

Title (en)
Flame retardant cellulose regenerated fibers and process for their preparation

Title (de)
Flammhemmende Celluloseregeneratfasern und Verfahren zu deren Herstellung

Title (fr)
Fibres de cellulose régénérée ignifuges et procédé destiné à leur fabrication

Publication
EP 2664697 A3 20140101 (DE)

Application
EP 12007741 A 20121115

Priority
• EP 2012002069 W 20120514
• EP 12007741 A 20121115

Abstract (en)
[origin: EP2664697A2] Producing regenerated cellulosic fiber, comprises mixing a viscose with a dispersion of particles of a flame retardant solid matter, in a dispersion medium with a specific ratio, and carrying out wet spinning of the obtained mixture according to specific spinning parameters, molding the particles, whose dimension in a particle major axis is greater than in the two orthogonal axes of secondary particles, and aligning the particle major axes in the fiber in a preferred direction parallel to their spin direction. An independent claim is also included for the cellulose regenerated fiber spun from viscose that is doped with flame-retardant particles, produced by the above method, where the decrease in a dry tensile strength of the cellulose regenerated fiber spun from viscose doped with flame-retardant particles with respect to an identical cellulose regenerated fiber produced from an un-doped viscose, is less than 28%, preferably less than 20%.

IPC 8 full level
D01F 1/07 (2006.01); **D01F 2/06** (2006.01)

CPC (source: EP)
D01F 2/08 (2013.01)

Citation (search report)
• [X] US 2010190402 A1 20100729 - TOZZI-SPADONI FRANCESCO [IT], et al
• [X] WO 2011026159 A1 20110310 - CHEMIEFASER LENZING AG [AT], et al
• [X] CHOUDHARY M S ET AL: "Investigation of the action of flame retardants in cellulose. I. Investigation of the flame retardant action of 2,2-oxybis(5,5-dimethyl-1,3,2-dioxaphosphorinane-2,2-disulfide) in cellulose", JOURNAL OF APPLIED POLYMER SCIENCE, JOHN WILEY & SONS, INC, US, vol. 30, no. 11, 1 November 1985 (1985-11-01), pages 4345 - 4355, XP002479984, ISSN: 0021-8995, DOI: 10.1002/APP.1985.070301113

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 2664697 A2 20131120; EP 2664697 A3 20140101; EP 2664697 B1 20160302; EP 2664697 B2 20180523; ES 2569859 T3 20160512

DOCDB simple family (application)
EP 12007741 A 20121115; ES 12007741 T 20121115