

Search history

Search PN=(WO2016209942) (Results 1)

1:

Search [SP]: 1. a composite gypsum board comprising: (a) a board core comprising set gypsum formed from a first slurry at least water, stucco, and optionally, an enhancing additive, the first slurry having a first water-stucco ratio, the core having a first density, the core defining first and second core faces in opposing relation and (b) a concentrated layer formed from a second slurry comprising at least water, stucco, and the enhancing additive, the second slurry having a second water-stucco ratio, the concentrated layer disposed in bonding relation to the first core face, the concentrated layer having a density of at least about 1.1 times higher than the density of the board core wherein: (i) when the enhancing additive is present in the first slurry, the enhancing additive is included in a higher concentration in the second slurry than in the first slurry, (ii) the board core has a thickness greater than the thickness of the concentrated layer, and (iii) the second water-stucco ratio is at least about 1.2 times higher than the first water-stucco ratio. 2. the composite gypsum board of claim 1, wherein: the concentrated layer defines first and second concentrated layer faces, the board further comprises a top cover sheet, the first concentrated layer face facing the top cover sheet, and the second concentrated layer face faces the first core face, 3. the composite gypsum board of claim 1 wherein the board further comprises a bottom cover sheet, the second core face facing the bottom cover sheet. 4. the composite gypsum board of claim 1, wherein the second water-stucco ratio is at least about 1.4 times higher than the first water-stucco ratio. 5. the composite gypsum board of claim 1, wherein the concentrated layer has an average core hardness that is at least about 1.5 times greater than the average core hardness of the board core. 6. the composite gypsum board of claim 1, wherein the board core has a dry density of about 30 pcf or less. 7. the composite gypsum board of claim 1, wherein the concentrated layer is formed from at least about 1.2 times the enhancing additive used in forming the board core. 8. the composite gypsum board of claim 1, wherein the board has a density of about 33 pcf (about 530 kg/m³) or less, and the board has a nail pull resistance according to astm c473-10, method b of at least about 68 lbs of force. 9. the composite gypsum board of claim 1, wherein the enhancing additive comprises starch. 10. the composite gypsum board of claim 9, wherein the starch comprises a pregelatinized starch having a viscosity of from about 20 centipoise to about 700 centipoise when the viscosity is measured while the starch is subjected to conditions according to the vma method. 11. the composite gypsum board of claim 1, wherein the second slurry further comprises glass fiber. 12. a composite gypsum board comprising: (a) a board core comprising set gypsum formed from at least water, stucco, and optionally, an enhancing additive, the core having a density, the core defining a first core face and (b) a concentrated layer formed from at least water, stucco, and the enhancing additive, the concentrated layer disposed in bonding relation to the first core face wherein: (i) when the enhancing additive is present in forming the core, the enhancing additive is included in a higher concentration in forming the concentrated layer than in forming the board core, (ii) the board core having a dry density of about 30 pcf or less, and (iii) the concentrated layer having a higher dry density than the board core dry density. 13. the composite gypsum board of claim 12, wherein a density differential between the concentrated layer and the board core is at least about 8 pcf (about 130 kg/m³). 14. the composite gypsum board of claim 12, wherein the concentrated layer has an average core hardness that is at least about 1.5 times greater than the average core hardness of the board core. 15. the composite gypsum board of claim 12, wherein the concentrated layer is formed from at least about 1.2 times the enhancing additive used in forming the board core. 16. the composite gypsum board of claim 12, wherein the board has a density of about 33 pcf (about 530 kg/m³) or less, and the board has a nail pull resistance according to astm c473-10, method b of at least about 68 lbs of force. 17. the composite gypsum board of claim 12, wherein the enhancing additive comprises starch. 18. a composite gypsum board comprising: (a) a board core comprising set gypsum formed from at least water, stucco, and optionally, an enhancing additive, the core having a density, the core defining a first core face and (b) a concentrated layer formed from at least water, stucco, and the enhancing additive, the concentrated layer disposed in bonding relation to the first core face, the concentrated layer having a density of at least about 1.1 times higher than the density of the board core wherein: (i) when the enhancing additive is present in forming the core, the enhancing additive is included in a higher concentration in forming the concentrated layer than in forming the board core, (ii) the concentrated layer has a young's modulus that is at least about 1.5 times higher than a young's modulus of the board core, and (iii) the concentrated layer having a higher dry density than the board core dry density. 19. the composite gypsum board of claim 18, wherein the enhancing additive comprises starch. 20. the composite gypsum board of claim 18, wherein the concentrated layer has an average core hardness that is at least about 1.5 times greater than the average core hardness of the board core. 21. the composite gypsum board of claim 18, wherein the concentrated layer is formed from at least about 1.2 times the enhancing additive used in forming the board core. 22. the composite gypsum board of claim 18, wherein the board has a density of about 33 pcf (about 530 kg/m³) or less, and the board has a nail pull resistance according to astm c473-10, method b of at least about 68 lbs of force. (Results 45)

Search 2 and PD<20150624 (Results 39)

3:

1) Family number: 46990000 (US2010247937A)

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Title: CEMENTITIOUS ARTICLE AND METHOD FOR PREPARING THE SAME

Abstract: A cementitious article and a method of making a cementitious article are disclosed. The cementitious article comprises a cementitious component that comprises a polyvinyl acetate type polymer, a monobasic phosphate, and optionally boric acid. Cementitious articles, such as board, are prepared such that the polyvinyl acetate type polymer, the monobasic phosphate, and optionally boric acid can be present in the cementitious core, and/or in dense layers if present. The concentration of the polyvinyl acetate type polymer, monobasic phosphate, and optionally boric acid in the cementitious article can increase from a central region A to peripheral regions B and C, respectively. In some embodiments, the polyvinyl acetate type polymer is a polyvinyl alcohol and the monobasic phosphate is monoammonium phosphate.

Classifications:

International (IPC 8-9): B05D3/00 B05D3/02 B28B19/00 B32B27/00 B32B27/18 B32B9/04 C04B22/16 C04B24/26 C04B28/14 E04C2/00 (Advanced/Invention);

B05D3/00 B32B27/18 C04B24/00 (Core/Invention);

B28B19/00 C04B22/16 C04B24/26 (Core/Non-invention)

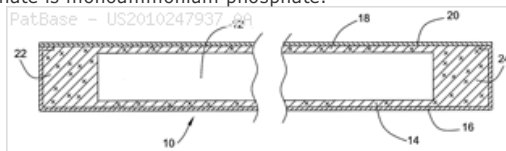
International (IPC 1-7): C04B28/00

CPC: Y10T428/31504 Y10T428/31855 C04B28/14 C04B2111/00482

C04B2111/00662 C04B2111/00672 C04B2111/60 Y02W30/92

European: C04B28/14 M04B111/00T10B M04B111/00T2 M04B111/00T6B M04B111/60

US: 427/331 427/331S 427/372.2 428/411.1 428/500 428/500P 524/5 524/5S



Family:

Publication number	Publication date	Application number	Application date
AR076168 AA	20110526	AR2010P101023	20100329
CA2757262 AA	20101014	CA20102757262	20100316
CA2757262 C	20190115	CA20102757262	20100316
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WO10117563 A1	20101014	WO2010US27401	20100316

Priority:

US20090415931 20090331 WO2010US27401 20100316

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Agent(s): MOFFAT AND CO; LEYDIG VOIT AND MAYER LTD; PHILIP T; DAVID F; HASAN SALIM ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

2) Family number: 34171065 (US2007022913A)

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Title: SILOXANE POLYMERIZATION IN WALLBOARD

Abstract: Polymerization of siloxane is improved using a gypsum-based slurry that includes stucco, Class C fly ash, magnesium oxide and an emulsion of siloxane and water. This slurry is used in a method of making water-resistant gypsum articles that includes making an emulsion of siloxane and water, then combining the slurry with a dry mixture of stucco, magnesium oxide and Class C fly ash. The slurry is then shaped as desired and the stucco is allowed to set and the siloxane polymerizes. The resulting product is useful for making a water-resistant gypsum panel having a core that includes interwoven matrices of calcium sulfate dihydrate crystals and a silicone resin, where the interwoven matrices have dispersed throughout them a catalyst comprising magnesium oxide and components from a Class C fly ash.

