Title (en)

A POLYMERIC COMPOSITE MATERIAL WITH IMPROVED FLAME RESISTANCE

Title (de)

POLYMERER VERBUNDSTOFF MIT VERBESSERTER FEUERBESTÄNDIGKEIT

Title (fr)

MATERIAU COMPOSITE POLYMERE AVEC MEILLEURE RESISTANCE AUX FLAMMES

Publication

EP 0983316 A1 20000308 (EN)

Application

EP 97919873 A 19970417

Priority

SK 9700003 W 19970417

Abstract (en)

[origin: WO9846673A1] A polymeric composite material with improved flame resistance contains 25 to 75 parts by weight, preferably 35 to 60 parts by weight of a thermoplastic substance (based on 100 parts by weight of the polymeric composite material), and 75 to 25 parts by weight, preferably 65 to 40 parts by weight of magnesium hydroxide (based on 100 parts by weight of the polymeric composite material) the surface of which is treated by a surface active agent and/or which is uniformly intermixed with a surface active agent. The magnesium hydroxide consists of agglomerates of crystals having all particles with diameters less than 4.0 mu m, 50 % of particles with diameters less than 1.4 mu m, and a specific surface, determined by the BET-method, less than 25 m<2>/g. The magnesium hydroxide is a powdered crystalline product with the crystal size, as determined by Xray powder diffraction method, in the <004> direction greater than 150 ANGSTROM and less than 500 ANGSTROM , the aspect ratio having a value in the range of 2 to 5, strain in the <004> direction being not more than 4.2 x 10<-3>, and strain in the <110> direction being not more than 3.0 x 10<-3>. A method of preparation of a surface treated magnesium hydroxide is characterized in that, the surface active agent or a part of it in the form of a solution or suspension is added to an aqueous suspension of magnesium hydroxide, the mixture is mixed and water separated, providing the surface treated magnesium hydroxide. A mixture of magnesium hydroxide and a surface active agent or a part of it is mixed in a mixer at such elevated temperature, at which the surface active agent is uniformly deposited on the surface of magnesium hydroxide particles, and the product is cooled down.

IPC 1-7

C08K 9/00; C01F 5/14

IPC 8 full level

C01F 5/14 (2006.01); **C08K 9/04** (2006.01); **C09C 1/02** (2006.01)

CPC (source: EP KR)

C01F 5/14 (2013.01 - EP); **C08K 3/016** (2017.12 - KR); **C08K 5/098** (2013.01 - KR); **C08K 5/20** (2013.01 - KR); **C08K 5/54** (2013.01 - KR); **C08K 9/04** (2013.01 - EP KR); **C09C 1/028** (2013.01 - EP); C01P 2002/60 (2013.01 - EP); C01P 2004/50 (2013.01 - EP); C01P 2004/61 (2013.01 - EP); C01P 2006/12 (2013.01 - EP); C01P 2006/90 (2013.01 - EP); C08K 2003/2224 (2013.01 - KR); C08K 2201/003 (2013.01 - EP KR); C08K 2201/006 (2013.01 - EP KR)

Citation (search report)

See references of WO 9846673A1

Designated contracting state (EPC)

AT FR GB IT

DOCDB simple family (publication)

WO 9846673 A1 19981022; AU 2420397 A 19981111; EP 0983316 A1 20000308; KR 100532735 B1 20051130; KR 20010006442 A 20010126; SK 156399 A3 20000612; SK 282487 B6 20020205

DOCDB simple family (application)

SK 9700003 W 19970417; AU 2420397 A 19970417; EP 97919873 A 19970417; KR 19997009532 A 19991015; SK 156399 A 19970417