CPC  COOPERATIVE PATENT CLASSIFICATION

D  TEXTILES; PAPER

TEXTILES OR FLEXIBLE MATERIALS NOT OTHERWISE PROVIDED FOR

D01  NATURAL OR MAN-MADE THREADS OR FIBRES; SPINNING

NOTE omitted

D01F  CHEMICAL FEATURES IN THE MANUFACTURE OF ARTIFICIAL FILAMENTs, THREADS, FIBRES, BRISTLES OR RIBBONS; APPARATUS SPECIALLY ADAPTED FOR THE MANUFACTURE OF CARBON FILAMENTs

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00  General methods for the manufacture of artificial filament or the like

1/02  .  Addition of substances to the spinning solution or to the melt (addition of substances to viscose D01F 2/08 - D01F 2/20)

1/04  .  Pigments

1/06  .  Dyes

1/07  .  for making fire- or flame-proof filaments

1/08  .  for forming hollow filaments

1/09  .  for making electroconductive or anti-static filaments

1/10  .  Other agents for modifying properties

1/103  .  .  .  [Agents inhibiting growth of microorganisms]

1/106  .  .  .  [ Radiation shielding agents, e.g. absorbing, reflecting agents]

2/00  Monocomponent artificial filament or the like of cellulose or cellulose derivatives; Manufacture thereof

2/02  .  from solutions of cellulose in acids, bases or salts

2/04  .  from cuprammonium solutions

2/06  .  from viscose (preparation of alkali cellulose C08B)

2/08  .  Composition of the spinning solution or the bath (preparing or dissolving cellulose xanthe C08B)

2/10  .  .  Addition to the spinning solution or spinning bath of substances which exert their effect equally well in either

2/12  .  .  .  Addition of delustering agents to the spinning solution

2/14  .  .  .  Addition of pigments

2/16  .  .  .  Addition of dyes to the spinning solution

2/18  .  .  .  Addition to the spinning solution of substances to influence ripening

2/20  .  .  .  for the manufacture of hollow threads

2/22  .  .  .  by the dry spinning process

2/24  .  .  .  from cellulose derivatives

2/26  .  .  .  from nitrocellulose

2/28  .  .  .  from organic cellulose esters or ethers, e.g. cellulose acetate

2/30  .  .  .  by the dry spinning process

4/00  Monocomponent artificial filament or the like of proteins; Manufacture thereof

4/02  .  from fibroin

4/04  .  from casein

4/06  .  from globulins, e.g. groundnut protein

6/00  Monocomponent artificial filament or the like of synthetic polymers; Manufacture thereof

6/02  .  from homopolymers obtained by reactions only involving carbon-to-carbon unsaturated bonds

6/04  .  .  .  from polyolefins

6/06  .  .  .  from polypropylene

6/08  .  .  .  from polymers of halogenated hydrocarbons

6/10  .  .  .  from polyvinyl chloride or polyvinylidene chloride

6/12  .  .  .  from polymers of fluorinated hydrocarbons

6/14  .  .  .  from polymers of unsaturated alcohols, e.g. polyvinyl alcohol, or of their acetals or ketals

6/16  .  .  .  from polymers of unsaturated carboxylic acids or unsaturated organic esters, e.g. polyacrylic esters, polyvinyl acetate

6/18  .  .  .  from polymers of unsaturated nitriles, e.g. polyaclrlonitrile, polyvinylidenene cyanide

6/20  .  .  .  from polymers of cyclic compounds with one carbon-to-carbon double bond in the side chain

6/22  .  .  .  from polystyrene

6/24  .  .  .  from polymers of aliphatic compounds with more than one carbon-to-carbon double bond

6/26  .  .  .  from other polymers

6/28  .  .  .  from copolymers obtained by reactions only involving carbon-to-carbon unsaturated bonds

NOTE

For the purposes of groups D01F 6/30 - D01F 6/96, the percentage for determining the major constituent is expressed in mole percent.

6/30  .  .  .  comprising olefins as the major constituent

6/32  .  .  .  comprising halogenated hydrocarbons as the major constituent

6/34  .  .  .  comprising unsaturated alcohols, acetals or ketals as the major constituent

6/36  .  .  .  comprising unsaturated carboxylic acids or unsaturated organic esters as the major constituent
6/38 . . comprising unsaturated nitriles as the major constituent
6/40 . . Modacrylic fibres, i.e. containing 35 to 85% acrylonitrile
6/42 . . comprising cyclic compounds containing one carbon-to-carbon double bond in the side chain as major constituent
6/44 . . from mixtures of polymers obtained by reactions only involving carbon-to-carbon unsaturated bonds as major constituent with other polymers or low-molecular-weight compounds
6/46 . . of polyolefins
6/48 . . of polymers of halogenated hydrocarbons
6/50 . . of polyalcohols, polyacets or polyketals
6/52 . . of polymers of unsaturated carboxylic acids or unsaturated esters
6/54 . . of polymers of unsaturated nitriles
6/56 . . of polymers of cyclic compounds with one carbon-to-carbon double bond in the side chain
6/58 . . from homopolycondensation products
6/60 . . from polyamides (from polyamino acids or polypeptides D01F 6/68)
6/605 . . [from aromatic polyamides]
6/62 . . from polyesters
6/625 . . [derived from hydroxy-carboxylic acids, e.g. lactones]
6/64 . . from polycarbonates
6/66 . . from polyethers
6/665 . . [from polyetherketones, e.g. PEEK]
6/68 . . from polyaminoacids or polypeptides
6/70 . . from polyurethanes
6/72 . . from polyureas
6/74 . . from polycondensates of cyclic compounds, e.g. polyimidmes, polypbenzimidazoles
6/76 . . from other polycondensation products
6/765 . . [from polyarylene sulfides]
6/78 . . from copolycondensation products
6/80 . . from copolyamides
6/805 . . [from aromatic copolyamides]
6/82 . . from polyester amides or polyether amides
6/84 . . from copolypesters
6/86 . . from polyetheresters
6/88 . . from mixtures of polycondensation products as major constituent with other polymers or low-molecular-weight compounds
6/90 . . of polyamides
6/905 . . [of aromatic polyamides]
6/92 . . of polyesters
6/94 . . of other polycondensation products
6/96 . . from other synthetic polymers