Classifications:

International (ipc 8-9): C04B28/14 B28B1/26 B28B3/00 B32B13/00 B32B13/04 B32B13/08 B32B29/00 B32B37/00 B32B9/04 C04B C04B11/00 C04B11/02 C04B18/06 C04B18/18 C04B22/06 C04B24/00 C04B24/40 C04B24/42 C04B28/00 C04B28/10 C08G77/08 C08J3/20 C08K3/22 C08K3/30 C08K3/34 C08L3/00 C08L83/04 E04C2/04 (Advanced/Invention); C04B11/02 C04B24/00 C04B24/42 C04B28/00 (Advanced/Non-invention); B32B13/00 B32B29/00 B32B9/04 C04B11/00 C04B18/04 C04B24/00 C04B28/00 C04B28/14 C08J3/20 C08K3/00 C08L3/00 C08L83/00 (Core/Invention); C04B (Subclass/Invention)
International (ipc 1-7): C04B 24/00 C04B 24/42 C04B11/00 C04B11/02 C04B24/00 C04B24/42 C04B28/00 C04B28/14
CPC: Y10T428/31663 Y10T442/665 C04B28/14 C04B2111/0062 C04B2111/27 Y02W30/92
European: C04B28/14 M04B111/00T6B M04B111/27
US: 106/697 106/705 106/705S 106/772 106/778 106/801 106/802 106/802S 106/806 156/41 156/41S 264/333 428/447 428/447P 428/703 442/386 52/309.17 523/122 523/122S 524/3 524/3S 524/423 524/423S 524/47 524/47S 524/650

PatBase - NZ564932_A

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AU2006276951 BB	20110428	AU20060276951	20060605
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US7815730 BB	20101019	US20090478114	20090604
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VN12124 A1	20140127	VN20080000416	20060605
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WO07018705 A3	20080807	WO2006US21793	20060605
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Priority:

US20050192652 20050729 EP20060772196 20060605 WO2006US21793 20060605
US20090478114 20090604 US20090617114 20091112 US20100888162 20100922
US20110091369 20110421

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Inventor(s): YU QIANGUS ; WANG XUMINGUS ; LIU QINGXIAUS ; REED PAULUS ; RRED PAUL

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 20907072 (US2080009A)

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Title: PLASTER WALLBOARD AND METHOD OF MAKING IT

Abstract: What I claim is: 1. The process of producing cellular cementitious products which comprises making a fine-grained foam from a solution containing foam-producing agents, thereupon stabilizing said formed foam by the addition of organic colloidal stabilizing agents, then adding said stabilized foam to a slurry of gauging fluid and cementitious substance, and then molding the resultant mixture. 2. The process of producing cellular cementitious products which comprises whipping a comparatively freely fluid solution containing a foaming agent into a fine-grained foam, adding to said foam a soluble organic colloid capable of stabilizing said foam, adding the thus stabilized foam to a slurry of gauging fluid and cementitious substance, and molding the resultant mixture. 3. The process of producing a plasterboard having a cellular core which comprises whipping a comparatively freely fluid solution of a foaming agent into a fine-grained foam, adding to said foam a water-soluble organic colloid capable of stabilizing said foam and of rendering the walls of the air bubbles of said foam resistant to crushing by pressure, gauging calcined gypsum with water, adding aforesaid stabilized foam to the gauged gypsum, passing the thus prepared mixture through a plasterboard machine, allowing the gypsum to set, and drying the resulting plasterboards. 4. The process of making cellular insulating material comprising aerating a starch paste, mixing finely divided calcined gypsum with water to hydrate the same, uniformly mixing the aerated starch with the gypsum slurry, bringing the mass into the desired shape and drying the same. 5. The process of making insulating material which comprises incorporating a foam into a starch paste, adding water to finely divided calcined gypsum, intimately mixing the foam-containing starch with the gypsum slurry, giving the mass the desired form and drying the same. 6. In the process of making insulating material the step which comprises incorporating an aerated starch in a gypsum slurry. 7. The process of making wall board which comprises mixing a dense foam with a starch paste to expand the latter and form cells therein, adding the mixture to a slurry of calcined gypsum, placing the mass between sheet liners and drying the same. 8. The process of making wall board which comprises forming a dense foam, uniformly mixing the same with a starch paste to expand the latter and form cells therein, adding water to finely divided calcined gypsum in quantity sufficient to hydrate the same and before the latter begins to set intimately incorporating the starch-foam mixture therein, placing the mass between

paper liners and drying the same. 9. The process of making insulating material comprising emulsifying a starch paste with air, mixing the starch emulsion with a slurry of gypsum, giving the mass the desired form and drying the same. 10. A plaster board having a porous body comprising a hardened cementitious material enclosing a plurality of voids encased in tough pliable Elms. 11. A plaster board having a light weight porous body of hardened cementitious material enclosing a plurality of minute voids each enveloped in a tough pliable colloidal casing. 12. The process of producing a plaster board having a porous body comprising the formation of an aggregate of minute gas cells encased in tough pliable envelopes, adding the aggregate to calcined gypsum and water, thoroughly mixing therewith, passing the homogeneous mixture through a plaster board machine and removing the moisture from the plaster boards so formed. 13. The Process of manufacturing Plaster boards having a Porous body comprising the production of one grained gaseous aggregate consisting of minute colloidal film encased individual bubbles, incorporating the aggregate in the plastic body material, passing the mixture through a plaster board machine and allowing the plaster boards so formed to harden, the tough pliable casings of the bubbles maintaining their individuality during the process. 14. A wallboard comprising a porous body of hardened cellular cementitious material enclosing a plurality of voids encased in tough pliable films, and cover sheets between which said cementitious material is interposed. 15. A wallboard comprising a porous body of hardened cellular cementitious material enclosing a plurality of voids encased in tough pliable films, and cover sheets between which said cementitious material is interposed and to which said cover sheets are bonded. 16. A wallboard comprising a porous body of hardened cellular cementitious material enclosing a plurality of voids encased in tough pliable films, and cover sheets applied to said cellular cementitious material while in a plastic condition and to which said cover sheets are bonded when the plastic cementitious material hardens in a plastic state whereupon said cover sheets remain bonded to said cementitious material after the same has set and hardened. 18. The process of manufacturing wallboard having a cellular cementitious core which comprises the production of 9. fine grained foam consisting of a plurality of voids encased in tough pliable films, incorporating said foam in the cementitious material in a plastic state, passing the mixture through a plasterboard machine whereupon cover sheets are applied to said mixture through the application of pressure, and allowing the same to harden whereby the cover sheets become bonded to the cementitious cellular core and the tough pliable casings of the bubbles maintain their individuality

Classifications:

International (IPC 8-9): C04B28/14 (Advanced/Invention);

C04B28/00 (Core/Invention)

International (IPC 1-7): C04B21/10

CPC: C04B28/14 Y10T428/249968

European: C04B28/14

US: 106/646 106/779 156/39 156/78 428/312.4 428/703

Family:

