

Title (en)  
MULTILAYER THERMOPLASTIC SEMI-FINISHED FIBER MATRIX PRODUCT

Title (de)  
MEHRSCHICHTIGES THERMOPLASTISCHES FASER-MATRIX-HALBZEUG

Title (fr)  
SEMI-PRODUIT À MATRICE DE FIBRES THERMOPLASTIQUE MULTICOUCHE

Publication  
**EP 2625038 A1 20130814 (DE)**

Application  
**EP 11767437 A 20111007**

Priority  
• EP 10187010 A 20101008  
• EP 2011067593 W 20111007  
• EP 11767437 A 20111007

Abstract (en)  
[origin: EP2439068A1] The multilayer thermoplastic of a sandwich construction made of a semifinished sheet comprises a core layer having a thickness of 0.3-5 mm of continuous endless fiber reinforced thermoplastic composite materials or of long fiber reinforced thermoplastic composite materials, and a thermoformable thermoplastic molding material layer having a thickness of 0.1-3 mm. An entire surface of the upper- and/or under-side is connected with the thermoformable thermoplastic molding material layer. The core layer contains a reinforcement fiber of 0.001-80 wt.% and has a fiber diameter of 3-40  $\mu$ m. The multilayer thermoplastic of a sandwich construction made of a semifinished sheet comprises a core layer having a thickness of 0.3-5 mm of continuous endless fiber reinforced thermoplastic composite materials or of long fiber reinforced thermoplastic composite materials, and a thermoformable thermoplastic molding material layer having a thickness of 0.1-3 mm. An entire surface of the upper- and/or under-side is connected with the thermoformable thermoplastic molding material layer. The core layer contains a reinforcement fiber of 0.001-80 wt.% and has a fiber diameter of 3-40  $\mu$ m. The core layer and the material layer are connected by bonding, welding, laminating, coating and calendering. The molding material layer is applied on the core layer by coating processes. The thermoformable thermoplastic molding material layer has a comparable or higher melting point than the matrix of the fiber reinforced thermoplastic composite materials in the core layer and a temperature of shear rates of 1/s-100/s. An independent claim is included for a method for producing multilayer thermoplastic of a sandwich construction made of a semifinished sheet.

IPC 8 full level  
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See references of WO 2012045878A1

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