Six-membered rings **[7]**
5/156 • • • having two oxygen atoms in the ring **[7]**
5/1565 • • • • Five-membered rings **[7]**
5/1575 • • • • Six-membered rings **[7]**
5/159 • • • having more than two oxygen atoms in the ring **[7]**
5/16 • Nitrogen-containing compounds **[2]**
5/17 • • Amines; Quaternary ammonium compounds **[2]**
5/18 • • • with aromatically bound amino groups **[2]**
5/19 • • • Quaternary ammonium compounds **[2]**
5/20 • • Carboxylic acid amides **[2]**
5/205 • • Compounds containing  groups, e.g. carbamates **[6]**
5/21 • • Urea; Derivatives thereof, e.g. biuret **[2]**
5/22 • • Compounds containing nitrogen bound to another nitrogen atom **[2]**
5/23 • • • Azo-compounds **[2]**
5/24 • • • Derivatives of hydrazine **[2]**
5/25 • • • • Carboxylic acid hydrazides **[2]**
5/26 • • • • Semicarbazides **[2]**
5/27 • • • Compounds containing a nitrogen atom bound to two other nitrogen atoms, e.g. diazoamino-compounds **[2]**
5/28 • • • • Azides **[2]**
5/29 • • Compounds containing carbon-to-nitrogen double bonds **[2]**
5/30 • • • Hydrazones; Semicarbazones **[2]**
5/31 • • • Guanidine; Derivatives thereof **[2]**
5/315 • • Compounds containing carbon-to-nitrogen triple bonds **[6]**
5/32 • • Compounds containing nitrogen bound to oxygen **[2]**
5/33 • • • Oximes **[2]**
5/34 • • Heterocyclic compounds having nitrogen in the ring **[2]**
5/3412 • • • having one nitrogen atom in the ring **[5]**
5/3415 • • • • Five-membered rings **[5]**
5/3417 • • • • • condensed with carbocyclic rings **[5]**
5/3432 • • • • Six-membered rings **[5]**
5/3435 • • • • • Piperidines **[5]**
5/3437 • • • • • condensed with carbocyclic rings **[5]**
5/3442 • • • having two nitrogen atoms in the ring **[5]**
5/3445 • • • • Five-membered rings **[5]**
5/3447 • • • • • condensed with carbocyclic rings **[5]**
5/3462 • • • • Six-membered rings **[5]**
5/3465 • • • • • condensed with carbocyclic rings **[5]**
5/3467 • • • having more than two nitrogen atoms in the ring **[5]**
5/3472 • • • • Five-membered rings **[5]**
5/3475 • • • • • condensed with carbocyclic rings **[5]**
5/3477 • • • • Six-membered rings **[5]**
5/3492 • • • • • Triazines **[5]**
5/3495 • • • • • condensed with carbocyclic rings **[5]**
5/35 • • • having also oxygen in the ring **[2]**
5/353 • • • • Five-membered rings **[5]**
5/357 • • • • Six-membered rings **[5]**

