

Title (en)
ELECTRICAL WIRE INSULATION

Title (de)
ISOLIERUNG VON ELEKTRISCHEN LEITUNGEN

Title (fr)
ISOLANT POUR FIL ELECTRIQUE

Publication
EP 1116243 B1 20060322 (EN)

Application
EP 99947633 A 19990917

Priority
• GB 9903116 W 19990917
• GB 9820214 A 19980917

Abstract (en)
[origin: WO0017889A1] An electrical wire or cable having insulation comprising (i) at least a first layer of a polyolefin-based formulation, of which at least 20 %, preferably at least 40 %, more preferably at least 60 % or very preferably at least 80 % of the weight of the polymeric portion of the said formulation consists of a carbonyl-containing polymer (homopolymer or copolymer or terpolymer), of which polymer the or at least one constituent monomer is a carboxylic acid ester, preferably an acrylate or acetate, especially an alkyl acrylate (preferably methyl acrylate, ethyl acrylate, propyl acrylate or butyl acrylate), the said monomer itself constituting at least 5 %, preferably at least 9 %, more preferably at least 15 % by weight of the said co-, or ter- polymer when used, and the remainder or the majority of the remainder of the said co-, or ter- polymer preferably being derived from olefinic monomer, preferably ethylene; in contact with (ii) at least a second layer of another material formulation, containing at least 10 %, more preferably at least 50 %, very preferably at least 90 %, especially 100 %, by weight of the second layer, of polyvinylidene fluoride (PVDF), or especially preferably a copolymer based on VDF with a partially or fully fluorinated co-monomer, most preferably a copolymer of VDF and hexafluoropropylene (HFP); wherein the said layers (i) and (ii) whilst in contact with each other have been subjected to cross-linking reaction, preferably by radiation, more preferably ionising radiation, sufficient to prevent delamination of the two layers during a 1 hour acetone immersion test at 23 DEG C, or to increase the peel bond strength between the said layers to at least 5N according to the ASTM B1876-95 method described below preferably increasing the bond strength by at least 50 %, more preferably by at least 100 %, especially by at least 500 % or 1000 %, compared to that between the uncrosslinked layers.

IPC 8 full level
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CPC (source: EP KR)
H01B 3/42 (2013.01 - KR); **H01B 3/441** (2013.01 - EP); **H01B 3/445** (2013.01 - EP)

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