

CPC COOPERATIVE PATENT CLASSIFICATION

D TEXTILES; PAPER

TEXTILES OR FLEXIBLE MATERIALS NOT OTHERWISE PROVIDED FOR

D01 **NATURAL OR ARTIFICIAL THREADS OR FIBRES; SPINNING** ([metal threads B21](#); [fibres or filaments of softened glass, minerals, or slag C03B 37/00](#); [yarns D02](#))
(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**

1/00	General methods for the manufacture of artificial filaments or the like	4/06	. from globulins, e.g. groundnut protein
1/02	. Addition of substances to the spinning solution or to the melt (addition of substances to viscose D01F 2/08 - D01F 2/20)	6/00	Monocomponent artificial filaments or the like of synthetic polymers; Manufacture thereof
1/04	. . Pigments	6/02	. from homopolymers obtained by reactions only involving carbon-to-carbon unsaturated bonds
1/06	. . Dyes	6/04	. . from polyolefins
1/07	. . for making fire- or flame-proof filaments	6/06	. . . from polypropylene
1/08	. . for forming hollow filaments	6/08	. . from polymers of halogenated hydrocarbons
1/09	. . for making electroconductive or anti-static filaments	6/10	. . . from polyvinyl chloride or polyvinylidene chloride
1/10	. . Other agents for modifying properties	6/12	. . . from polymers of fluorinated hydrocarbons
1/103	. . . { Agents inhibiting growth of microorganisms }	6/14	. . from polymers of unsaturated alcohols, e.g. polyvinyl alcohol, or of their acetals or ketals
1/106	. . . { Radiation shielding agents, e.g. absorbing, reflecting agents }	6/16	. . from polymers of unsaturated carboxylic acids or unsaturated organic esters, e.g. polyacrylic esters, polyvinyl acetate
2/00	Monocomponent artificial filaments or the like of cellulose or cellulose derivatives; Manufacture thereof	6/18	. . from polymers of unsaturated nitriles, e.g. polyacrylonitrile, polyvinylidene cyanide
2/02	. from solutions of cellulose in acids, bases or salts	6/20	. . from polymers of cyclic compounds with one carbon-to-carbon double bond in the side chain
2/04	. . from cuprammonium solutions	6/22	. . . from polystyrene
2/06	. from viscose (preparation of alkali cellulose C08B)	6/24	. . from polymers of aliphatic compounds with more than one carbon-to-carbon double bond
2/08	. . Composition of the spinning solution or the bath (preparing or dissolving cellulose xanthate C08B)	6/26	. . from other polymers
2/10	. . . Addition to the spinning solution or spinning bath of substances which exert their effect equally well in either	6/28	. from copolymers obtained by reactions only involving carbon-to-carbon unsaturated bonds
2/12	. . . Addition of delustering agents to the spinning solution	NOTE	
2/14	. . . . Addition of pigments	For the purposes of groups D01F 6/30 - D01F 6/96, the percentage for determining the major constituent is expressed in mole percent.	
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	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		
4/00	Monocomponent artificial filaments or the like of proteins; Manufacture thereof	6/38	. . comprising unsaturated nitriles as the major constituent
4/02	. from fibroin	6/40	. . Modacrylic fibres, i.e. containing 35 to 85% acrylonitrile
4/04	. from casein		

6/42	. . comprising cyclic compounds containing one carbon-to-carbon double bond in the side chain as major constituent	9/00	Artificial filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments
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	9/02	. of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide
6/46	. . of polyolefins	9/04	. of alginates
6/48	. . of polymers of halogenated hydrocarbons	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)
6/50	. . of polyalcohols, polyacetals or polyketals	9/10	. . by decomposition of organic substances (D01F 9/12 takes precedence)
6/52	. . of polymers of unsaturated carboxylic acids or unsaturated esters	9/12	. . Carbon filaments; Apparatus specially adapted for the manufacture thereof {(with fullerene structure, e.g. carbon nanotubes C01B 32/15)}
6/54	. . of polymers of unsaturated nitriles	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}
6/56	. . of polymers of cyclic compounds with one carbon-to-carbon double bond in the side chain	9/1271	. . . . {Alkanes or cycloalkanes}
6/58	. from homopolycondensation products	9/1272	. . . . {Methane}
6/60	. . from polyamides (from polyamino acids or polypeptides D01F 6/68)	9/1273	. . . . {Alkenes, alkynes}
6/605	. . . {from aromatic polyamides}	9/1274	. . . . {Butadiene}
6/62	. . from polyesters	9/1275	. . . . {Acetylene}
6/625	. . . {derived from hydroxy-carboxylic acids, e.g. lactones}	9/1276	. . . . {Aromatics, e.g. toluene}
6/64	. . . from polycarbonates	9/1277	. . . . {Other organic compounds}
6/66	. . from polyethers	9/1278	. . . . {Carbon monoxide}
6/665	. . . {from polyetherketones, e.g. PEEK}	9/133	. . . . Apparatus therefor
6/68	. . from polyaminoacids or polypeptides	9/14	. . . by decomposition of organic filaments
6/70	. . from polyurethanes	9/145	. . . . from pitch or distillation residues
6/72	. . from polyureas	9/15	. . . . . from coal pitch
6/74	. . from polycondensates of cyclic compounds, e.g. polyimides, polybenzimidazoles	9/155	. . . . . from petroleum pitch
6/76	. . from other polycondensation products	9/16	. . . . from products of vegetable origin or derivatives thereof, e.g. from cellulose acetate (D01F 9/18 takes precedence)
6/765	. . . {from polyarylene sulfides}	9/17	. . . . . from lignin
6/78	. from copolycondensation products	9/18	. . . . from proteins, e.g. from wool
6/80	. . from copolyamides	9/20	. . . . from polyaddition, polycondensation or polymerisation products (D01F 9/145 , D01F 9/16 , D01F 9/18 take precedence)
6/805	. . . {from aromatic copolyamides}	9/21	. . . . . from macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
6/82	. . from polyester amides or polyether amides	9/22	. . . . . from polyacrylonitriles
6/84	. . from copolyesters	9/225	. . . . . {from stabilised polyacrylonitriles}
6/86	. . from polyetheresters	9/24	. . . . . from macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
6/88	. from mixtures of polycondensation products as major constituent with other polymers or low-molecular-weight compounds	9/245	. . . . . {from polyurethanes}
6/90	. . of polyamides	9/26	. . . . . from polyesters
6/905	. . . {of aromatic polyamides}	9/28	. . . . . from polyamides
6/92	. . of polyesters	9/30	. . . . . from aromatic polyamides
6/94	. . of other polycondensation products	9/32	. . . . Apparatus therefor
6/96	. from other synthetic polymers	9/322	. . . . . {for manufacturing filaments from pitch}
8/00	Conjugated, i.e. bi- or multicomponent, artificial filaments or the like; Manufacture thereof	9/324	. . . . . {for manufacturing filaments from products of vegetable origin}
8/02	. from cellulose, cellulose derivatives, or proteins	9/326	. . . . . {for manufacturing filaments from proteins}
8/04	. from synthetic polymers	9/328	. . . . . {for manufacturing filaments from polyaddition, polycondensation, or polymerisation products}
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		

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 . . . {Nitriles, 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