

Title (en)  
Flexible cellulosic fibers with reduced modulus and NMR-characteristics and process for their production

Title (de)  
Flexible Cellulosefasern mit reduziertem Modul und vermindertem NMR-Ordnungsgrad und deren Herstellungsverfahren

Title (fr)  
Fibres cellulosiques flexibles avec module et RMN-caractéristiques réduits et procédé pour leur fabrication

Publication  
**EP 0686712 A3 19960501 (DE)**

Application  
**EP 95104358 A 19950324**

Priority  
DE 4420304 A 19940610

Abstract (en)  
[origin: US5618483A] This invention relates to flexible cellulose fibers with a reduced modulus and a decreased NMR degree of order, particularly for use in the textile field, which are obtained by pressing out solutions of the cellulose in hydrous NMMNO through spinning nozzles along an air travel into an NMMNO-containing aqueous and/or alcoholic precipitation bath as well as by a conventional rinsing, aftertreatment and drying, with strengths of between 15 and 50 cN/tex, and to a process for their production. According to the invention, these flexible cellulose fibers have an initial modulus of less than 1,500 cN/tex, and the relationship of the heights of the lines at 88 ppm and 85 ppm above the spectrum base line in the highly resolved <sup>13</sup>C-NMR solid-body spectrum is  $\leq 1$ . Furthermore, these flexible cellulose fibers are obtained by means of a process in which specified hydrophilic, low-molecular weight, organic additives, which are soluble in the polymer solution and have mainly nitrogen-containing groupings are added in defined amounts to the spinning solution of the cellulose as well as to the precipitation bath.

IPC 1-7  
**D01F 2/00**

IPC 8 full level  
**D01F 2/00** (2006.01)

CPC (source: EP US)  
**D01F 2/00** (2013.01 - EP US)

Citation (search report)

- [A] DD 158656 A1 19830126 - LUKANOFF BIRGITTE, et al
- [PA] US 5362867 A 19941108 - CHIN HUI-CHIU [TW], et al
- [A] V. V. ROMANOV ET AL: "PREPARATION OF HYDROCELLULOSE FIBRES WITH INCREASED ELASTICITY FROM SOLUTIONS OF CELLULOSE IN N-METHYLMORPHOLINE-N-OXIDE", FIBRE CHEMISTRY, vol. 21, no. 4, pages 317 - 320
- [DA] DATABASE WPI Section Ch Week 8648, Derwent World Patents Index; Class A11, AN 86-317773
- [A] DATABASE WPI Section Ch Week 9345, Derwent World Patents Index; Class A11, AN 93-359229

Cited by  
US6033618A; WO0181428A1; WO2005052227A1; WO0174906A1; WO9960026A1; WO2015101543A1; US10883196B2

Designated contracting state (EPC)  
AT DE FR GB NL

DOCDB simple family (publication)  
**US 5618483 A 19970408**; AT E170938 T1 19980915; DE 4420304 C1 19950921; DE 59503497 D1 19981015; EP 0686712 A2 19951213; EP 0686712 A3 19960501; EP 0686712 B1 19980909

DOCDB simple family (application)  
**US 46942695 A 19950606**; AT 95104358 T 19950324; DE 4420304 A 19940610; DE 59503497 T 19950324; EP 95104358 A 19950324