

Title (en)  
Chlorine-resistant elasthane fibers

Title (de)  
Chlorbeständige Elastanfasern

Title (fr)  
Fibres d'élasthane résistant au chlore

Publication  
**EP 1452631 A1 20040901 (DE)**

Application  
**EP 04000698 A 20040115**

Priority  
DE 10302912 A 20030124

Abstract (en)  
A polyurethane urea fiber having enhanced chlorine resistance comprises at least 85% segmented polyurethane urea containing 0.05-10 wt.% of a finely divided hydrotalcite, coated with 0.2-15 wt.% a metal fatty acid salt. A polyurethane urea fiber (I) having enhanced chlorine resistance comprises at least 85% segmented polyurethane urea whereby the fiber contains 0.05-10 wt.% of a finely divided hydrotalcite, preferably of formula (1) or (2) and is characterized in that the hydrotalcite is coated with 0.2-15 wt.% a metal fatty acid salt.  $M_1-x_2 \rightarrow + Al_x(OH)_2Ax/nn \cdot nH_2O$  (1)  $Mg_1-yAl_y(OH)_u(A_2 \rightarrow) y/2 \cdot nH_2O$  (2)  $M_2 \rightarrow +$  magnesium;  $A \rightarrow OH \rightarrow$ ,  $F \rightarrow$ ,  $Br \rightarrow$ ,  $CO_3 \rightarrow$ ,  $SO_4 \rightarrow$ ,  $HPO_4 \rightarrow$ , silicate, acetate or oxalate, preferably  $CO_3 \rightarrow$ ;  $y$  : 0.20-0.35;  $u$  : 1-10; and  $w$  : 0-20. Independent claims are also included for the following: (1) a process for the production of fibers (I) by forming a 20-50 (25-45) wt.% of a long chain synthetic polymer comprising at least 85% segmented polyurethane in an organic solvent such as dimethylacetamide, dimethylformamide or dimethylsulfoxide and spinning by a dry or wet spinning process to form filaments whereby 0.05-10 (2-5) wt.% of hydrotalcite (with respect to the weight of fiber (I)), coated with 0.05-10, preferably 2-5 wt.% of a metal fatty acid salt, is added to the spinning solution and is distributed within the filaments and/or is on the filament surfaces; and (2) textile goods, preferably cord, knitware or woven goods prepared using the fibers (I), preferably mixed with polyamide, polyamide, polyacrylate, wool, silk or cotton fibers.

Abstract (de)  
Die Erfindung betrifft elastische Polyurethanharnstofffasern, die in wässrigen, chlorhaltigen Umgebungen, wie beispielsweise in Schwimmbädern für Badebekleidung eingesetzt werden können und ein Verfahren zu ihrer Herstellung. Die Polyurethanharnstofffasern enthalten mit Metallfettsäuresalzen beschichtete Hydrotalcite.

IPC 1-7  
**D01F 6/70**; **D01F 1/10**

IPC 8 full level  
**A41D 7/00** (2006.01); **D01F 1/10** (2006.01); **D01F 6/70** (2006.01); **D01F 6/94** (2006.01)

CPC (source: EP KR US)  
**D01F 1/10** (2013.01 - EP US); **D01F 6/70** (2013.01 - EP KR US)

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- [A] EP 0843031 A2 19980520 - BAYER AG [DE]
- [DA] EP 0843029 A1 19980520 - BAYER AG [DE]
- [DA] EP 0558758 A1 19930908 - ASAHI CHEMICAL IND [JP]
- [A] EP 1262499 A1 20021204 - FILLATTICE S P A [IT]

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