Publication number	Publication date	Application number	Application date
US2079338 A	19370504	US19250003477	19250119
US2080009 A	19370511	US19260142155	19261016

Priority:

US19250003477 19250119

US19260142155 19261016

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Assignee(s): (std):

UNITED STATES GYPSUM CO

Assignee(s):

UNITED STATES GYPSUM COMPANY

Inventor(s): (std):

ROOS CARLISLE K

4) Family number: 28690108 (US2003118803A)

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Title: GYPSUM-CONTAINING COMPOSITION HAVING ENHANCED RESISTANCE TO PERMANENT DEFORMATION

Abstract: A composition comprising a mixture of a calcium sulfate material, water, and a tetrametaphosphate compound is disclosed. Desirably, the inclusion of the tetrametaphosphate compound (e.g., salt or ion) in a pre-set treatment of a calcium sulfate material enhances the resistance to permanent deformation (e.g., sag), dimensional stability, and/or compressive strength of the composition while also preferably avoiding any significant retardive effect on the rate of hydration of calcined gypsum to calcium sulfate dihydrate. A set gypsum-containing product and a method for producing a set gypsum-containing product having increased resistance to permanent deformation are also disclosed.

Classifications:

International (IPC 8-9): C04B22/16 C04B24/30 C04B24/38 C04B28/14 (Advanced/Invention);

C04B22/00 C04B22/16 C04B24/00 C04B28/00 (Core/Invention)

International (IPC 1-7): B32B21/02 B32B5/22 C01B25/00 C04B11/28 C04B22/16 C04B24/30 C04B24/38 C04B28/14

CPC: Y10T428/232 C04B22/16 C04B28/14 C04B2111/0062 C04B2111/52 Y10T428/249925 Y10T428/249953

Y10T428/249956 Y10T428/249967 Y10T428/249968 Y10T428/249981 Y10T428/249986 Y02W30/97

European: C04B22/16 C04B28/14 M04B111/00T6B M04B111/52

US: 42/830.73 42/831.22 42/831.24 42/831.66 423/299 423/299S 428/292.4 428/292.400P 428/304.4 428/307.3 428/312.2 428/312.4 428/316.6 428/317.9 428/70

Family:

Publication number	Publication date	Application number	Application date
AR037768 AA	20041201	AR2002P104774	20021210
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AU2002351337 AA	20030709	AU20020351337	20021209
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AU2008202979 AA	20080807	AU20080202979	20080704
AU2008202979 BB	20110324	AU20080202979	20080704
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Priority:

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AU20080202979 20080704

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Inventor(s): (std): FRANK WILLIAM ; FRANK WILLIAM A ; QIANG YU ; SRINIVAS VEERAMASUNENI ; VEERAMASUNENI SRINIVAS ; WILLIAM A FRANK ; YU QIANG ; FRANK A

Agent(s): GRIFFITH HACK ; SMART AND BIGGAR ; MOFFAT AND CO ; ALESSANDRI

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

5) Family number: 41454114 (US2008028988A)

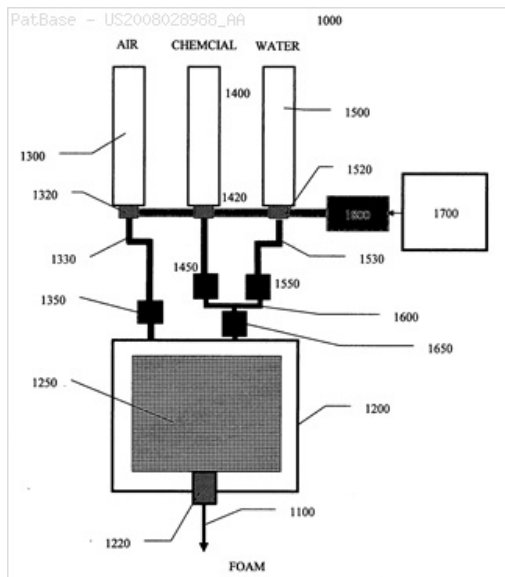
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Title: METHOD AND APPARATUS FOR MAKING AIR-ENTRAINED OR CELLULAR HIGH-STRENGTH CONCRETE

Abstract: A method for making foam used in the manufacture of concrete, the method comprising, in an exemplary embodiment for making foam at the rate of one cubic foot per minute; (1) injecting water into a mixer, the water injected at a temperature not less than 62 degrees Fahrenheit, the water injected at the rate from 252 ounces per minute to 1,178 ounces per minute; (3) injecting a chemical into the mixer, wherein the chemical comprises a surfactant, a foam booster and a stabilizer, the chemical injected at a temperature of not less than 52 degrees Fahrenheit and at a rate of 22 ounces to 79 ounces per minute; and (4) injecting air into the mixer, the air injected at a pressure from 62 pounds-per-square inch to 135 pounds-per-square inch, and at the rate of from 19 cubic feet per minute to 32 cubic feet per minute; whereby foam is made in the mixer, and may be later used in the manufacture of concrete.

Classifications:

International (IPC 8-9): B01F15/00 B01F15/02 B01F3/04 B28C5/00 B28C5/06 B28C5/38 B28C7/00 B28C7/02 B28C7/04 B28C9/00 B28C9/02 C04B38/00 C04B38/10 C04B40/00 C09K8/42 E21B33/14 G05B15/02 (Advanced/Invention); B28C5/38 B28C7/04 B28C9/02 (Advanced/Non-invention); B01F15/02 B28C5/00 (Core/Invention)
IPC: B01F5/0698 B28C7/02 E21B33/14 B28C5/003 B01F2215/0081 B28C7/04 B28C7/0454 B01F3/04439 B01F3/04446 B01F3/04992 B01F15/00253 B28C5/381 C04B40/0032 C04B28/02 C04B38/10 C04B2103/304 C09K8/42 B28C5/386 B28C7/0472 G05B15/02 B01F2215/0047 E21B33/13 B28C5/388 B01F15/00136 B01F15/00396 B28C7/026 B28C9/02 C04B38/00
European: B01F15/00K4 B01F3/04C2 B01F3/04C3 B01F3/04P2 B01F5/06F4G6 C04B40/00D1 L28C5/38B
US: 106/316 106/682 166/242.9 166/292 366/10 366/10S 366/151.1 366/151.100S 366/153.1 366/153.100S 366/17 366/3 366/4 366/4P 366/8



Family:

Publication number	Publication date	Application number	Application date
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EP2552856 A4	20150729	EP20110766377	20110322
EP2552856 B1	20161116	EP20110766377	20110322
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US2010246312 AA	20100930	US20100748883	20100329
US2013148459 AA	20130613	US20130759957	20130205
US2013180717 AA	20130718	US20130785040	20130305
US2017157796 AA	20170608	US20170435499	20170217
US2017158567 AA	20170608	US20170435451	20170217

US8408781 BB	20130402	US20100748883	20100329
US9593050 BB	20170314	US20130785040	20130305
WO11126723 A2	20111013	WO2011US29330	20110322
WO11126723 A3	20120308	WO2011US29330	20110322

Priority:

US20060775571P 20060221 US20070709932 20070221 US20100748883 20100329
EP20110766377 20110322 WO2011US29330 20110322 US20130759957 20130205
US20130785040 20130305 US20170435499 20170217 US20170435451 20170217

Probable Assignee: MACH IV LLC

Assignee(s): (std): MACH IV LLC ; SMITH NORMAN SCOTT ; WELKER CHARLES D

Assignee(s): WELKER CHARLES D DALLAS

Inventor(s): (std): SMITH NORMAN SCOTT ; WELKER CHARLES D

Inventor(s): WELKER CHARLES DAVID ; SMITH NORMAN SCOTT ARLINGTON ; WELKER CHARLES

Agent(s): MACPHERSON LESLIE AND TYERMAN LLP; MLT AIKINS LLP; Loven Keith James; LOVEN KEITH JAMES; DAVID E ORR; HOWISON AND ARNOTT LLP; DAVID G; KATARZYNA; JORGENSEN EDWARD

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

6) Family number: 1371123 (US4009062A)

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Title: GYPSUM WALLBOARD {13 {0 MAKING PROCESS AND PRODUCT

Abstract: A specially prepared paper bond liner, gypsum wallboard, and gypsum wallboard process which bonds the liner to the core by an adhesive confined to the paper-core interface, the adhesive comprising certain starches placed on the bond liner in their raw state.

