

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(10) International Publication Number
WO 2015/057978 A3

(43) International Publication Date
23 April 2015 (23.04.2015)

(51) International Patent Classification:

C04B 14/04 (2006.01) C04B 28/04 (2006.01)
C04B 28/02 (2006.01) C04B 18/08 (2006.01)

(21) International Application Number:

PCT/US2014/060924

(22) International Filing Date:

16 October 2014 (16.10.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/892,239 17 October 2013 (17.10.2013) US
61/892,194 17 October 2013 (17.10.2013) US

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(81) Designated States (unless otherwise indicated, for every

kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG,
MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM,
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SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every

kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ,
TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU,
TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE,
DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,
LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(88) Date of publication of the international search report:

18 June 2015

(54) Title: HIGH TEMPERATURE LIGHTWEIGHT THERMAL INSULATING CEMENT AND SILICA BASED MATERIALS

(57) Abstract: A high temperature lightweight thermal insulating material is formed from a mixture that includes cement or silica sand, water and a foaming agent. The foaming agent can be an aluminum powder or a surfactant. The insulating material has a maximum use temperature greater than about 600 degrees Celsius.



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A. CLASSIFICATION OF SUBJECT MATTER**C04B 14/04(2006.01)i, C04B 28/02(2006.01)i, C04B 28/04(2006.01)i, C04B 18/08(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C04B 14/04; B28B 1/50; E04B 1/78; B32B 13/00; C04B 38/00; C04B 14/00; C08J 9/00; B28B 1/14; C04B 28/02; C04B 28/04; C04B 18/08

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & keywords: insulate, cement, sand, silica, water, foaming agent, mold, maximum use temperature

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5641584 A (ANDERSEN, PER JUST et al.) 24 June 1997 See abstract; column 5, lines 39-40; column 9, lines 21-25; column 11, lines 18-35; column 13, lines 10-15; column 15, lines 8, 14-26; column 16, lines 15-19, 35, 49, 60-62; column 19, lines 49, 66, 67; column 20, lines 1-5, 46-62; column 23, lines 10, 24-26; column 25, lines 11-15; column 27, lines 15-31; column 28, lines 7, 25-46; and claims 1, 2, 21-25, 32-34, 40-42, 50-64.	1-90
A	US 6773500 B1 (CREAMER, STEVE R. et al.) 10 August 2004 See abstract; column 2, lines 1-35; column 3, lines 16-39; column 4, lines 9-19; column 7, lines 24-31; and claims 1, 7-13, 15.	1-90
A	US 5250578 A (CORNWELL, CHARLES E.) 5 October 1993 See abstract; column 2, lines 35-46; and claims 1-5, 8-18.	1-90
A	US 4124669 A (URMSTON, CHARLES W. B.) 7 November 1978 See abstract; column 2, lines 24-45; column 6, lines 31-33; and claims 1, 3.	1-90
A	US 2012-0286190 A (PRAT, EVELYNE et al.) 15 November 2012 See abstract; paragraphs [0045]-[0050], [0108], [0183]-[0188]; and claims 1, 3, 6, 8, 13.	1-90

 Further documents are listed in the continuation of Box C. See patent family annex.

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Date of the actual completion of the international search

26 February 2015 (26.02.2015)

Date of mailing of the international search report

26 February 2015 (26.02.2015)

Name and mailing address of the ISA/KR

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Republic of Korea

Facsimile No. ++82 42 472 3473

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