

Title (en)  
SHEETLIKE COMPOSITE MATERIAL

Title (de)  
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Title (fr)  
MATÉRIAU COMPOSITE PLAN

Publication  
**EP 2812184 A1 20141217 (DE)**

Application  
**EP 13707292 A 20130208**

Priority  
• EP 12154516 A 20120208  
• EP 2013052616 W 20130208  
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Abstract (en)  
[origin: EP2626200A1] Planar composite material comprises (i) at least one layer (A) made of a fiber fleece comprising 40-100 wt.% thermoplastic fibers and 0-60 wt.% reinforcing fibers, or a thermoplastic film, and (ii) at least two unidirectional fiber clutch-layers (B) and (c) made of parallel reinforcing fiber bundles, having a bi-directional fiber orientation, where the layers are stitched together and needled. An independent claim is also included for producing composite material, comprising producing fiber fleece-layer (A) according to the carding process, airlay process or spunbond process, bringing together the fiber clutch-layers (B) and (c) with the fiber fleece-layer (A), and stitching together and needling.

IPC 8 full level  
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CPC (source: EP US)  
**B29C 39/203** (2013.01 - US); **B29C 43/305** (2013.01 - US); **B29C 51/145** (2013.01 - US); **B29C 70/24** (2013.01 - EP US); **B29C 70/506** (2013.01 - EP US); **B32B 5/022** (2013.01 - EP US); **B32B 5/06** (2013.01 - EP US); **B32B 5/08** (2013.01 - EP US); **B32B 5/10** (2013.01 - US); **B32B 5/12** (2013.01 - EP US); **B32B 5/26** (2013.01 - EP US); **B32B 27/08** (2013.01 - US); **B32B 27/12** (2013.01 - EP US); **B32B 27/285** (2013.01 - EP US); **B32B 27/288** (2013.01 - EP US); **B32B 27/32** (2013.01 - EP US); **B32B 27/34** (2013.01 - EP US); **B32B 38/0012** (2013.01 - US); **D04H 1/46** (2013.01 - US); **B29C 70/02** (2013.01 - US); **B29C 70/28** (2013.01 - US); **B32B 2250/03** (2013.01 - EP US); **B32B 2250/04** (2013.01 - US); **B32B 2250/05** (2013.01 - EP US); **B32B 2250/40** (2013.01 - EP US); **B32B 2262/02** (2013.01 - EP US); **B32B 2262/0253** (2013.01 - EP US); **B32B 2262/0261** (2013.01 - EP US); **B32B 2262/101** (2013.01 - EP US); **B32B 2262/106** (2013.01 - EP US); **B32B 2262/14** (2013.01 - EP US); **B32B 2305/08** (2013.01 - EP US); **D04H 1/48** (2013.01 - US); **Y10T 156/1044** (2015.01 - EP US); **Y10T 428/24091** (2015.01 - EP US); **Y10T 428/24132** (2015.01 - EP US)

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See references of WO 2013117743A1

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BA ME

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