5/36 • Sulfur-, selenium-, or tellurium-containing compounds **[2]**
5/37 • • Thiols **[2, 7]**
5/372 • • Sulfides **[6, 7]**
5/375 • • • containing six-membered aromatic rings **[6, 7]**
5/378 • • • containing heterocyclic rings **[6, 7]**
5/38 • • Thiocarbonic acids; Derivatives thereof, e.g. xanthates **[2]**
5/39 • • Thiocarbamic acids; Derivatives thereof, e.g. dithiocarbamates **[2]**
5/40 • • • Thiuramsulfides; Thiurampolysulfides, e.g.  compounds containing groups **[2]**
5/405 • • Thioureas; Derivatives thereof **[6]**
5/41 • • Compounds containing sulfur bound to oxygen **[2]**
5/42 • • • Sulfonic acids; Derivatives thereof **[2]**
5/43 • • Compounds containing sulfur bound to nitrogen **[2]**
5/435 • • • Sulfonamides **[6]**
5/44 • • • Sulfenamides **[2]**
5/45 • • Heterocyclic compounds having sulfur in the ring **[2]**
5/46 • • • with oxygen or nitrogen in the ring **[2]**
5/47 • • • • Thiazoles **[2]**
5/48 • • Selenium- or tellurium-containing compounds **[2]**
5/49 • Phosphorus-containing compounds **[2]**
5/50 • • Phosphorus bound to carbon only **[2, 5]**
5/51 • • Phosphorus bound to oxygen **[2]**
5/52 • • • bound to oxygen only **[2]**
5/521 • • • • Esters of phosphoric acids, e.g. of H_3PO_4 **[5]**
5/523 • • • • • with hydroxyaryl compounds **[5]**
5/524 • • • • Esters of phosphorous acids, e.g. of H_3PO_3 **[5]**
5/526 • • • • • with hydroxyaryl compounds **[5]**
5/527 • • • • Cyclic esters **[5]**
5/529 • • • • Esters containing heterocyclic rings not representing cyclic esters of phosphoric or phosphorous acids **[5]**
5/53 • • • bound to oxygen and to carbon only **[2, 5]**
5/5313 • • • • Phosphinic compounds, e.g. R_2=P(:O)OR' **[5]**
5/5317 • • • • Phosphonic compounds, e.g. R—P(:O)$(OR')_2$ **[5]**
5/5333 • • • • • Esters of phosphonic acids **[5]**
5/5337 • • • • • • containing also halogens **[5]**
5/5353 • • • • • • containing also nitrogen **[5]**
5/5357 • • • • • • cyclic **[5]**
5/5373 • • • • • • containing heterocyclic rings not representing cyclic esters of phosphonic acids **[5]**
5/5377 • • • • Phosphinous compounds, e.g. R_2=P—OR' **[5]**
5/5393 • • • • Phosphonous compounds, e.g. R—$P(OR')_2$ **[5]**
5/5397 • • • • Phosphine oxides **[5]**
5/5398 • • Phosphorus bound to sulfur **[5]**
5/5399 • • Phosphorus bound to nitrogen **[5]**
5/54 • Silicon-containing compounds **[2]**
5/541 • • containing oxygen **[7]**
5/5415 • • • containing at least one Si—O bond **[7]**
5/5419 • • • • containing at least one Si—C bond **[7]**
5/5425 • • • containing at least one C=C bond **[7]**
5/5435 • • • containing oxygen in a ring **[7]**
5/544 • • containing nitrogen **[7]**
5/5445 • • • containing at least one Si—N bond **[7]**
5/5455 • • • containing at least one  group **[7]**
5/5465 • • • containing at least one C=N bond **[7]**
5/5475 • • • containing at least one C≡N bond **[7]**
5/548 • • containing sulfur **[7]**
5/549 • • containing silicon in a ring **[7]**
5/55 • Boron-containing compounds **[2]**
5/56 • Organo-metallic compounds, i.e. organic compounds containing a metal-to-carbon bond **[2]**
5/57 • • Organo-tin compounds **[2]**
5/58 • • • containing sulfur **[2]**
5/59 • Arsenic- or antimony-containing compounds **[2]**

7/00 **Use of ingredients characterised by shape [2]**
7/02 • Fibres or whiskers **[2]**
7/04 • • inorganic **[2]**
7/06 • • • Elements **[2]**
7/08 • • • Oxygen-containing compounds **[2]**
7/10 • • • Silicon-containing compounds **[2]**
7/12 • • • • Asbestos **[2]**
7/14 • • • Glass **[2]**
7/16 • Solid spheres **[2]**
7/18 • • inorganic **[2]**
7/20 • • • Glass **[2]**
7/22 • Expanded, porous or hollow particles **[2]**
7/24 • • inorganic **[2]**
7/26 • • • Silicon-containing compounds **[2]**
7/28 • • • Glass **[2]**

9/00 **Use of pretreated ingredients** (use of pretreated fibrous materials in the manufacture of articles or shaped materials containing macromolecular substances C08J 5/06) **[2]**
9/02 • Ingredients treated with inorganic substances **[2]**
9/04 • Ingredients treated with organic substances **[2]**
9/06 • • with silicon-containing compounds **[2]**
9/08 • Ingredients agglomerated by treatment with a binding agent **[2]**
9/10 • Encapsulated ingredients **[2]**
9/12 • Adsorbed ingredients **[2]**

11/00 **Use of ingredients of unknown constitution, e.g. undefined reaction products [2]**

13/00 **Use of mixtures of ingredients not covered by any single one of main groups C08K 3/00-C08K 11/00, each of these compounds being essential [4]**
13/02 • Organic and inorganic ingredients **[4]**
13/04 • Ingredients characterised by their shape and organic or inorganic ingredients **[4]**
13/06 • Pretreated ingredients and ingredients covered by the main groups C08K 3/00-C08K 7/00 **[4]**
13/08 • Ingredients of unknown constitution and ingredients covered by the main groups C08K 3/00-C08K 9/00 **[4]**

