

Title (en)

USE OF POLYMER MICROPARTICLES IN BUILDING MATERIAL MIXTURES

Title (de)

VERWENDUNG VON POLYMEREN MIKROPARTIKELN IN BAUSTOFFMISCHUNGEN

Title (fr)

UTILISATIONS DE MICROPARTICULES POLYMERES DANS DES MELANGES DE MATERIAUX DE CONSTRUCTION

Publication

EP 1928801 A1 20080611 (DE)

Application

EP 06792315 A 20060928

Priority

- EP 2006009444 W 20060928
- DE 102005046681 A 20050929

Abstract (en)

[origin: US2007068088A1] The use of polymeric microparticles having a cavity in hydraulically setting building material mixtures is described, from 1 to 100% by volume of the cavity of these microparticles being filled with water. In this way, remarkable concrete resistance to the freezing and thawing cycle is achieved, these microparticles providing improved protection for the concrete from the effects of the freezing and thawing cycle, even at a diameter of from 0.1 to 1 mum and in doses which are 1 to 2 orders of magnitude lower than those described in the prior art. Moreover, the compressive strength of the correspondingly hardened concrete is substantially improved, which was likewise not foreseeable.

IPC 8 full level

C04B 16/08 (2006.01); **C04B 24/26** (2006.01); **C04B 28/02** (2006.01)

CPC (source: EP US)

C04B 16/08 (2013.01 - EP US); **C04B 20/0036** (2013.01 - EP US); **C04B 24/2641** (2013.01 - EP US); **C04B 28/02** (2013.01 - EP US); **C04B 2103/0049** (2013.01 - EP US); **C04B 2103/0058** (2013.01 - EP US); **C04B 2111/10** (2013.01 - EP US); **C04B 2111/29** (2013.01 - EP US)

Citation (search report)

See references of WO 2007036365A1

Citation (examination)

- JP 2005206399 A 20050804 - SUMITOMO OSAKA CEMENT CO LTD
- US 2004034147 A1 20040219 - ZAMA YOSHIKI [JP]
- US 6084011 A 20000704 - LUCERO RICHARD F [US], et al
- JP H03267437 A 19911128 - SHIMIZU CONSTRUCTION CO LTD, et al
- DE 2229094 A1 19730118 - SEMPERIT GMBH
- EP 0338739 A1 19891025 - MITSUI CONSTR [JP], et al

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DOCDB simple family (publication)

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DOCDB simple family (application)

US 24796205 A 20051011; CA 2623881 A 20060928; CN 200680041801 A 20060928; DE 102005046681 A 20050929; EP 06792315 A 20060928; EP 2006009444 W 20060928; JP 2008532677 A 20060928; US 29088008 A 20081104