

Title (en)

USE OF A SILICONE FORMULATION FOR THE DURABLE FUNCTIONALISATION OF TEXTILES FOR SPORTS CLOTHING

Title (de)

VERWENDUNG EINER SILICONFORMULIERUNG ZUR DAUERHAFTEN FUNKTIONALISIERUNG VON TEXTILIEN FÜR SPORTKLEIDUNG

Title (fr)

UTILISATION D UNE FORMULATION SILICONE POUR LA FONCTIONNALISATION DURABLE DES TEXTILES POUR LES VETEMENTS DE SPORT

Publication

EP 1709236 A1 20061011 (FR)

Application

EP 05717473 A 20050121

Priority

- FR 2005000147 W 20050121
- FR 0400548 A 20040121

Abstract (en)

[origin: FR2865223A1] Crosslinkable liquid silicone composition is used to impart a waterproof and impermeable finish to a textile material. The composition comprises a hydroxy- or alkoxy-functional polyorganosiloxane resin, an adhesion promoter comprising a metal alkoxide, and a functional additive comprising coupling functions and hydrophobic functions. Crosslinkable liquid silicone composition is used to coat a textile material and/or its constituent threads, fibers and/or filaments so as to form a crosslinked silicone sheath around the threads, fibers and/or filaments and to impart a durable waterproof and impermeable finish to the textile material without substantially affecting its intrinsic breathability. The composition comprises 100 parts by weight of a polyorganosiloxane resin A comprising at least two different siloxy units selected from M, D, T and Q, one of which is a T or Q unit, and at least three hydroxy and/or C1-C6 alkoxy groups; 0.5-200 parts by weight of an adhesion promoter B comprising a metal alkoxide (I) and/or a metal polyalkoxide resulting from the partial hydrolysis of (I: a=0) and optionally an optionally alkoxyated organosilane with at least one C2-C6 alkenyl group and/or an organosilicon compound containing at least one epoxy, amino, ureido, isocyanato and/or isocyanurate group; 1-1000 parts by weight of a functional additive C comprising a silane, linear polyorganosiloxane and/or polyorganosiloxane resin with coupling functions capable of reacting with A and/or B and hydrophobic functions and/or a monomeric, oligomeric or polymeric hydrocarbon compound comprising at least one linear or branched (un)saturated hydrocarbon group and optionally heteroatoms other than silicon, where the hydrocarbon compound has coupling functions capable of reacting with A and/or B and hydrophobic functions; and 0-10000 parts by weight of a nonreactive additive system D comprising an organic solvent and/or an organosilicon compound and/or water. M[(OCH₂CH₂)_aOR_{2-n}]_n(I) M: Ti, Zr, Ge, Si, Mn or Al, optionally coordinated to a ligand; n: the valence of M; R_{2-n}>1-12C alkyl; a: 0, 1 or 2; provided that R_{2-n}>is 2-12C alkyl when a: 0 and 1-4C alkyl when a = 1 or 2.

IPC 8 full level

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CPC (source: EP KR US)

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