C08K

C08L **COMPOSITIONS OF MACROMOLECULAR COMPOUNDS** (pesticides, herbicides A01N; pharmaceuticals, cosmetics A61K; explosives C06B; compositions based on polymerisable monomers C08F, C08G; paints, inks, varnishes, dyes, polishes, adhesives C09; lubricants C10M; detergents C11D; artificial filaments or fibres D01F; textile treating compositions D06) **[2]**

Note(s)

1. In this subclass, the following term is used with the meaning indicated:
   - "rubber" includes:
     a. natural or conjugated diene rubbers;
     b. rubber in general (for a specific rubber, other than a natural rubber or a conjugated diene rubber, see the group provided for compositions of such macromolecular compounds).
2. In this subclass:
   a. compositions are classified according to the mutual proportions by weight of only the macromolecular constituents;
   b. compositions are classified according to the macromolecular constituent or constituents present in the highest proportion; if all these constituents are present in equal proportions the composition is classified according to each of these constituents.
3. Any macromolecular constituent of a composition which is not identified by the classification according to Note (2) above, and the use of which is determined to be novel and non-obvious, must also be classified in this subclass. For example, a composition containing 80 parts polyethene and 20 parts polyvinyl chloride is classified in both groups C08L 23/06 and C08L 27/06, if the use of polyvinyl chloride is determined to be novel and non-obvious.
4. Any macromolecular constituent of a composition which is not identified by the classification according to Notes (2) or (3) above, and which is considered to represent information of interest for search, may also be classified in this subclass. This can, for example, be the case when it is considered of interest to enable searching of compositions using a combination of classification symbols. Such non-obligatory classification should be given as "additional information".

Subclass index

Compositions of polysaccharides or of their derivatives [2]

1/00 Compositions of cellulose, modified cellulose, or cellulose derivatives [2]

1/02 • Cellulose; Modified cellulose **[2]**
1/04 • • Oxycellulose; Hydrocellulose **[2]**
1/06 • • Cellulose hydrate **[2]**
1/08 • Cellulose derivatives **[2]**
1/10 • • Esters of organic acids **[2]**
1/12 • • • Cellulose acetate **[2]**
1/14 • • • Mixed esters, e.g. cellulose acetate-butyrate **[2]**
1/16 • • Esters of inorganic acids **[2]**
1/18 • • • Cellulose nitrate **[2]**
1/20 • • Esters of both organic acids and inorganic acids **[2]**
1/22 • • Cellulose xanthate **[2]**
1/24 • • • Viscose **[2]**
1/26 • • Cellulose ethers **[2]**
1/28 • • • Alkyl ethers **[2]**
1/30 • • • Aryl ethers; Aralkyl ethers **[2]**
1/32 • • Cellulose ether-esters **[2]**

3/00 Compositions of starch, amylose or amylopectin or of their derivatives or degradation products [2]

3/02 • Starch; Degradation products thereof, e.g. dextrin **[2]**
3/04 • Starch derivatives **[2]**
3/06 • • Esters **[2]**
3/08 • • Ethers **[2]**
3/10 • • Oxidised starch **[2]**
3/12 • Amylose; Amylopectin; Degradation products thereof **[2]**
3/14 • Amylose derivatives; Amylopectin derivatives **[2]**
3/16 • • Esters **[2]**
3/18 • • Ethers **[2]**
3/20 • • Oxidised amylose; Oxidised amylopectin **[2]**

5/00 Compositions of polysaccharides or of their derivatives not provided for in group C08L 1/00 or C08L 3/00 [2]

5/02 • Dextran; Derivatives thereof **[2]**
5/04 • Alginic acid; Derivatives thereof **[2]**
5/06 • Pectin; Derivatives thereof **[2]**
5/08 • Chitin; Chondroitin sulfate; Hyaluronic acid; Derivatives thereof **[2]**
5/10 • Heparin; Derivatives thereof **[2]**
5/12 • Agar-agar; Derivatives thereof **[2]**
5/14 • Hemicellulose; Derivatives thereof **[2]**
5/16 • Cyclodextrin; Derivatives thereof **[2]**

Compositions of rubbers or of their derivatives [2]

7/00 Compositions of natural rubber [2]

7/02 • Latex **[2]**

9/00 Compositions of homopolymers or copolymers of conjugated diene hydrocarbons [2]

9/02 • Copolymers with acrylonitrile **[2]**
9/04 • • Latex **[2]**
9/06 • Copolymers with styrene **[2]**
9/08 • • Latex **[2]**
9/10 • Latex (C08L 9/04, C08L 9/08 take precedence) **[2]**

