

SECTION D – TEXTILES; PAPER

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)

D01F **CHEMICAL FEATURES IN THE MANUFACTURE OF ARTIFICIAL FILAMENTS, THREADS, FIBRES, BRISTLES, OR RIBBONS; APPARATUS SPECIALLY ADAPTED FOR THE MANUFACTURE OF CARBON FILAMENTS [2]**

- (1) Attention is drawn to the Note following the title of class D01.
 (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. [5]

GENERAL PROCESSES	1/00	From synthetic resins	6/00
FILAMENTS AND MANUFACTURE		From other materials	9/00
THEREOF		Multicomponent filaments	8/00
From cellulose or derivatives; from		AFTER-TREATMENT; RECOVERY OF	
proteins.....	2/00; 4/00	STARTING MATERIAL.....	11/00; 13/00

1/00 General methods for the manufacture of artificial filaments 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 [4]
 1/08 . . for forming hollow filaments
 1/09 . . for making electroconductive or anti-static filaments [4]
 1/10 . . Other agents for modifying properties [2]

2/00 Monocomponent artificial filaments or the like of cellulose or cellulose derivatives; Manufacture thereof [2]

- 2/02 . . from solutions of cellulose in acids, bases, or salts [2]
 2/04 . . from cuprammonium solutions [2]
 2/06 . . from viscose (preparation of alkali cellulose C08B) [2]
 2/08 . . Composition of the spinning solution or the bath (preparing or dissolving cellulose xanthate C08B) [2]
 2/10 . . . Addition to the spinning solution or spinning bath of substances which exert their effect equally well in either [2]
 2/12 . . . Addition of delustring agents to the spinning solution [2]
 2/14 Addition of pigments [2]
 2/16 Addition of dyes to the spinning solution [2]
 2/18 Addition to the spinning solution of substances to influence ripening [2]
 2/20 . . . for the manufacture of hollow threads [2]
 2/22 . . by the dry spinning process [2]
 2/24 . . from cellulose derivatives [2]
 2/26 . . from nitrocellulose [2]

- 2/28 . . from organic cellulose esters or ethers, e.g. cellulose acetate [2]
 2/30 . . . by the dry spinning process [2]

4/00 Monocomponent artificial filaments or the like of proteins; Manufacture thereof [2]

- 4/02 . . from fibroin [2]
 4/04 . . from casein [2]
 4/06 . . from globulins, e.g. groundnut protein [2]

6/00 Monocomponent artificial filaments or the like of synthetic polymers; Manufacture thereof [2]

In this group, the percentage for determining the major constituent is expressed in mole percent. [8]

- 6/02 . . from homopolymers obtained by reactions only involving carbon-to-carbon unsaturated bonds [2]
 6/04 . . from polyolefins [2]
 6/06 . . . from polypropylene [2]
 6/08 . . from polymers of halogenated hydrocarbons [2]
 6/10 . . . from polyvinyl chloride or polyvinylidene chloride [2]
 6/12 . . . from polymers of fluorinated hydrocarbons [2]
 6/14 . . from polymers of unsaturated alcohols, e.g. polyvinyl alcohol, or of their acetals or ketals [2]
 6/16 . . from polymers of unsaturated carboxylic acids or unsaturated organic esters, e.g. polyacrylic esters, polyvinyl acetate [2]
 6/18 . . from polymers of unsaturated nitriles, e.g. polyacrylonitrile, polyvinylidene cyanide [2]
 6/20 . . from polymers of cyclic compounds with one carbon-to-carbon double bond in the side chain [2]
 6/22 . . . from polystyrene [2]

