Title (en)

MATERIAL COMPOSITION FOR PRODUCING A FIREPROOF MATERIAL AND THE USE THEREOF, AND FIREPROOF MOULDING BODY AND METHOD FOR THE PRODUCTION THEREOF

Title (de)

MATERIALZUSAMMENSETZUNG ZUR HERSTELLUNG EINES FEUERFESTWERKSTOFFES SOWIE IHRE VERWENDUNG UND FEUERFESTFORMKÖRPER SOWIE VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

COMPOSITION DE MATIÈRE POUR RÉALISER UN MATÉRIAU IGNIFUGE ET SON UTILISATION, ET CORPS MOULÉ IGNIFUGE ET PROCÉDÉ POUR LE RÉALISER

Publication

EP 2331479 A1 20110615 (DE)

Application

EP 09779478 A 20090514

Priority

- EP 2009055828 W 20090514
- EP 08017129 A 20080929
- EP 09779478 A 20090514

Abstract (en)

[origin: EP2168935A1] The material composition comprises a fine-grain fraction with grain size of less than 100 mu m and a coarse-grain fraction with grain sizes of more than 100 mu m. The fine-grain fraction comprises 90% of aluminum oxide having a grain size of 50-100 mu m, 5 wt.% of zirconium oxide having a grain size of 50-20 mu m, and 5 wt.% of stabilizer having a grain size of 50-20 mu m for the zirconium oxide and/or titanium oxide powder, in relation to the total weight of the fine-grain fraction. The coarse-grain fraction represents a weight fraction of more than 30 wt.% of the material composition. The material composition comprises a fine-grain fraction with grain size of less than 100 mu m and a coarse-grain fraction with grain sizes of more than 100 mu m. The fine-grain fraction comprises 90% of aluminum oxide having a grain size of 50-100 mu m, 5 wt.% of zirconium oxide having a grain size of 50-20 mu m, and 5 wt.% of stabilizer having a grain size of 50-20 mu m for the zirconium oxide and/or titanium oxide powder, in relation to the total weight of the fine-grain fraction. The coarse-grain fraction represents a weight fraction of more than 30 wt.% of the material composition and comprises an aluminum oxide-based crushed granulate and/or aluminum oxide-based hollow sphere structures. The zirconium oxide is partially or completely stabilized with the stabilizer and is monoclinic zirconium oxide. The stabilizer exists as an independent component of the fine grain fraction. The composition consists of 60-80 % of coarse-grain fraction. Hardened or sintered crushed granulate based on fine-grain fraction exists as crushed granulates. The crushed granulate is sintered at above 1300[deg] C. The composition consists of a dispersion medium and/or a plasticizer. Independent claims are included for: (1) a method for the production of a fireproof material; and (2) a fireproof material.

IPC 8 full level

C04B 35/106 (2006.01); **C04B 35/66** (2006.01)

CPC (source: EP US)

C04B 35/106 (2013.01 - EP US); **C04B 35/6262** (2013.01 - EP US); **C04B 35/6263** (2013.01 - EP US); **C04B 35/62665** (2013.01 - EP US); **C04B 35/66** (2013.01 - EP US); **C04B 38/08** (2013.01 - EP US); C04B 2235/3206 (2013.01 - EP US); C04B 2235/3208 (2013.01 - EP US); C04B 2235/3217 (2013.01 - EP US); C04B 2235/3225 (2013.01 - EP US); C04B 2235/3229 (2013.01 - EP US); C04B 2235/3232 (2013.01 - EP US); C04B 2235/3244 (2013.01 - EP US); C04B 2235/3246 (2013.01 - EP US); C04B 2235/528 (2013.01 - EP US); C04B 2235/5427 (2013.01 - EP US); C04B 2235/5436 (2013.01 - EP US); C04B 2235/5472 (2013.01 - EP US); C04B 2235/76 (2013.01 - EP US); F05C 2203/08 (2013.01 - EP US); Y10T 428/2982 (2015.01 - EP US)

C-Set (source: EP US)

C04B 38/08 + **C04B 35/106**

Citation (search report)

See references of WO 2010034529A1

Designated contracting state (EPC)

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Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

EP 2168935 A1 20100331; CN 102227389 A 20111026; CN 104003696 A 20140827; EP 2331479 A1 20110615; JP 2012504087 A 20120216; JP 5279915 B2 20130904; US 2012175826 A1 20120712; US 2014057773 A1 20140227; US 8609019 B2 20131217; US 9108886 B2 20150818; WO 2010034529 A1 20100401

DOCDB simple family (application)

EP 08017129 A 20080929; CN 200980147685 A 20090514; CN 201410212257 A 20090514; EP 09779478 A 20090514; EP 2009055828 W 20090514; JP 2011528263 A 20090514; US 200913121429 A 20090514; US 201314065555 A 20131029