11/00 Compositions of homopolymers or copolymers of chloroprene [2]
11/02 • Latex **[2]**

13/00 Compositions of rubbers containing carboxyl groups [2]
13/02 • Latex **[2]**

15/00 Compositions of rubber derivatives (C08L 11/00, C08L 13/00 take precedence) **[4]**
15/02 • Rubber derivatives containing halogen **[2]**

17/00 Compositions of reclaimed rubber [2]

19/00 Compositions of rubbers not provided for in groups C08L 7/00-C08L 17/00 [2]
19/02 • Latex **[2]**

21/00 Compositions of unspecified rubbers [2]
21/02 • Latex **[2]**

Compositions of macromolecular compounds obtained by reactions involving only carbon-to-carbon unsaturated bonds [2]

Note(s)

1. In groups C08L 23/00-C08L 49/00, "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 doublebond to one atom other thancarbon;
   c. an aromatic carbocyclic ring or aheterocyclic ring.
2. In groups C08L 23/00-C08L 49/00, in the absence of an indication to the contrary, a copolymer is classified according to the major monomeric component.

23/00 Compositions of homopolymers or copolymers of unsaturated aliphatic hydrocarbons having only one carbon-to-carbon double bond; Compositions of derivatives of such polymers [2]
23/02 • not modified by chemical after-treatment **[2]**
23/04 • • Homopolymers or copolymers of ethene **[2]**
23/06 • • • Polyethene **[2]**
23/08 • • • Copolymers of ethene (C08L 23/16 takes precedence) **[2]**
23/10 • • Homopolymers or copolymers of propene **[2]**
23/12 • • • Polypropene **[2]**
23/14 • • • Copolymers of propene (C08L 23/16 takes precedence) **[2]**
23/16 • • Ethene-propene or ethene-propene-diene copolymers **[2]**
23/18 • • Homopolymers or copolymers of hydrocarbons having four or more carbon atoms **[2]**
23/20 • • • having four to nine carbon atoms **[2]**
23/22 • • • • Copolymers of isobutene; Butyl rubber **[2]**
23/24 • • • having ten or more carbon atoms **[2]**
23/26 • modified by chemical after-treatment **[2]**
23/28 • • by reaction with halogens or halogen-containing compounds (C08L 23/32 takes precedence) **[2]**
23/30 • • by oxidation **[2]**
23/32 • • by reaction with phosphorus- or sulfur-containing compounds **[2]**
23/34 • • • by chlorosulfonation **[2]**
23/36 • • by reaction with nitrogen-containing compounds, e.g. by nitration **[2]**

25/00 Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an aromatic carbocyclic ring; Compositions of derivatives of such polymers [2]
25/02 • Homopolymers or copolymers of hydrocarbons **[2]**
25/04 • • Homopolymers or copolymers of styrene **[2]**
25/06 • • • Polystyrene **[2]**
25/08 • • • Copolymers of styrene (C08L 29/08, C08L 35/06, C08L 55/02 take precedence) **[2]**
25/10 • • • • with conjugated dienes **[2]**
25/12 • • • • with unsaturated nitriles **[2]**
25/14 • • • • with unsaturated esters **[2]**
25/16 • • Homopolymers or copolymers of alkyl-substituted styrenes **[2]**
25/18 • Homopolymers or copolymers of aromatic monomers containing elements other than carbon and hydrogen **[2]**

27/00 Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a halogen; Compositions of derivatives of such polymers [2]
27/02 • not modified by chemical after-treatment **[2]**
27/04 • • containing chlorine atoms **[2]**
27/06 • • • Homopolymers or copolymers of vinyl chloride **[2]**
27/08 • • • Homopolymers or copolymers of vinylidene chloride **[2]**
27/10 • • containing bromine or iodine atoms **[2]**
27/12 • • containing fluorine atoms **[2]**
27/14 • • • Homopolymers or copolymers of vinyl fluoride **[2]**
27/16 • • • Homopolymers or copolymers of vinylidene fluoride **[2]**
27/18 • • • Homopolymers or copolymers of tetrafluoroethene **[2]**
27/20 • • • Homopolymers or copolymers of hexafluoropropene **[2]**
27/22 • modified by chemical after-treatment **[2]**
27/24 • • halogenated **[2]**

29/00 Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an alcohol, ether, aldehydo, ketonic, acetal, or ketal radical; Compositions of hydrolysed polymers of esters of unsaturated alcohols with saturated carboxylic acids; Compositions of derivatives of such polymers [2]
29/02 • Homopolymers or copolymers of unsaturated alcohols (C08L 29/14 takes precedence) **[2]**