Classifications:

International (IPC 8-9): B32B13/08 B32B27/40 D21H19/54

E04C2/04 (Advanced/Invention);

B32B13/00 B32B27/40 D21H19/00 E04C2/04 (Core/Invention)

International (IPC 1-7): B05D5/00 B28B1/30 B28B19/00 B32B13/08

B32B3/00 B32B31/12 B32B7/14 C04B11/00 C04B11/16 C09J1/00

C09J5/00 C09J7/02 D21H1/02 D21H1/24 D21H5/00 E04C2/00

E04C2/02 E04C2/26 E04C2/42

CPC: Y10T428/24851 Y10T428/24934 Y10T428/24826 Y10T428/283

Y10T428/2865 Y10T428/24985 Y10T428/31982 Y10T428/31986

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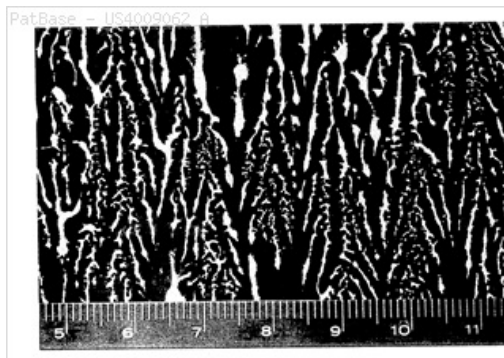
B32B13/08 E04C2/043

European: B32B13/08 D21H19/54 E04C2/04C

US: 156/336 156/39 156/44 427/286 427/288 428/198 428/201

428/211.1 428/219 428/317.7 428/350 428/355CP 428/513 428/532

428/535 428/536 428/701 428/703



Family:

Publication number	Publication date	Application number	Application date
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BE796476 A	19730702	BE19730128543	19730308
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Priority:

US19720221324 19720127 US19740491097 19740723 US19750574159 19750502
US19770770149 19770218 US19770799412 19770523 CA19780294683 19780110
US19780918181 19780622

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): AUSTRALIAN GYPSUM ; AUSTRALIAN GYPSUM LTD ; UNITED STATES GYPSUM CO ; US GYPSUM ; US GYPSUM COMP

Assignee(s): US GYPSUM CY ; US GYPSUM CO ; UNITED STATES GYPSUM CY 101 SOUTH WACKER DRIVE CHICAGO ILLINOIS 60606 E U A ; UNITED STATES GYPSUM CY 101 SOUTH WACKER DRIVE CHICAGO ILLINOIS 60606 EUA ; UNITED STATES GYPSUM COMP ; UNITED STATES GYPSUM COMPANY ; UNITED STATES GYPSUM CY ; LONG WILLIAM J ; UNITED STATES GYPSUM

Inventor(s): (std): UIRIAMU JIEI RONGU ; LONG W ; LONG WILLIAM J ; LONG W J

Inventor(s): J LONG WILLIAM ; WILLIAM J LONG ; WJ LONG ; W J LONG

Agent(s): MACRAE AND CO

7) Family number: 51804146 (US2012219785A)

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Title: LIGHTWEIGHT, REDUCED DENSITY FIRE RATED GYPSUM PANELS

Abstract: A reduced weight, reduced density gypsum panel that includes high expansion vermiculite with fire resistance capabilities that are at least comparable to (if not better than) commercial fire rated gypsum panels with a much greater gypsum content, weight and density.

Classifications:

International (IPC 8-9): B28B1/14 B28B1/16 B28B1/30 B28B1/50 B28B1/12 B28B1/14 B28B1/24 B28B1/7/00 B28B19/00 B32B13/00 B32B13/02 B32B17/02 B32B27/32 B32B3/00 B32B3/26 B32B38/00 B32B5/16 B32B5/20 B32B9/00 C04B11/00 C04B11/00 C04B11/28 C04B14/20 C04B14/38 C04B14/42 C04B14/46 C04B20/06 C04B22/10 C04B22/16 C04B24/22 C04B24/38 C04B28/14 C04B38/08 C04B38/10 C04B9/04 E04B1/88 E04B1/94 E04C2/04 E04C2/26 E04F13/075 (Advanced/Invention); C04B11/00 C04B11/28 C04B11/40 (Advanced/Non-invention); C04B20/00 (Core/Invention)

CPC: B32B38/164 C04B28/145 C04B211/0062 C04B211/28 C04B14/386 C04B14/42 C04B14/46 C04B20/0024 C04B22/16 C04B24/38 C04B38/0054 C04B38/106 C04B2103/408 C04B14/202 Y10T428/249968 Y10T428/249979 Y10T428/26 Y10T428/31971 B28B1/12 B28B1/243 B32B9/005 B32B5/16 E04B1/942 B32B2307/3065 B32B2607/00 C04B2201/30 C04B20/06 C04B28/14 B28B1/16 B28B1/14 B28B17/0081 B28B19/0092 C04B14/204 C04B211/00431 C04B211/40 C04B2201/20 C04B2201/32 C04B2201/50 C04B38/10 E04F13/14 E04F2290/045 B28B1/50 E04C2/04

European: C04B20/06 C04B28/14H M04B11/00T6B M04B11/28

US: 106/772 106/788 156/43 428/220 428/312.4 428/312.400P 428/315.7 428/332 428/426 428/426S 428/532 428/532S 428/703 428/703S

PatBase - US2012219785_AA

Patent Application Publication Aug. 30, 2012 Sheet 1 of 54 US 2012/0219785 A1

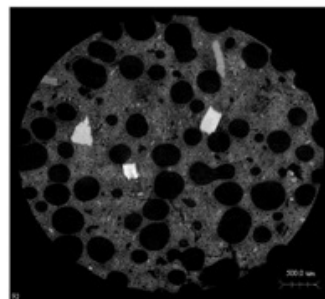


FIG. 1

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US2012219785 AA	20120830	US20120400010	20120217
US2013068364 AA	20130321	US20120669283	20121105
US2014158273 AA	20140612	US20140181590	20140214
US2017183868 AA	20170629	US20170457466	20170313
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US9623586 BB	20170418	US20140181590	20140214
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Priority:

US20110446941P	20110225	US20120400010	20120217	AU20120222102	20120224
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Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): LI ALFRED ; LUAN WENQI ; SONG WEIXIN D ; UNITED STATES GYPSUM CO ; VEERAMASUNENI SRINIVAS ; YU QIANG ; USG CORP ; YUNAJTED STEJTS DZHIPSUM KOMPANI

