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(54) Title (EN): HYBRID FABRICS OF HIGH PERFORMANCE POLYETHYLENE FIBER

(54) Title (FR): TISSUS HYBRIDES À BASE DE FIBRES DE POLYÉTHYLÈNE HAUTE PERFORMANCE

(57) Abstract:

(EN): The invention relates to hybrid fabric comprising: a high-performance polyethylene (HPPE) fiber having a tensile modulus of at least 110 GPa, preferably higher than 135 GPa, as measured according to ASTM D885M-2014; and a non-polymeric fiber, wherein the cross-sectional area of the HPPE fiber is equal to or smaller than the cross-sectional area of the non-polymeric fiber, the cross-sectional area being defined as the linear density of the fiber divided by volumetric density of the fiber. The invention also relates to a composite comprising the hybrid fabric and to an article comprising the composite.

(FR): L'invention concerne un tissu hybride comprenant : une fibre de polyéthylène haute performance (HPPE) ayant un module de traction d'au moins 110 GPa, de préférence supérieur à 135 GPa, tel que mesuré selon la norme ASTM D885M-2014; et une fibre non polymère, la surface de section transversale de la fibre de HPPE étant égale ou inférieure à la surface de section transversale de la fibre non polymère, la surface de section transversale étant définie comme la densité linéaire de la fibre divisée par la densité volumétrique de la fibre. L'invention concerne également un composite comprenant le tissu hybride et un article comprenant le composite.

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