29/04 • • Polyvinyl alcohol; Partially hydrolysed homopolymers or copolymers of esters of unsaturated alcohols with saturated carboxylic acids **[2]**

29/06 • • Copolymers of allyl alcohol **[2]**

29/08 • • • with vinyl aromatic monomers **[2]**

29/10 • Homopolymers or copolymers of unsaturated ethers (C08L 35/08 takes precedence) **[2]**

29/12 • Homopolymers or copolymers of unsaturated ketones **[2]**

29/14 • Homopolymers or copolymers of acetals or ketals obtained by polymerisation of unsaturated acetals or ketals or by after-treatment of polymers of unsaturated alcohols **[2]**

31/00 Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by an acyloxy radical of a saturated carboxylic acid, of carbonic acid, or of a haloformic acid (of hydrolysed polymers C08L 29/00)**; Compositions of derivatives of such polymers [2]**

31/02 • Homopolymers or copolymers of esters of monocarboxylic acids **[2]**

31/04 • • Homopolymers or copolymers of vinyl acetate **[2]**

31/06 • Homopolymers or copolymers of esters of polycarboxylic acids **[2]**

31/08 • • of phthalic acid **[2]**

33/00 Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and only one being terminated by only one carboxyl radical, or of salts, anhydrides, esters, amides, imides, or nitriles thereof; Compositions of derivatives of such polymers [2]

33/02 • Homopolymers or copolymers of acids; Metal or ammonium salts thereof **[2]**

33/04 • Homopolymers or copolymers of esters **[2]**

33/06 • • of esters containing only carbon, hydrogen, and oxygen, the oxygen atom being present only as part of the carboxyl radical **[2]**

33/08 • • • Homopolymers or copolymers of acrylic acid esters **[2]**

33/10 • • • Homopolymers or copolymers of methacrylic acid esters **[2]**

33/12 • • • • Homopolymers or copolymers of methyl methacrylate **[2]**

33/14 • • of esters containing halogen, nitrogen, sulfur, or oxygen atoms in addition to the carboxy oxygen **[2]**

33/16 • • • Homopolymers or copolymers of esters containing halogen atoms **[2]**

33/18 • Homopolymers or copolymers of nitriles **[2]**

33/20 • • Homopolymers or copolymers of acrylonitrile (C08L 55/02 takes precedence) **[2]**

33/22 • • Homopolymers or copolymers of nitriles containing four or more carbon atoms **[2]**

33/24 • Homopolymers or copolymers of amides or imides **[2]**

33/26 • • Homopolymers or copolymers of acrylamide or methacrylamide **[2]**

35/00 Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a carboxyl radical, and containing at least one other carboxyl radical in the molecule, or of salts, anhydrides, esters, amides, imides or nitriles thereof; Compositions of derivatives of such polymers [2]

35/02 • Homopolymers or copolymers of esters (C08L 35/06, C08L 35/08 take precedence) **[2]**

35/04 • Homopolymers or copolymers of nitriles (C08L 35/06, C08L 35/08 take precedence) **[2]**

35/06 • Copolymers with vinyl aromatic monomers **[2]**

35/08 • Copolymers with vinyl ethers **[2]**

37/00 Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a heterocyclic ring containing oxygen (of cyclic esters of polyfunctional acids C08L 31/00; of cyclic anhydrides of unsaturated acids C08L 35/00)**; Compositions of derivatives of such polymers [2]**

39/00 Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a single or double bond to nitrogen or by a heterocyclic ring containing nitrogen; Compositions of derivatives of such polymers [2]

39/02 • Homopolymers or copolymers of vinylamine **[2]**

39/04 • Homopolymers or copolymers of monomers containing heterocyclic rings having nitrogen as ring member **[2]**

39/06 • • Homopolymers or copolymers of N-vinyl-pyrrolidones **[2]**

39/08 • • Homopolymers or copolymers of vinyl-pyridine **[2]**

41/00 Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and at least one being terminated by a bond to sulfur or by a heterocyclic ring containing sulfur; Compositions of derivatives of such polymers [2]

43/00 Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing boron, silicon, phosphorus, selenium, tellurium, or a metal; Compositions of derivatives of such polymers [2]

43/02 • Homopolymers or copolymers of monomers containing phosphorus **[2]**

43/04 • Homopolymers or copolymers of monomers containing silicon **[2]**

45/00 Compositions of homopolymers or copolymers of compounds having no unsaturated aliphatic radicals in a side chain, and having one or more carbon-to-carbon double bonds in a carbocyclic or in a heterocyclic ring system; Compositions of derivatives of such polymers (of cyclic esters of polyfunctional acids C08L 31/00; of cyclic anhydrides or imides C08L 35/00) **[2]**

