

# 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.

|             |  |  |   |
|-------------|--|--|---|
| <b>1/00</b> | <b>General methods for the manufacture of artificial filaments or the like</b>   | 4/02   | . from fibroin  |
| 1/02        | . Addition of substances to the spinning solution or to the melt ( <a href="#">addition of substances to viscose D01F 2/08 - D01F 2/20</a> ) | 4/04   | . from casein   |
| 1/04        | . . Pigments   | 4/06   | . from globulins, e.g. groundnut protein  |
| 1/06        | . . Dyes   | <b>6/00</b>  | <b>Monocomponent artificial filaments or the like of synthetic polymers; Manufacture thereof</b>                            |
| 1/07        | . . for making fire- or flame-proof filaments  | 6/02   | . from homopolymers obtained by reactions only involving carbon-to-carbon unsaturated bonds                                 |
| 1/08        | . . for forming hollow filaments   | 6/04   | . . from polyolefins  |
| 1/09        | . . for making electroconductive or anti-static filaments  | 6/06   | . . . from polypropylene  |
| 1/10        | . . Other agents for modifying properties  | 6/08   | . . from polymers of halogenated hydrocarbons   |
| 1/103       | . . . { <a href="#">Agents inhibiting growth of microorganisms</a> }   | 6/10   | . . . from polyvinyl chloride or polyvinylidene chloride  |
| 1/106       | . . . { <a href="#">Radiation shielding agents, e.g. absorbing, reflecting agents</a> }  | 6/12   | . . . from polymers of fluorinated hydrocarbons   |
| <b>2/00</b> | <b>Monocomponent artificial filaments or the like of cellulose or cellulose derivatives; Manufacture thereof</b>                             | 6/14   | . . from polymers of unsaturated alcohols, e.g. polyvinyl alcohol, or of their acetals or ketals                            |
| 2/02        | . from solutions of cellulose in acids, bases or salts   | 6/16   | . . from polymers of unsaturated carboxylic acids or unsaturated organic esters, e.g. polyacrylic esters, polyvinyl acetate |
| 2/04        | . . from cuprammonium solutions  | 6/18   | . . from polymers of unsaturated nitriles, e.g. polyacrylonitrile, polyvinylidene cyanide                                   |
| 2/06        | . from viscose ( <a href="#">preparation of alkali cellulose C08B</a> )  | 6/20   | . . from polymers of cyclic compounds with one carbon-to-carbon double bond in the side chain                               |
| 2/08        | . . Composition of the spinning solution or the bath ( <a href="#">preparing or dissolving cellulose xanthate C08B</a> )                     | 6/22   | . . . from polystyrene  |
| 2/10        | . . . Addition to the spinning solution or spinning bath of substances which exert their effect equally well in either                       | 6/24   | . . from polymers of aliphatic compounds with more than one carbon-to-carbon double bond                                    |
| 2/12        | . . . Addition of delustering agents to the spinning solution  | 6/26   | . . from other polymers   |
| 2/14        | . . . . Addition of pigments   | 6/28   | . from copolymers obtained by reactions only involving carbon-to-carbon unsaturated bonds                                   |
| 2/16        | . . . Addition of dyes to the spinning solution  | <b>NOTE</b>  |   |
| 2/18        | . . . Addition to the spinning solution of substances to influence ripening  | <a href="#">For the purposes of groups D01F 6/30 - D01F 6/96, the percentage for determining the major constituent is expressed in mole percent.</a> |   |
| 2/20        | . . . for the manufacture of hollow threads  | 6/30   | . . comprising olefins as the major constituent   |
| 2/22        | . . by the dry spinning process  | 6/32   | . . comprising halogenated hydrocarbons as the major constituent  |
| 2/24        | . from cellulose derivatives   | 6/34   | . . comprising unsaturated alcohols, acetals or ketals as the major constituent   |
| 2/26        | . . from nitrocellulose  | 6/36   | . . comprising unsaturated carboxylic acids or unsaturated organic esters as the major constituent                          |
| 2/28        | . . from organic cellulose esters or ethers, e.g. cellulose acetate  |  |   |
| 2/30        | . . . by the dry spinning process  |  |   |
| <b>4/00</b> | <b>Monocomponent artificial filaments or the like of proteins; Manufacture thereof</b>   |  |   |

- 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, polyacetals 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. polyimides, polybenzimidazoles
- 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 copolyesters
- 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
- 9/00 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}

- 9/328 . . . . . {for manufacturing filaments from polyaddition, polycondensation, or polymerisation products}
- 11/00 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](#))
- 11/02 . of cellulose, cellulose derivatives, or proteins
- 11/04 . of synthetic polymers
- 11/06 . . of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
- 11/08 . . of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- 11/10 . of carbon
- 11/12 . . with inorganic substances {Intercalation}
- 11/121 . . . {Halogen, halogenic acids or their salts}
- 11/122 . . . {Oxygen, oxygen-generating compounds (anode oxidising [D01F 11/16](#))}
- 11/123 . . . {Oxides}
- 11/124 . . . {Boron, borides, boron nitrides}
- 11/125 . . . {Carbon}
- 11/126 . . . {Carbides (boron-comprising compounds [D01F 11/124](#); nitrogen carbide [D01F 11/128](#))}
- 11/127 . . . {Metals (metal depositing by electrolysis [D01F 11/16](#); metal alloys with reinforcing carbon fibres [C22C 49/14](#))}
- 11/128 . . . {Nitrides, nitrogen carbides (nitrogen borides [D01F 11/124](#))}
- 11/129 . . . {Intercalated carbon- or graphite fibres}
- 11/14 . . with organic compounds, e.g. macromolecular compounds
- 11/16 . . by physicochemical methods
- 13/00 Recovery of starting material, waste material or solvents during the manufacture of artificial filaments or the like**
- 13/02 . of cellulose, cellulose derivatives or proteins {(recovery of sodium sulfate from coagulation baths [C01D 5/006](#))}
- 13/04 . of synthetic polymers