

Title (en)  
Amination of cellulosic synthetic fibres.

Title (de)  
Aminierung von cellulosischen Synthesefasern.

Title (fr)  
Amination de fibres synthétiques cellulosiques.

Publication  
**EP 0683251 A1 19951122 (DE)**

Application  
**EP 95106357 A 19950427**

Priority  
• DE 4417211 A 19940517  
• DE 4421740 A 19940622

Abstract (en)  
Modified cellulosic synthetic fibres (I) are obtd. by: (a) treating a cellulose soln. with a modifier, and then (b) spinning fibres from the soln.; or by: (a) treating an alkali cellulose soln. with a modifier, then (b) xanthogenic treating and spinning fibres by the viscose process. The modifier is an amine of formula (1a), (1b), (1c), (1d) or (1e), or 2-oxo-1,3-oxazolidine, 4- or 5-aminomethyl-2-oxo-1,3-oxazolidine, 4- or 5-(trimethylammonium-methyl)-2-oxo-1,3-oxazolidine chloride, or 1-(trimethylammonium-methyl)-ethylene-carbonate chloride. (B)p-alk(OH)<sub>n</sub>(ER)<sub>m</sub> (1b) H<sub>2</sub>N-alkylene-(ER)<sub>m</sub> (1c) ClCH<sub>2</sub>-CH(OH)-CH<sub>2</sub>-N<+>R<1>2R<2>Z<-> (1e) Z = H, 1-4C alkyl (opt. substd. with 1 or 2 OH gps.), or alkyl-(ER)<sub>m</sub>; ER = ester gp.; A + N + 1 or 2 1-4C alkylene gps. = an heterocyclic ring; A = O, R-N<, R-CH< or R<1>R<2>N<+>Z<->; B = -NH<sub>2</sub>, -NR<1>R<3> or -N<+>R<1>R<2>R<4>Z<->; R = H, amino, 1-6C alkyl (opt. substd. with 1 or 2 amino, sulfo, OH, sulphato, phosphato or COOH gps.), or 3-8C alkyl with 1 or 2 in-chain O or NH gps. (opt. substd. as before); R<1>, R<2>, R<4> = H, Me or Et; R<3> = Me or Et; Z<-> = anion; alkylene = 2-6C opt. branched alkylene (opt. substd. with 1 or 2 OH), or 3-8C alkylene with 1 or 2 in-chain O or NH gps.; Alk = 2-6C opt. branched alkylene, or 3-8C alkylene with 1 or 2 in-chain O or NH; m = 1 or 2; n = 1-4; p = 1 or 2; in these cpds., the amino, OH and ester gps. may be on prim., sec. or tert. C atoms of the alkylene gps. Also claimed is a process for the prodn. of dyed or printed textile materials from cellulosic fibres modified as above, by: (a) weaving or knitting the modified fibre, and then (b) dyeing or printing the fabric obtd. with anionic textile dye(s) in the absence of additional electrolyte salts or alkali.

Abstract (de)  
Modifizierte cellulosische Synthesefasern werden hergestellt, indem man einer Cellusolösung einen Modifikator zusetzt und aus der Lösung Fasern spinn, oder indem man einer Viskoselösung einen Modifikator zusetzt und nach dem Viskosespinnverfahren Fasern spinn, dadurch gekennzeichnet, daß der Modifikator ein Amin der Formeln (1a), (1b), (1c), (1d) oder (1e) ist <IMAGE> H<sub>2</sub>N-alkylen-(ER)<sub>m</sub> (1c) <IMAGE> Die auf diese Weise hergestellten modifizierten cellulosischen Synthesefasern können ohne Zusatz von Elektrolytsalz oder Alkali mit Reaktivfarbstoffen gefärbt werden und sind bedeutend affiner als herkömmliche Viskosefasern.

IPC 1-7  
**D01F 2/00**; **D01F 2/06**; **D01F 2/10**; **D06P 3/66**

IPC 8 full level  
**D06P 3/66** (2006.01); **C04B 28/04** (2006.01); **D01F 2/00** (2006.01); **D01F 2/06** (2006.01); **D01F 2/10** (2006.01); **D01F 2/24** (2006.01); **D06P 5/00** (2006.01); **D06P 5/22** (2006.01); **D06P 5/30** (2006.01)

CPC (source: EP KR US)  
**D01F 2/00** (2013.01 - EP KR US); **D01F 2/06** (2013.01 - EP US); **D01F 2/10** (2013.01 - EP US); **D06P 1/38** (2013.01 - KR); **D06P 1/6428** (2013.01 - KR); **D06P 3/66** (2013.01 - KR); **D06P 5/225** (2013.01 - EP US); **D06P 5/30** (2013.01 - EP US); **D06P 3/66** (2013.01 - EP US); **Y10S 8/92** (2013.01 - US); **Y10S 8/921** (2013.01 - US)

Citation (search report)  
• [XY] DE 1942742 A1 19700305 - INST TEXTILE DE FRANCE  
• [AY] EP 0590397 A1 19940406 - HOECHST AG [DE]  
• [A] DR. U. EINSELE: "Über die Aminierung von Cellulosefasern und deren physikalisches und chemisches Verhalten bei der Textilveredlung", MELLIAND TEXTILBERICHTE, no. 6, HEIDELBERG, BRD, pages 641 - 647

Cited by  
US6001995A; US6955693B2; WO2007147773A3; WO9637642A1; EP3696317A1; WO2020165363A1

Designated contracting state (EPC)  
AT DE GB SE

DOCDB simple family (publication)  
**EP 0683251 A1 19951122**; **EP 0683251 B1 19980708**; AT E168143 T1 19980715; CA 2149504 A1 19951118; CN 1119685 A 19960403; DE 59502732 D1 19980813; FI 113282 B 20040331; FI 952353 A0 19950515; FI 952353 A 19951118; JP H0849111 A 19960220; KR 950032880 A 19951222; US 5565007 A 19961015

DOCDB simple family (application)  
**EP 95106357 A 19950427**; AT 95106357 T 19950427; CA 2149504 A 19950516; CN 95106025 A 19950515; DE 59502732 T 19950427; FI 952353 A 19950515; JP 11753095 A 19950516; KR 19950012061 A 19950516; US 44099795 A 19950515