45/02 • of coumarone-indene polymers **[2]**

47/00 **Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, at least one having two or more carbon-to-carbon double bonds; Compositions of derivatives of such polymers** (C08L 45/00 takes precedence; of conjugated diene rubbers C08L 9/00-C08L 21/00) **[2]**

49/00 **Compositions of homopolymers or copolymers of compounds having one or more carbon-to-carbon triple bonds; Compositions of derivatives of such polymers [2]**

51/00 **Compositions of graft polymers in which the grafted component is obtained by reactions only involving carbon-to-carbon unsaturated bonds** (for ABS polymers C08L 55/02)**; Compositions of derivatives of such polymers [2]**

51/02 • grafted on to polysaccharides **[2]**

51/04 • grafted on to rubbers **[2]**

51/06 • grafted on to homopolymers or copolymers of aliphatic hydrocarbons containing only one carbon-to-carbon double bond **[2]**

51/08 • grafted on to macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds **[2]**

51/10 • grafted on to inorganic materials **[3]**

53/00 **Compositions of block copolymers containing at least one sequence of a polymer obtained by reactions only involving carbon-to-carbon unsaturated bonds; Compositions of derivatives of such polymers [2]**

53/02 • of vinyl aromatic monomers and conjugated dienes **[2]**

55/00 **Compositions of homopolymers or copolymers, obtained by polymerisation reactions only involving carbon-to-carbon unsaturated bonds, not provided for in groups C08L 23/00-C08L 53/00 [2]**

55/02 • ABS [Acrylonitrile-Butadiene-Styrene] polymers **[2]**

55/04 • Polyadducts obtained by the diene synthesis **[2]**

57/00 **Compositions of unspecified polymers obtained by reactions only involving carbon-to-carbon unsaturated bonds [2]**

57/02 • Copolymers of mineral oil hydrocarbons **[2]**

57/04 • Copolymers in which only the monomer in minority is defined **[2]**

57/06 • Homopolymers or copolymers containing elements other than carbon and hydrogen **[2]**

57/08 • • containing halogen atoms **[2]**

57/10 • • containing oxygen atoms **[2]**

57/12 • • containing nitrogen atoms **[2]**

Compositions of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2]

59/00 **Compositions of polyacetals; Compositions of derivatives of polyacetals** (of polyvinyl acetals C08L 29/14) **[2]**

59/02 • Polyacetals containing polyoxymethylene sequences only **[2]**

59/04 • Copolyoxymethylenes **[3]**

61/00 **Compositions of condensation polymers of aldehydes or ketones** (with polyalcohols C08L 59/00; with polynitriles C08L 77/00)**; Compositions of derivatives of such polymers [2]**

61/02 • Condensation polymers of aldehydes or ketones only **[2]**

61/04 • Condensation polymers of aldehydes or ketones with phenols only **[2]**

61/06 • • of aldehydes with phenols **[2]**

61/08 • • • with monohydric phenols **[2]**

61/10 • • • • Phenol-formaldehyde condensates **[2]**

61/12 • • • with polyhydric phenols **[2]**

61/14 • • • Modified phenol-aldehyde condensates **[2]**

61/16 • • of ketones with phenols **[2]**

61/18 • Condensation polymers of aldehydes or ketones with aromatic hydrocarbons or their halogen derivatives only **[2]**

61/20 • Condensation polymers of aldehydes or ketones with only compounds containing hydrogen attached to nitrogen (with amino phenols C08L 61/04) **[2]**

61/22 • • of aldehydes with acyclic or carbocyclic compounds **[2]**

61/24 • • • with urea or thiourea **[2]**

61/26 • • of aldehydes with heterocyclic compounds **[2]**

61/28 • • • with melamine **[2]**

61/30 • • of aldehydes with heterocyclic and acyclic or carbocyclic compounds **[2]**

61/32 • • Modified amine-aldehyde condensates **[2]**

61/34 • Condensation polymers of aldehydes or ketones with monomers covered by at least two of the groups C08L 61/04, C08L 61/18, and C08L 61/20 **[2]**

63/00 **Compositions of epoxy resins; Compositions of derivatives of epoxy resins [2]**

63/02 • Polyglycidyl ethers of bis-phenols **[2]**

63/04 • Epoxynovolacs **[2]**

63/06 • Triglycidylisocyanurates **[2]**

63/08 • Epoxidised polymerised polyenes **[2]**

63/10 • Epoxy resins modified by unsaturated compounds **[2]**

Note(s)

In groups C08L 65/00-C08L 85/00, in the absence of an indication to the contrary, compositions of macromolecular compounds obtained by reactions forming two different linkages in the main chain are classified only according to the linkage present in excess.