8/00 Conjugated, i.e. bi- or multicomponent, artificial filaments or the like; Manufacture thereof

8/02 . . from cellulose, cellulose derivatives, or proteins
8/04 . . from synthetic polymers
8/06 . . with at least one polyolefin as constituent
8/08 . . with at least one polyacrylonitrile as constituent
8/10 . . with at least one other macromolecular compound obtained by reactions only involving carbon-to-carbon unsaturated bonds as constituent
8/12 . . with at least one polyamide as constituent
8/14 . . with at least one polyester as constituent

8/16 . . with at least one other macromolecular compound obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds as constituent

8/18 . . from other substances

9/0 Artificial filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments

9/02 . . of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide
9/04 . . of alginates
9/08 . . of inorganic material (from softened glass, minerals or slags C03B 37/00; {obtaining ceramic fibres C04B 35/62227}; incandescent bodies F21H, H01K 1/02, H01K 3/02)
9/10 . . by decomposition of organic substances ([D01F 9/12 takes precedence)
9/12 . . Carbon filaments; Apparatus specially adapted for the manufacture thereof ([with fullerene structure, e.g. carbon nanotubes C01B 32/15)
9/127 . . by thermal decomposition of hydrocarbon gases or vapours (or other carbon-containing compounds in the form of gas or vapour, e.g. carbon monoxide, alcohols)
9/1271 . . . . . . [Alkanes or cycloalkanes]
9/1272 . . . . . . [Methane]
9/1273 . . . . . . [Alkenes, alkynes]
9/1274 . . . . . . [Butadiene]
9/1275 . . . . . . [Acetylene]
9/1276 . . . . . . [Aromatics, e.g. toluene]
9/1277 . . . . . . [Other organic compounds]
9/1278 . . . . . . [Carbon monoxide]
9/133 . . . . . . Apparatus therefor
9/14 . . by decomposition of organic filaments
9/145 . . . . . . from pitch or distillation residues
9/15 . . . . . . from coal pitch
9/155 . . . . . . from petroleum pitch
9/16 . . . . . . from products of vegetable origin or derivatives thereof, e.g. from cellulose acetate ([D01F 9/18 takes precedence)
9/17 . . . . . . from lignin
9/18 . . . . . . from proteins, e.g. from wool
9/20 . . . . . . from polyaddition, polycondensation or polymerisation products ([D01F 9/145, D01F 9/16, D01F 9/18 take precedence)
9/21 . . . . . . from macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
9/22 . . . . . . from polyacrylonitriles
9/225 . . . . . . [from stabilised polyacrylonitriles]
9/24 . . . . . . from macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
9/245 . . . . . . [from polyurethanes]
9/26 . . . . . . from polyesters
9/28 . . . . . . from polyamides
9/30 . . . . . . from aromatic polyamides
9/32 . . . . . . Apparatus therefor
9/322 . . . . . . [for manufacturing filaments from pitch]
9/324 . . . . . . [for manufacturing filaments from products of vegetable origin]
9/326 . . . . . . [for manufacturing filaments from proteins]
Chemical after-treatment of artificial filaments or the like during manufacture (of artificial filaments from softened glass, minerals or slags C03C; from ceramics C04B; finishing D06M)

- of cellulose, cellulose derivatives, or proteins
- of synthetic polymers
- of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
- of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- of carbon
- with inorganic substances (Intercalation)
- [Halogen, halogenic acids or their salts]
- [Oxygen, oxygen-generating compounds (anode oxidising D01F 11/16)]
- [Oxides]
- [Boron, borides, boron nitrides]
- [Carbon]
- [Carbides (boron-comprising compounds D01F 11/124; nitrogen carbide D01F 11/128)]
- [Metals (metal depositing by electrolysis D01F 11/16; metal alloys with reinforcing carbon fibres C22C 49/14)]
- [Nitrides, nitrogen carbides (nitrogen borides D01F 11/124)]
- [Intercalated carbon- or graphite fibres]
- with organic compounds, e.g. macromolecular compounds
- by physicochemical methods

Recovery of starting material, waste material or solvents during the manufacture of artificial filaments or the like

- of cellulose, cellulose derivatives or proteins (recovery of sodium sulfate from coagulation baths C01D 5/006)
- of synthetic polymers