Assignee(s): UNITED STATES GYPSUM COMPANY

Inventor(s): (std): SONG WEIXIN DAVID ; VEERAMASUNENI SRINIVAS D ; ALFRED LI ; WENQI LUAN ; SRINIVAS VEERAMASUNENI ; WEIXIN D SONG ; LU QIANG ; QIANG YU ; WEIXIN DAVID SONG ; LI ALFRED ; SONG WEIXIN D ; LUAN WENQI ; YU QIANG ; VEERAMASUNENI SRINIVAS

Agent(s): JAMES AND WELLS INTELLECTUAL PROPERTY; MOFFAT AND CO; SCHUETTE HARTMUT; BSB PATENTANWALTE SCHUETTE AND ENGELN PARTNERSCHAFT MBB; BSB INTELLECTUAL PROPERTY LAW; SULEIMAN I AL AMMAR LAW OFFICE; BAHAR SANTOSO SH; TOLGA CAYLAK; LEYDIG VOIT AND MAYER LTD; PHILIP T; DAVID F; PRADIP K; PETTI PHILIP T; SAHU PRADIP K; FILBIN PAUL J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

8) Family number: 56296193 (US2014113124A)

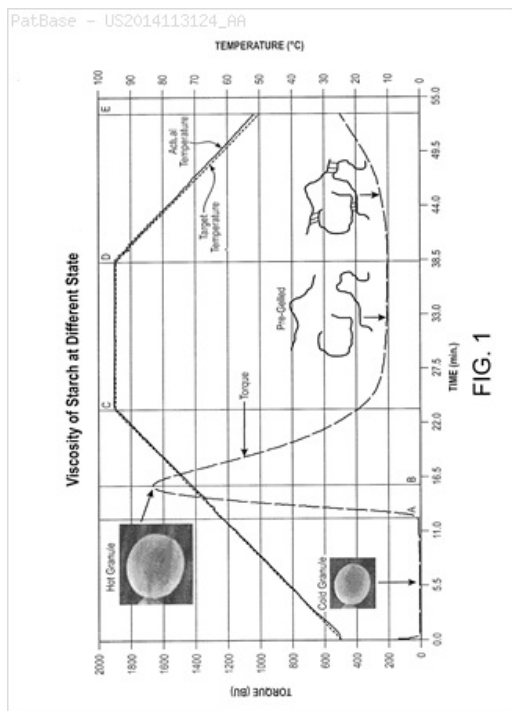
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Title: PREGELATINIZED STARCH WITH MID-RANGE VISCOSITY, AND PRODUCT, SLURRY AND METHODS RELATED THERETO

Abstract: Disclosed are product (e.g., panels), slurry, and methods relating to a pregelatinized starch having a mid-range viscosity (i.e., from about 20 centipoise to about 700 centipoise).

Classifications:

International (IPC 8-9): B01J13/00 B28B1/16 B32B13/00 B32B37/15 B32B9/02 C04B C04B103/32 C04B11/00 C04B111/20 C04B22/16 C04B24/00 C04B24/10 C04B24/22 C04B24/28 C04B24/38 C04B24/383 C04B28/00 C04B28/04 C04B28/14 C04B28/16 C04B38/10 C04B40/00 C08B C08B30/12 C08B30/14 C08B30/18 C08B31/06 C08B31/10 C08D30/14 C08L3/02 C08L3/08 C09D5/34 C09J103/02 C09J103/08 C13K1/06 E04B1/86 E04C2/04 E04C2/26 (Advanced/Invention); C04B103/10 C04B103/20 C04B103/32 C04B111/00 C04B111/20 E04C2/26 (Advanced/Non-invention); C04B24/00 C07K16/28 C08B30/14 (Core/Invention)
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US: 106/776 106/779 106/804 127/38 127/71 156/348 156/39 252/62 264/138 428/220 428/326 428/532



Family:

Publication number	Publication date	Application number	Application date
AR093072 AA	20150513	AR2013P103798	20131018
AR097880 AA	20160420	AR2014P103654	20141001
AU2013335106 AA	20140501	AU20130335106	20131014
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CN105722861 B	20181102	CN201480062755	20140929
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CO16098183 A2	20160909	CO20160098183	20160418
EP2912071 A2	20150902	EP20130783185	20131014
EP3052527 A1	20160810	EP20140789654	20140929
ID201603852 A	20160610	ID2015P0002723	20131014
ID201709493 A	20170901	ID2016P0002489	20140929
IN03612DN2015 A	20151120	IN2015DN03612	20150428
IN201617012883 A	20160831	IN201617012883	20160412
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JP2018150237 A2	20180927	JP20180099285	20180524
JP6346186 B2	20180620	JP20150537757T	20131014
KR20150077437 A	20150707	KR20157012060	20131014
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MX2015004978 A1	20150717	MX20150004978	20131014
MX2016004060 A1	20160622	MX20160004060	20140929
PE06672016 A1	20160709	PE20160000418	20140929
PE10332015 A1	20150819	PE20150000526	20131014
RU2015117913 A	20161210	RU20150117913	20131014
RU2016114846 A	20171023	RU20160114846	20140929
RU2016114846 A3	20180510	RU20160114846	20140929
RU2018137709 A	20190322	RU20180137709	20140929
RU2641350 C2	20180117	RU20150117913	20131014
RU2671467 C2	20181031	RU20160114846	20140929
TH159395 A	20170118	TH20161001804	20140929
TH167533 A	20170907	TH20151002178	20131014
TW201416225 A	20140501	TW20130137827	20131018
TW201514315 A	20150416	TW20140134059	20140930
TWI623418 B	20180511	TW20130137827	20131018
TWI638050 B	20181011	TW20140134059	20140930
UA118570 C2	20190211	UA20160004338	20140929

US2014113124 AA	20140424	US20130835002	20130315
US2014113128 AA	20140424	US20130044582	20131002
US2015010767 AA	20150108	US20140494547	20140923
US2017073272 AA	20170316	US20160359196	20161122
US2018037671 AA	20180208	US20170787264	20171018
US2018339944 AA	20181129	US20180053485	20180802
US9540810 BB	20170110	US20130044582	20131002
US9828441 BB	20171128	US20140494547	20140923
WO14066079 A2	20140501	WO2013US64776	20131014
WO14066079 A3	20151008	WO2013US64776	20131014
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ZA201503140 A	20160127	ZA20150003140	20150507
ZA201602499 A	20180328	ZA20160002499	20160413

Priority:

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AU20130335106	20131014	CN201380064231	20131014	JP20150537757T	20131014
WO2013US64776	20131014	US20140494547	20140923	AU20140329817	20140929
RU20160114846	20140929	WO2014US57980	20140929	CL20150000989	20150417
US20160359196	20161122	US20170787264	20171018	AU20180203602	20180522
JP20180099285	20180524	US20180053485	20180802	AU20180279047	20181217

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): UNITED STATES GYPSUM CO ; YUNAJTED STEJTS DZHIPSUM KOMPANI ; YUNAJTED STEJTS DZHIPSUM KOMPANI ; USG CORP

Assignee(s): US GYPSUM CO ; CHAN CESAR ; LEE CHRIS C ; SANG YIJUN ; SONG WEIXIN D

Inventor(s): (std): CESAR CHAN ; CHAN CESAR ; CHAN SIZAR ; CHRIS C LEE ; LEE CHRIS C ; LI KRIS S ; SAN ITSZYUN ; SANG YI JUN ; SANG YIJUN ; SONG WEIXIN D ; SONG WEIXIN DAVID ; SUN VEJSIN D ; WEIXIN D SONG ; WEIXIN DAVID SONG ; YIJUN SANG ; WEISING SONG ; CHRIS LEE ; SONG W D ; SANG Y ; LI C C ; CHEN C

Agent(s): MADDERNS PATENT AND TRADE MARK ATTORNEYS; JAMES AND WELLS INTELLECTUAL PROPERTY; MOFFAT AND CO; JOHANSSON AND LANGLOIS LTDA; DANILO ROMERO RAAD; BSB INTELLECTUAL PROPERTY LAW; BUDI RAHMAT SH; BUDI RAHMAT; RYBINA N A; RYBINOJ NA; PHILIP T; LEYDIG VOIT AND MAYER LTD; PRADIP K; HASAN SALIM ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

9) Family number: 34280220 (US2007082170A)

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Title: WALLBOARD WITH ANTIFUNGAL PROPERTIES AND METHOD OF MAKING SAME

Abstract: This invention provides wallboard with a gypsum core with improved antifungal properties based on the distribution of fungicide and starch. Preferably, the wallboard has a gypsum core having a first surface and a second surface; facing sheets adhered to the first and second surfaces; a fungicide and a starch in the gypsum core; wherein the concentration of fungicide and starch is greater in portions of the core adjacent to the facing sheets than in a center of the core. Also a method for manufacturing wallboard as described above.

