

Title (en)

Fixed polyacrylonitrile filaments and fibres, and process for preparing them.

Title (de)

Fixierte Polyacrylnitrilfäden und -fasern sowie Verfahren zu ihrer Herstellung.

Title (fr)

Filaments et fibres fixés en polyacrylonitrile, et procédé pour leur fabrication.

Publication

EP 0061117 A2 19820929 (DE)

Application

EP 82102086 A 19820315

Priority

CH 191881 A 19810320

Abstract (en)

[origin: US4446206A] The invention relates to filaments and fibers spun from at least 98% by weight of polyacrylonitrile and relative viscosities of between 2.5 and 6.0 which have tensile strengths of more than 50 cN/tex with an elongation at break of at most 15% and a shrinkage at the boil of less than 5% and to a process for their production which comprises at least 2 stretching stages with a minimum stretching ratio of 1:9 as well as a concluding setting stage in which the filaments are treated without shrinkage in dry heat at 170 DEG to 280 DEG C. Such filaments and fibers are distinguished by an increased resistance to swelling and hydrolysis and they are particularly suitable for reinforcing organic and inorganic materials.

Abstract (de)

Fäden und Fasern aus wenigstens 98 Gew.-% Polyacrylnitril und rel. Viskositäten zwischen 2.5 und 6.0 weisen Festigkeiten von mehr als 50 cN/tex bei höchstens 15% Dehnung und einen Kochschrumpf kleiner 5 % auf und zeichnen sich durch eine erhöhte Quell- und Hydrolysebeständigkeit aus. Das Herstellverfahren enthält wenigstens 2 Streckstufen bei einem Mindestverstreckverhältnis von 1:9 sowie eine abschließende Fixierstufe, in der die Filamente ohne Schrumpf bei trockener Hitze von 170 bis 280 °C behandelt werden.

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D01F 6/18

IPC 8 full level

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D01F 6/18 (2013.01 - EP US); **Y10T 428/2913** (2015.01 - EP US)

Cited by

EP0165372A3; EP0154217A3; DE102009019120A1; EP0554775A3; EP0645479A1; EP0213772A3; US6228966B1; WO9826116A1

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