65/00 **Compositions of macromolecular compounds obtained by reactions forming a carbon-to-carbon link in the main chain** (C08L 7/00-C08L 57/00, C08L 61/00 take precedence)**; Compositions of derivatives of such polymers [2]**

65/02 • Polyphenylenes **[2]**

65/04 • Polyxylylenes **[2]**

67/00 **Compositions of polyesters obtained by reactions forming a carboxylic ester link in the main chain** (of polyester-amides C08L 77/12; of polyester-imides C08L 79/08)**; Compositions of derivatives of such polymers [2]**

67/02 • Polyesters derived from dicarboxylic acids and dihydroxy compounds (C08L 67/06 takes precedence) **[2]**

67/03 • • the dicarboxylic acids and dihydroxy compounds having the hydroxy and the carboxyl groups directly linked to aromatic rings **[5]**

67/04 • Polyesters derived from hydroxy carboxylic acids, e.g. lactones (C08L 67/06 takes precedence) **[2]**

67/06 • Unsaturated polyesters **[2]**

67/07 • • having terminal carbon-to-carbon unsaturated bonds **[5]**

67/08 • Polyesters modified with higher fatty oils or their acids, or with natural resins or resin acids **[2]**

69/00 Compositions of polycarbonates; Compositions of derivatives of polycarbonates [2]

71/00 Compositions of polyethers obtained by reactions forming an ether link in the main chain (of polyacetals C08L 59/00; of epoxy resins C08L 63/00; of polythioether-ethers C08L 81/02; of polyethersulfones C08L 81/06)**; Compositions of derivatives of such polymers [2]**

71/02 • Polyalkylene oxides **[2]**

71/03 • • Polyepihalohydrins **[5]**

71/08 • Polyethers derived from hydroxy compounds or from their metallic derivatives (C08L 71/02 takes precedence) **[5]**

71/10 • • from phenols **[5]**

71/12 • • • Polyphenylene oxides **[5]**

71/14 • • Furfuryl alcohol polymers **[5]**

73/00 Compositions of macromolecular compounds obtained by reactions forming a linkage containing oxygen or oxygen and carbon in the main chain, not provided for in groups C08L 59/00-C08L 71/00; Compositions of derivatives of such polymers [2]

73/02 • Polyanhydrides **[2]**

75/00 Compositions of polyureas or polyurethanes; Compositions of derivatives of such polymers [2]

75/02 • Polyureas **[2]**

75/04 • Polyurethanes **[2]**

75/06 • • from polyesters **[2]**

75/08 • • from polyethers **[2]**

75/10 • • from polyacetals **[2]**

75/12 • • from compounds containing nitrogen and active hydrogen, the nitrogen atom not being part of an isocyanate group **[2]**

75/14 • • Polyurethanes having carbon-to-carbon unsaturated bonds **[5]**

75/16 • • • having terminal carbon-to-carbon unsaturated bonds **[5]**

77/00 Compositions of polyamides obtained by reactions forming a carboxylic amide link in the main chain (of polyhydrazides C08L 79/06; of polyamide-imides or polyamide acids C08L 79/08)**; Compositions of derivatives of such polymers [2]**

77/02 • Polyamides derived from omega-amino carboxylic acids or from lactams thereof (C08L 77/10 takes precedence) **[2]**

77/04 • Polyamides derived from alpha-amino carboxylic acids (C08L 77/10 takes precedence) **[2]**

77/06 • Polyamides derived from polyamines and polycarboxylic acids (C08L 77/10 takes precedence) **[2]**

77/08 • • from polyamines and polymerised unsaturated fatty acids **[2]**

77/10 • Polyamides derived from aromatically bound amino and carboxyl groups of amino carboxylic acids or of polyamines and polycarboxylic acids **[2]**

77/12 • Polyester-amides **[2]**

79/00 Compositions of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing nitrogen with or without oxygen, or carbon only, not provided for in groups C08L 61/00-C08L 77/00 [2]

79/02 • Polyamines **[2]**

79/04 • Polycondensates having nitrogen-containing heterocyclic rings in the main chain; Polyhydrazides; Polyamide acids or similar polyimide precursors **[2]**