Classifications:

International (IPC 8-9): B05D1/36 B05D3/02 B32B1/04 B32B13/04 B32B13/08 D21H27/20 E04C2/04 (Advanced/Invention); B05D1/36 B05D3/02 B32B1/00 B32B13/00 D21H27/18 (Core/Invention)

International (IPC 1-7): B05D1/36 B05D3/02 B32B1/04

CPC: Y10T428/232 D21H27/20 B01F5/221 B01F7/00466 B01F7/26 B28B19/0092 B28C5/166 B32B5/145 B32B13/02 B32B13/04 B32B13/08 B32B13/14 B32B29/00 B32B2262/101 B32B2264/06 B32B2264/12 B32B2307/3065 B32B2307/54 B32B2307/7145 B32B2307/72 B32B2419/04 C04B28/14 C04B2111/00413 C04B2111/0062 C04B2111/00629 D21H17/28 D21H21/36 D21H27/32

European: B01F5/22B B01F7/00B16E2 B01F7/26 B28B19/00K B28C5/16K B32B13/02 B32B13/04 B32B13/08 B32B13/14 B32B29/00 B32B5/14B C04B28/14 D21H27/20 D21H27/32 L32B262/10A L32B264/06 L32B264/12 L32B307/306B L32B307/540 L32B307/714B L32B307/720 L32B419/04 M04B111/00P35 M04B111/00T6B M04B111/00T6B4 N21H17/28 N21H21/36

US: 106/778 106/778S 106/779 106/779S 427/372.2 427/372.200S 427/403 427/403S 428/70 428/70P

Family:

Publication number	Publication date	Application number	Application date
AR057785 AA	20071219	AR2006P103781	20060830
CL2006002289 A1	20070420	CL20060002289	20060830
US2007082170 AA	20070412	US20060512082	20060830
WO07025734 A1	20070308	WO2006EP08481	20060830

Priority:

US20050712402P 20050831 US20060512082 20060830

Probable Assignee: PLATRES LAFARGE

Assignee(s): (std): COLBERT ELIZABETH A ; LAFARGE PLATRES ; MOLCHAN GARY ; WIEDER BRUCE

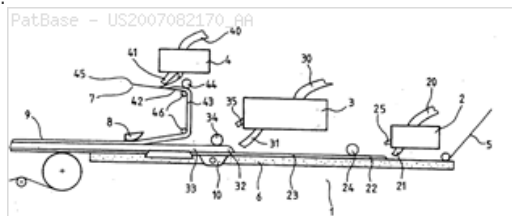
Assignee(s): PLATRES LAFARGE

Inventor(s): (std): COLBERT ELIZABETH A ; MOLCHAN GARY ; WIEDER BRUCE ; WIEDER BRUCE T

Inventor(s): ELIZABETH A COLBERT ; GARY MOLCHAN ; BRUCE T WIEDER ; COLBERT ELIZABETH

Agent(s): ALESSANDRI; BUCHANAN INGERSOLL AND ROONEY PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT



10) Family number: 22058304 (US2017022A)

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Title: CEMENTITIOUS MATERIAL**Abstract:** 1. The process of producing a light weight building material which comprises incorporating in a mixture of calcined gypsum and water a stabilized foam and allowing the mixture to set.**Classifications:****International (IPC 8-9):** C04B38/10 (Advanced/Invention);
C04B38/10 (Core/Invention)**International (IPC 1-7):** C04B21/10**CPC:** C04B28/02 C04B38/106 Y10S264/63**European:** C04B28/02 C04B38/10P**US:** 106/646 106/674 106/680 264/DIG.63 516/10**Family:**

Publication number	Publication date	Application number	Application date
US2017022 A	19351008	US19240733197	19240820

Priority:

US19240733197 19240820

Probable Assignee: UNITED STATES GYPSUM CO**Assignee(s): (std):** UNITED STATES GYPSUM CO**Assignee(s):** UNITED STATES GYPSUM COMPANY**Inventor(s): (std):** ROOS CARLISLE K**11) Family number: 42119310 (US2008202415A)**

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Title: METHODS AND SYSTEMS FOR ADDITION OF CELLULOSE ETHER TO GYPSUM SLURRY**Abstract:** An example system for making a gypsum board product comprises a container for containing a gypsum slurry, a moving receiver in communication with the container, wherein the container substantially continuously deposits the gypsum slurry on the moving receiver. A first and at least a second cellulose ether supply containing a first cellulose ether communicate with the container. The first and second supplies contain cellulose ethers having different physical or chemical properties. A controller is configured to change the amount of the first and second cellulose ethers delivered to the container in response to a change in at least one slurry physical property.**Classifications:****International (IPC 8-9):** B05C1/14 B32B13/00 B32B13/04

C04B16/02 C04B40/00 (Advanced/Invention);

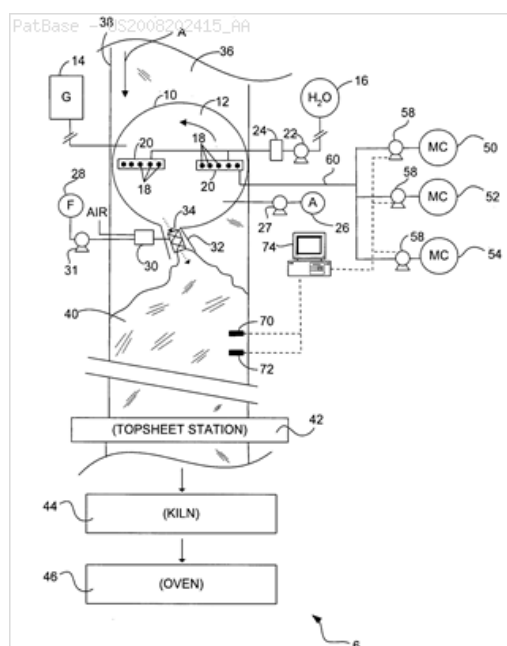
B05C1/04 B32B13/00 (Core/Invention)

International (IPC 1-7): B05C1/14 B23B13/00 H05B6/00**CPC:** B01F3/1221 B01F3/1228 B01F7/00766 B28B19/0092