- 6/24 . . . from polymers of aliphatic compounds with more than one carbon-to-carbon double bond [2]
- 6/26 . . . from other polymers [2]
- 6/28 . . . from copolymers obtained by reactions only involving carbon-to-carbon unsaturated bonds [2]
- 6/30 . . . comprising olefins as the major constituent [2]
- 6/32 . . . comprising halogenated hydrocarbons as the major constituent [2]
- 6/34 . . . comprising unsaturated alcohols, acetals, or ketals as the major constituent [2]
- 6/36 . . . comprising unsaturated carboxylic acids or unsaturated organic esters as the major constituent [2]
- 6/38 . . . comprising unsaturated nitriles as the major constituent [2]
- 6/40 . . . Modacrylic fibres, i.e. containing 35 to 85% acrylonitrile [2]
- 6/42 . . . comprising cyclic compounds containing one carbon-to-carbon double bond in the side chain as major constituent [2]
- 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 [2]
- 6/46 . . . of polyolefins [2]
- 6/48 . . . of polymers of halogenated hydrocarbons [2]
- 6/50 . . . of polyalcohols, polyacetals or polyketals [2]
- 6/52 . . . of polymers of unsaturated carboxylic acids or unsaturated esters [2]
- 6/54 . . . of polymers of unsaturated nitriles [2]
- 6/56 . . . of polymers of cyclic compounds with one carbon-to-carbon double bond in the side chain [2]
- 6/58 . . . from homopolycondensation products [2]
- 6/60 . . . from polyamides (from polyamino acids or polypeptides D01F 6/68) [2]
- 6/62 . . . from polyesters [2]
- 6/64 from polycarbonates [2]
- 6/66 . . . from polyethers [2]
- 6/68 . . . from polyaminoacids or polypeptides [2]
- 6/70 . . . from polyurethanes [2]
- 6/72 . . . from polyureas [2]
- 6/74 . . . from polycondensates of cyclic compounds, e.g. polyimides, polybenzimidazoles [2]
- 6/76 . . . from other polycondensation products [2]
- 6/78 . . . from copolycondensation products [2]
- 6/80 . . . from copolyamides [2]
- 6/82 . . . from polyester amides or polyether amides [2]
- 6/84 . . . from copolyesters [2]
- 6/86 . . . from polyetheresters [2]
- 6/88 . . . from mixtures of polycondensation products as major constituent with other polymers or low-molecular-weight compounds [2]
- 6/90 . . . of polyamides [2]
- 6/92 . . . of polyesters [2]
- 6/94 . . . of other polycondensation products [2]
- 6/96 . . . from other synthetic polymers [2]
- 8/00 Conjugated, i.e. bi- or multicomponent, artificial filaments or the like; Manufacture thereof [2]**
- 8/02 . . . from cellulose, cellulose derivatives, or proteins [2]
- 8/04 . . . from synthetic polymers [2]
- 8/06 . . . with at least one polyolefin as constituent [2]
- 8/08 . . . with at least one polyacrylonitrile as constituent [2]
- 8/10 . . . with at least one other macromolecular compound obtained by reactions only involving carbon-to-carbon unsaturated bonds as constituent [2]
- 8/12 . . . with at least one polyamide as constituent [2]
- 8/14 . . . with at least one polyester as constituent [2]
- 8/16 . . . with at least one other macromolecular compound obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2]
- 8/18 . . . from other substances [2]
- 9/00 Artificial filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [5]**
- 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; incandescent bodies F21H, H01K 1/02, H01K 3/02) [2]
- 9/10 . . . by decomposition of organic substances (D01F 9/12 takes precedence) [2]
- 9/12 . . . Carbon filaments; Apparatus specially adapted for the manufacture thereof [2,5]
- 9/127 by thermal decomposition of hydrocarbon gases or vapours [5]
- 9/133 Apparatus therefor [5]
- 9/14 by decomposition of organic filaments [2,5]
- 9/145 from pitch or distillation residues [5]
- 9/15 from coal pitch [5]
- 9/155 from petroleum pitch [5]
- 9/16 from products of vegetable origin or derivatives thereof, e.g. from cellulose acetat (D01F 9/18 takes precedence) [2,5]
- 9/17 from lignin [5]
- 9/18 from proteins, e.g. from wool [2]
- 9/20 from polyaddition, polycondensation or polymerisation products (D01F 9/145, D01F 9/16, D01F 9/18 take precedence) [2,5]
- 9/21 from macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [5]
- 9/22 from polyacrylonitriles [2,5]
- 9/24 from macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [5]
- 9/26 from polyesters [5]
- 9/28 from polyamides [5]
- 9/30 from aromatic polyamides [5]
- 9/32 Apparatus therefor [5]
- 11/00 Chemical after-treatment of artificial filaments or the like during manufacture (finishing D06M) [2]**
- 11/02 . . . of cellulose, cellulose derivatives, or proteins [2]
- 11/04 . . . of synthetic polymers [2]
- 11/06 . . . of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2]
- 11/08 . . . of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2]
- 11/10 . . . of carbon [2]
- 11/12 . . . with inorganic substances [5]
- 11/14 . . . with organic compounds, e.g. macromolecular compounds [5]
- 11/16 . . . by physicochemical methods [5]

13/00 Recovery of starting material, waste material, or solvents during the manufacture of artificial filaments or the like [2]

13/02 . of cellulose, cellulose derivatives, or proteins [2]

13/04 . of synthetic polymers [2]