

Title (en)

HIGH-STRENGTH, LIGHT NON-WOVEN OF SPUNBONDED NON-WOVEN, METHOD FOR THE PRODUCTION AND USE THEREOF

Title (de)

HOCHFESTER LEICHTER VLIESTOFF AUS SPINNVLIEN, VERFAHREN ZU SEINER HERSTELLUNG UND SEINE VERWENDUNG

Title (fr)

ÉTOFFE NAPPÉE LÉGÈRE, TRÈS RÉSISTANTE, COMPOSÉE DE NON-TISSÉ, PROCÉDÉ DE FABRICATION ET UTILISATION

Publication

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Application

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Priority

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Abstract (en)

[origin: EP1964956A1] The fleece comprises a layer of melt-spun synthetic filaments consolidated by high-energy water jets. The novel feature is a small quantity of thermally-activated binder. This is applied as a thin layer on the fleece layer. The fleece is constructed as a three-layer system. The central layer is low-melting thermoplastic polymer binder and the two outer layers are synthetic filaments. The melting temperature of the polymer is preferably at least 20[deg] C below that of the synthetic filaments. The titer of the synthetic filaments is preferably 1.0-4.0 dtex. The fibers are polyester, especially polyethylene terephthalate and/or a polyolefin, especially polypropylene. The low-melting polymer is largely polyethylene, a copolymer with a significant proportion of polyethylene, a copolyester, a polyamide and/or a copolyamide. The low-melting polymer fraction is less than 7 wt%, preferably 1.5-5 wt% with respect to the total weight of backing. The low-melting polymer comprises spun or melt-blown fibers or fibrils. Two-component fibers are used, the low-melting component being the thermally-activated binder. In manufacture, the fleece is laid by a fleece-spinning process. The thin layer of binder is applied. Water-jetting is then followed by drying and thermal activation of the binder. Water-jetting is controlled to achieve a specific longitudinal strength of 4.3 N/5cm per g/m 2>. The specific initial longitudinal modulus at 5% extension is at least 0.45 g/5cm per g/m 2>. The fibers or fibrils are deposited by air-laying or melt-blowing. An independent claim is included for the corresponding method of manufacture.

IPC 8 full level

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