B28C5/381 B28C7/024 B28C7/0418 C04B28/14 C04B2111/0062

European: B01F3/12C B01F3/12D B01F7/00G1A B28B19/00K

B28C5/38B B28C7/02B2 B28C7/04B4 C04B28/14 M04B111/00T6B

US: 118/708**Family:**

Publication number	Publication date	Application number	Application date
AR065502 AA	20090610	AR2008P100814	20080227
CA2678372 AA	20090814	CA20082678372	20080206
CL2008000560 A1	20080718	CL20080000560	20080225
MX2009009085 A1	20090902	MX20090009085	20080206
TH97077 A	20090724	TH20081000919	20080226
TW200900233 A	20090101	TW20080106323	20080222
US2008202415 AA	20080828	US20070713951	20070228
WO08105994 A1	20080904	WO2008US01545	20080206

Priority:

US20070713951 20070228 WO2008US01545 20080206

Probable Assignee: UNITED STATES GYPSUM CO**Assignee(s): (std):** LIU QINGXIA ; MILLER DAVID PAUL ; UNITED STATES GYPSUM CO ; YU QIANG

Assignee(s): UNITED STATES GYPSUM COMPANY
Inventor(s): (std): DAVID PAUL MILLER QINGXIA LIU ; LIU QINGXIA ; MILLER DAVID PAUL ; MILLER LARRY G ; YU QIANG
Inventor(s): DAVID PAUL MILLER ; QIANG YU ; QINGXIA LIU ; DAVID PAUL MILLER QINGXIA LIU QIANG YU
Agent(s): PERLEY ROBERTSON HILL AND MCDUGALL LLP; JOHANSSON; GREER BURNS AND CRAIN LTD; MICKELSON CAROLE A
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

12) Family number: 32859336 (JP2006069815A)

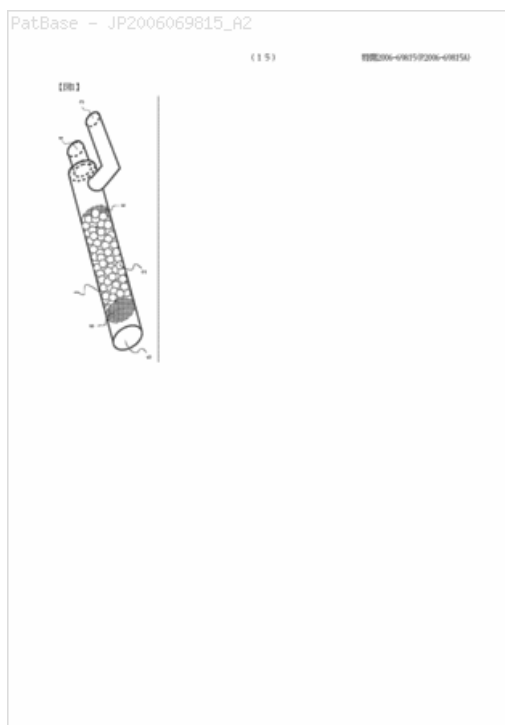
© PatBase

Title: FOAMING AGENT FOR AERATED CONCRETE, AND AERATED CONCRETE

Abstract: PROBLEM TO BE SOLVED: To provide a foaming agent for aerated concrete exhibiting superior foam stability. SOLUTION: The foaming agent for manufacturing aerated concrete comprising a compound (A) expressed by general formula (1) in which R is a 8-20C aliphatic hydrocarbon, Y is a hydrogen atom or a methyl group, m is an integer of 1-10, X is an alkali metal cation, an ammonium or an amine cation; a compound (B) expressed by formula (2) in which R and X are the same as in general formula (1); a 8-20C aliphatic alcohol (C); and a 8-14C aliphatic acid or its salt (D); and being characterised in that the content of the aliphatic acid or its salt (D) is 20-100 weight percent based on the total weight of the compound (A) and the compound (B); is used.

Classifications:

International (IPC 8-9): C04B24/02 C04B24/04 C04B24/08 C04B24/16 C04B24/32 C04B28/02 C04B38/10 (Advanced/Invention); C04B103/48 C04B111/40 (Advanced/Non-invention); C04B24/00 C04B28/00 C04B38/10 (Core/Invention)



Family:

Publication number	Publication date	Application number	Application date
JP2006069815 A2	20060316	JP20040252586	20040831

Priority:

JP20040252586 20040831

Probable Assignee: SANYO CHEMICAL IND LTD

Assignee(s): (std): SANYO CHEMICAL IND LTD

Assignee(s): SANYO CHEMICAL INDUSTRIES LTD ; SANYO CHEM IND LTD

Inventor(s): (std): SHIMIZU NORIKAZU

13) Family number: 95372 (US3573947A)

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Title: ACCELERATOR FOR GYPSUM PLASTER

Abstract: ABSTRACT OF THE DISCLOSURE A process for producing an accelerator for a calcium sulfate plaster comprising the steps of grinding together calcium sulfate dihydrate and sucrose at a temperature of up to about 145 degrees F. until the surface area of the mixture is substantially increased, and heating the ground mixture under conditions which essentially preclude the formation of a dewpoint condition in the mixture to a final moisture content from about 6% to about 14% by weight. B

Classifications:

International (IPC 8-9): C04B24/10 C04B28/14 (Advanced/Invention); C04B24/00 C04B28/00 (Core/Invention)

International (IPC 1-7): C04B11/09 C04B11/14 C04B11/22 C04B13/22 C04B13/24

CPC: C04B20/02 C04B28/14 C04B2103/12

European: C04B20/02 C04B28/14 M04B103/12

US: 106/315 106/779 106/823

Family:

Publication number	Publication date	Application number	Application date
BE737572 A	19700202		19690818
CA921936 A1	19730227	CA19690053218	19690602
DE1940843 A1	19700226	DE19691940843	19690811
DE1940843 B2	19750522	DE19691940843	19690811
DE1940843 C3	19800110	DE19691940843	19690811
GB1276539 A	19720601	GB19690038770	19690801
IE33250 B	19740501	IE19690001064	19690731
IE33250 L	19700219	IE19690001064	19690731
JP48022816 B4	19730709	JP19690064782	19690818
US3573947 A	19710406	US19680753786	19680819

Priority:

US19680753786 19680819

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): CANADIAN GYPSUM CO ; CANADIAN GYPSUM CO LTD ; UNITED STATES GYPSUM CO

Assignee(s): UNITED STATES GYPSUM CO CHICAGO ILL V ST A ; UNITED STATES GYPSUM COMPANY ; WILLIAM A KINKADE ; CANADIAN GYPSUM COMPANY ; EUGENE E O NEILL

Inventor(s): (std): ARTSMAN KINKADE WILLIAM ; EDWARD O NEILL EUGENE ; KINKADE W A ; KINKADE WILLIAM ; KINKADE WILLIAM A ; KINKADE WILLIAM ARTSMAN ; O NEILL E E ; O NEILL EUGENE E ; O NEILL EUGENE EDWARD

Inventor(s): O NEILL EUGENE EDWARD OKEENE OKLA ; WILLIAM A KINKADE ; WILLIAM ARTSMAN KINKADE ; WILLIAM KINKADE ; KINKADE WILLIAM ARTSMAN Lisle ILL ; EUGENE E O NEILL ; EUGENE EDWARD O NEILL

14) Family number: 13125375 (US5643510A)

© PatBase

Title: Producing foamed gypsum board using a foaming agent blend

Abstract: This invention is a process and foaming system for producing foamed gypsum board which permits the production and control of large foam voids in the gypsum core by adjusting the ratio of a first foaming agent and a second foaming agent. My process includes the steps of preforming a first foaming agent which forms stable foam voids in a gypsum slurry and independently preforming a second foaming agent which forms unstable foam voids in a gypsum slurry. Independently, blending the two different foaming agents is the key to controlling void size. A greater amount of the second foaming agent and a lesser amount of the first foaming agent is preferred.

