

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 December 2006 (07.12.2006)

PCT

(10) International Publication Number
WO 2006/128672 A1

(51) International Patent Classification:

C04B 33/13 (2006.01) **C03C 12/00** (2006.01)
C04B 33/04 (2006.01) **C03C 3/076** (2006.01)
C04B 35/18 (2006.01)

(21) International Application Number:

PCT/EP2006/005149

(22) International Filing Date: 30 May 2006 (30.05.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

PCT/EP2005/006039 31 May 2005 (31.05.2005) EP

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HEAT INSULATING COMPOSITE AND METHODS OF MANUFACTURING THEREOF

(57) Abstract: Heat insulating panels are widely used in various domains, for example construction sites or hospitals. These panels require adhesives which may generate heat when the panels are subjected to high temperatures. In the field of high temperature insulation, ceramics are brittle and may not be suitable in some applications. This invention discloses a heat-insulating composite including a plurality of glass, and a binder composition for fusing the glass when the heat-insulating composite is exposed to a temperature higher than 1000°C. It was found that as the heat progresses from the outer surface to the inner surface of the composite, plurality of laminated ceramic-like structures are formed, which may assist further in insulating the heat. Interestingly, these laminated ceramic-like structures are found to be rubber-like and therefore not brittle.

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