

Title (en)

Production and application of a shrinkable and shrinked, permanently deformable textil material made out of hybrid yarn

Title (de)

Hybridgarn und daraus hergestelltes schrumpffähiges und geschrumpftes, permanent verformbares Textilmaterial, seine Herstellung und Verwendung

Title (fr)

Fabrication et utilisation d'un matériau textile retrécissable et retréci, mis en forme de manière permanente et réalisé à partir d'un fil hybride

Publication

EP 0717133 A3 19970122 (DE)

Application

EP 95119533 A 19951212

Priority

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- DE 19506316 A 19950223

Abstract (en)

[origin: EP0717133A2] Hybrid yarn (I) consists of at least two sorts of filaments, in which the first type (A) has a max. dry heat shrinkage (DHS) of less than 7.5%, the second type (B) has a max. DHS of more than 10%, and the max. DHS stress is so large that the total shrinkage force of component (B) is sufficient to cause crimping of the low-shrinkage component (A), other types of filament (C) which may be present have max. DHS values of 2-200%, and at least one of the filament types (B) and/or (C) consists of thermoplastic filaments with a m.pt. at least 10 (pref. 20-100, esp. pref. 30-70) degrees C below the m.pt. of the low-shrinkage component. Also claimed is (i) textile sheet (II) consisting of or contg. a proportion of yarn (I) significantly affecting its shrinkage properties; (ii) permanently formable textile sheet (III) contg. (I), in which the low-shrinkage filaments (A) are crimped; (iii) fibre-reinforced mouldings (IV) contg. 20-90 (pref. 35-85, esp. pref. 45-75) wt.% sheet material made of low-shrink filaments embedded in 10-80 (pref. 15-45, esp. pref. 25-55) wt.% of a thermoplastic matrix, 0-70 (pref. 0-50, esp. pref. 0-30) wt.% other fibre components and up to 40 (pref. up to 20, esp. pref. up to 12) wt.% additives etc.; (iv) a process for the prodn. of (I) by swirling filaments (A) (low heat shrinkage), filaments (B) (high shrinkage) and opt. other types of filament (C) in a swirling appts.; (v) a process for the prodn. of textile sheet (II) by interweaving, knitting, laying down or matting yarn (I), opt. with other yarns, in an amt. sufficient to affect the shrinkage of the prod.; (vi) a process for the prodn. of formable sheet (III) by making textile sheet as in (v), and then shrinking it by 3-120% in at least one direction by heating at a temp. below the m.pt. of the lowest melting fibres or by infrared treatment; (vii) a process for the prodn. of moulded prods. (IV) by forming textile sheet at a temp. above the m.pt. of the thermoplastic filaments and below the m.pt. of the low-shrinkage filaments.

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D02G 3/40

IPC 8 full level

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Citation (search report)

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