

Title (en)

HIGH MODULUS POLYESTER YARN FOR TIRE CORDS AND COMPOSITES

Title (de)

POLYESTERGARNE MIT HOHEM MODUL FUER REIFENKORDEN UND VERBUNDMATERIALIEN

Title (fr)

FIL DE POLYESTER A MODULE ELEVE POUR CABLES DE PNEUS ET COMPOSITES

Publication

EP 0623179 B1 19960904 (EN)

Application

EP 93901119 A 19921222

Priority

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- US 82279992 A 19920121

Abstract (en)

[origin: WO9314252A1] Yarns are prepared by spinning PEN or other semi-crystalline polyester polymers made from similarly rigid monomer combinations to a state of optimum amorphous orientation and crystallinity. This is accomplished by selection of process parameters to form an undrawn polyester yarn of birefringence at least 0.030. The spun yarn is then hot drawn to a total draw ratio of between 1.5/1 and 6.0/1 with the resulting drawn semi-crystalline polyester yarn having T_g greater than 100 DEG C and a melting point elevation at least 8 DEG C. The preferred yarn has a tenacity at least 6.5 g/d, dimensional stability (EASL + Shrinkage) of less than 5 %, and shrinkage 4 % or less. The resulting yarn exhibits surprisingly high modulus and tenacity together with low shrinkage when compared to prior art yarns.

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