

Title (en)

MICROCAPSULES AND CONCRETE CONTAINING THE SAME

Title (de)

MIKROKAPSELN UND BETON DAMIT

Title (fr)

MICROCAPSULES ET BÉTON CONTENANT CELLES-CI

Publication

EP 2961715 A1 20160106 (EN)

Application

EP 14709589 A 20140303

Priority

- GB 201303690 A 20130301
- US 201313962638 A 20130808
- GB 201314220 A 20130808
- EP 2014054100 W 20140303

Abstract (en)

[origin: WO2014131913A1] Microcapsules, for inclusion in concrete, adapted to reduce the area of a defect by at least 45 % in said concrete once a quantity of said microcapsules has ruptured, said microcapsules each comprising: a polymeric shell encapsulating a liquid core, wherein the polymeric shell comprises a substantially impermeable polymer layer and the liquid core comprises carbonatogenic bacterial spores, and optionally bacterial nutrients, dispersed in a liquid medium. Also disclosed is a concrete composition comprising a quantity of such microcapsules, and a method of reducing the area of a defect in concrete.

IPC 8 full level

C04B 20/10 (2006.01); **C04B 40/06** (2006.01); **C12N 1/04** (2006.01)

CPC (source: EP)

C04B 20/1029 (2013.01); **C04B 20/1033** (2013.01); **C04B 40/0675** (2013.01); **C12N 1/04** (2013.01); **C12N 1/20** (2013.01);
C04B 2103/0001 (2013.01)

Citation (search report)

See references of WO 2014131913A1

Citation (examination)

- CN 103342484 A 20131009 - UNIV SOUTHEAST
- CN 103043937 A 20130417 - UNIV TONGJI
- DE MUYNCK W ET AL: "Microbial carbonate precipitation in construction materials: A review", ECOLOGICAL ENGINEERING, ELSEVIER, AMSTERDAM, NL, vol. 36, no. 2, 1 February 2010 (2010-02-01), pages 118 - 136, XP026857135, ISSN: 0925-8574, [retrieved on 20090613]
- JIANYUN WANG ET AL: "Use of silica gel or polyurethane immobilized bacteria for self-healing concrete", CONSTRUCTION AND BUILDING MATERIALS, ELSEVIER, NETHERLANDS, vol. 26, no. 1, 17 June 2011 (2011-06-17), pages 532 - 540, XP028285563, ISSN: 0950-0618, [retrieved on 20110624], DOI: 10.1016/J.CONBUILDMAT.2011.06.054

Cited by

CN109354472A; CN108751761A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2014131913 A1 20140904; EP 2961715 A1 20160106

DOCDB simple family (application)

EP 2014054100 W 20140303; EP 14709589 A 20140303