79/06 • • Polyhydrazides; Polytriazoles; Polyamino-triazoles; Polyoxadiazoles **[2]**

79/08 • • Polyimides; Polyester-imides; Polyamide-imides; Polyamide acids or similar polyimide precursors **[2]**

81/00 Compositions of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing sulfur with or without nitrogen, oxygen, or carbon only; Compositions of polysulfones; Compositions of derivatives of such polymers [2]

81/02 • Polythioethers; Polythioether-ethers **[2]**

81/04 • Polysulfides **[2]**

81/06 • Polysulfones; Polyethersulfones **[2]**

81/08 • Polysulfonates **[2]**

81/10 • Polysulfonamides; Polysulfonimides **[2]**

83/00 Compositions of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing silicon with or without sulfur, nitrogen, oxygen, or carbon only; Compositions of derivatives of such polymers [2]

83/02 • Polysilicates **[2]**

83/04 • Polysiloxanes **[2]**

83/05 • • containing silicon bound to hydrogen **[4]**

83/06 • • containing silicon bound to oxygen-containing groups (C08L 83/12 takes precedence) **[2]**

83/07 • • containing silicon bound to unsaturated aliphatic groups **[4]**

83/08 • • containing silicon bound to organic groups containing atoms other than carbon, hydrogen, and oxygen **[2]**

83/10 • Block- or graft-copolymers containing polysiloxane sequences (obtained by polymerising a compound having a carbon-to-carbon double bond on to a polysiloxane C08L 51/08, C08L 53/00) **[2]**

83/12 • • containing polyether sequences **[2]**

83/14 • in which at least two but not all the silicon atoms are connected by linkages other than oxygen atoms (C08L 83/10 takes precedence) **[2]**

83/16 • in which all the silicon atoms are connected by linkages other than oxygen atoms **[2]**

85/00 Compositions of macromolecular compounds obtained by reactions forming in the main chain of the macromolecule a linkage containing atoms other than silicon, sulfur, nitrogen, oxygen, and carbon; Compositions of derivatives of such polymers [2]

85/02 • containing phosphorus **[2]**

85/04 • containing boron **[2]**

87/00 Compositions of unspecified macromolecular compounds, obtained otherwise than by polymerisation reactions only involving unsaturated carbon-to-carbon bonds [2]

Compositions of natural macromolecular compounds or of derivatives thereof [2]

89/00 **Compositions of proteins; Compositions of derivatives thereof** (foodstuff preparations A23J 3/00) **[2]**

89/02 • Casein-aldehyde condensates **[2]**

89/04 • Products derived from waste materials, e.g. horn, hoof or hair **[2]**

89/06 • • derived from leather or skin **[2]**

91/00 **Compositions of oils, fats or waxes; Compositions of derivatives thereof** (polishing compositions, ski waxes C09G; soaps, detergent compositions C11D) **[2]**

91/02 • Vulcanised oils, e.g. factice **[2]**

91/04 • Linoxyn **[2]**

91/06 • Waxes **[2]**

91/08 • • Mineral waxes **[2]**

93/00 **Compositions of natural resins; Compositions of derivatives thereof** (of polysaccharides C08L 1/00-C08L 5/00; of natural rubber C08L 7/00; polishing compositions C09G) **[2]**

93/02 • Shellac (French polish C09F) **[2]**

93/04 • Rosin **[2]**

95/00 **Compositions of bituminous materials, e.g. asphalt, tar or pitch [2]**

97/00 **Compositions of lignin-containing materials** (of polysaccharides C08L 1/00-C08L 5/00) **[2]**

97/02 • Lignocellulosic material, e.g. wood, straw or bagasse **[2]**

99/00 **Compositions of natural macromolecular compounds or of derivatives thereof not provided for in groups C08L 1/00-C08L 7/00 or C08L 89/00-C08L 97/00 [2]**

101/00 **Compositions of unspecified macromolecular compounds [2]**

101/02 • characterised by the presence of specified groups **[2]**

101/04 • • containing halogen atoms **[2]**

101/06 • • containing oxygen atoms **[2]**

101/08 • • • Carboxyl groups **[2]**

101/10 • • containing hydrolysable silane groups **[4]**

101/12 • characterised by physical features, e.g. anisotropy, viscosity or electrical conductivity (liquid crystal materials or compositions C09K 19/00) **[6]**

101/14 • • the macromolecular compounds being water soluble or water swellable, e.g. aqueous gels **[6]**

101/16 • the macromolecular compounds being biodegradable **[7]**