Classifications:

International (IPC 8-9): B01F17/00 C04B28/14 C04B38/02 C04B38/10 (Advanced/Invention);

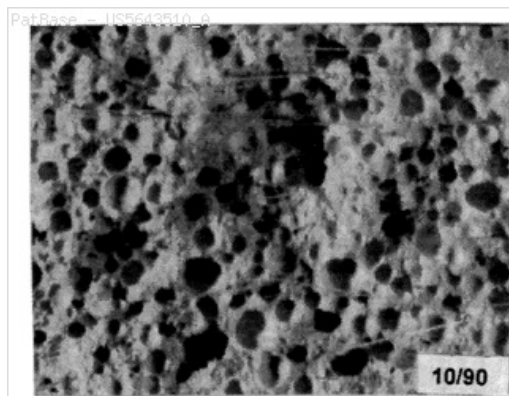
B01F17/00 C04B28/00 C04B38/10 (Core/Invention)

International (IPC 1-7): B01F17/00 B32B13/00 C04B38/02

CPC: B01F17/0057 C04B28/14 C04B38/10

European: B01F17/00M C04B28/14 C04B38/10

US: 156/43 264/40.1 264/401 264/42



Family:

Publication number	Publication date	Application number	Application date
CA2158820 AA	19960324	CA19952158820	19950921
CA2158820 C	20041123	CA19952158820	19950921
MX9504052 A1	19970228	MX19950004052	19950922
US5643510 A	19970701	US19960598413	19960208

Priority:

US19940311687 19940923

CA19952158820 19950921

US19960598413 19960208

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): UNITED STATES GYPSUM CO ; USG CORP

Assignee(s): SUCECH STEVEN W

Inventor(s): (std): SUCECH STEVEN W

Inventor(s): STEVEN W SUCECH

Agent(s): MACRAE AND CO

15) Family number: 23424379 (US6409825B)

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Title: Wet gypsum accelerator and methods, composition, and product relating thereto

Abstract: A wet gypsum accelerator comprising particles of calcium sulfate dihydrate, water, and at least one additive selected from the group consisting of (i) an organic phosphonic compound, (ii) a phosphate-containing compound, or (iii) a mixture of (i) and (ii), is disclosed. Also disclosed are a method of preparing a wet gypsum accelerator, a method of hydrating calcined gypsum to form an interlocking matrix of set gypsum, a set gypsum-containing composition, and a set gypsum-containing product.

Classifications:

International (IPC 8-9): C04B24/00 C04B28/14 (Advanced/Invention)
International (IPC 1-7): C04B11/00 C04B24/00 C04B28/14
CPC: C04B28/14 C04B2103/10
European: C04B28/14 M04B103/10
US: 106/772 106/776

Family:

Publication number	Publication date	Application number	Application date
CA2355476 AA	20020522	CA20012355476	20010821
CA2355476 C	20120221	CA20012355476	20010821
MXPA01010533 A1	20020527	MX2001PA10533	20011018
US6409825 BA	20020625	US20000721237	20001122

Priority:

US20000721237 20001122 CA20012355476 20010821

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): UNITED STATES GYPSUM CO

Assignee(s): UNITED STATES GYPSUM COMPANY ; VEERAMASUNENI SRINIVAS ; YU QIANG

Inventor(s): (std): QIANG YU ; YU QIANG ; VEERAMASUNENI SRINIVAS

Agent(s): MACRAE AND CO; MOFFAT AND CO

16) Family number: 3608394 (US4504335A)

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Title: METHOD FOR MAKING REINFORCED CEMENT BOARD

Abstract: A cement board of homogeneous composition from face to face and having a substantially uniform thickness is made continuously by distributing a sole cementitious composition on a moving carrier sheet and smoothing the surface by rotating a cylindrical roller in a direction counter to the movement of the carrier sheet. An upper reinforcing network is submerged under the surface by feeding it under the counter rotating roller.

Classifications:

International (IPC 8-9): B28B19/00 B28B23/00 (Advanced/Invention);

B28B19/00 B28B23/00 (Core/Invention)

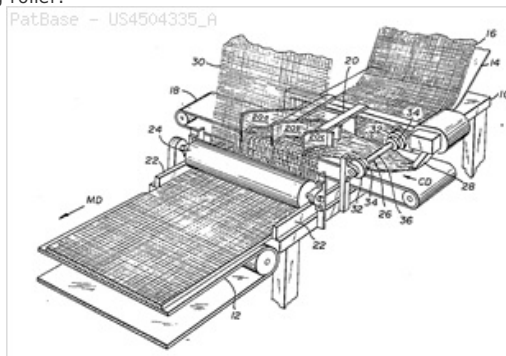
International (IPC 1-7): B32B13/14 B32B31/08 B32B31/18

CPC: Y10T156/1084 B28B19/0092 B28B23/0006

European: B28B19/00K B28B23/00A

US: 118/106 156/269 156/347 156/42 428/703

PatBase - US4504335_A



Family:

Publication number	Publication date	Application number	Application date
CA1232122 A1	19880202	CA19840457998	19840703
US4504335 A	19850312	US19830515399	19830720

Priority:

US19830515399 19830720 CA19840457998 19840703

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): UNITED STATES GYPSUM CO

Assignee(s): UNITED STATES GYPSUM COMPANY ; GALER RICHARD E

Inventor(s): (std): GALER RICHARD E

Agent(s): MACRAE AND CO

17) Family number: 51740411 (US2012207989A)

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Title: MULTILAYERED CORE BOARD WITH ENHANCED NAIL-PULL STRENGTH

Abstract: Disclosed herein are multilayered core cementitious boards with increased nail-pull resistance. The boards can comprise two or more layers of cementitious compositions, where each layer can be a different density. Methods of making the multilayered core boards are also disclosed. The methods include having a layer of cementitious composition partially set prior to applying the next layer.

Classifications:

International (IPC 8-9): B05D1/38 B32B38/00

B32B7/02 (Advanced/Invention)

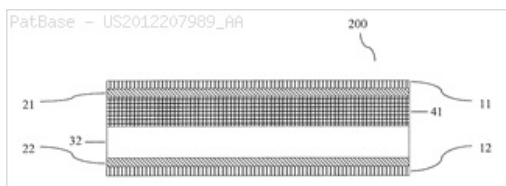
CPC: B32B7/02 B32B13/08 B32B13/14 B32B2250/40 B32B2607/00

E04C2/043 Y10T428/2495 Y10T428/24992

European: E04C2/04C

US: 156/39 156/39S 427/372.2 427/372.200S 427/379 427/379S 428/213 428/213P 428/218 428/218S

PatBase - US2012207989_AA



Family:

Publication number	Publication date	Application number	Application date
US2012207989 AA	20120816	US20110335396	20111222

Priority:

US20100426363P 20101222 US20110335396 20111222

Probable Assignee: UNITED STATES GYPSUM CO**Assignee(s):** (std): UNITED STATES GYPSUM CO ; WEINBERGER RENEE ; XU YUFENG**Assignee(s):** UNITED STATES GYPSUM COMPANY**Inventor(s):** (std): XU YUFENG ; WEINBERGER RENEE**18) Family number: 2459422 (US4518652A)**

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Title: METHOD FOR FORMING A LIGHTWEIGHT CEMENTITIOUS STRUCTURAL PRODUCT AND PRODUCT FORMED THEREBY

Abstract: A method for producing a lightweight set cementitious product, and more specifically, gypsum wallboard, having excellent strength and paper-to-core bond, which method comprises producing a foam comprising polyvinyl alcohol and water, introducing the foam thus formed into an aqueous cementitious slurry, depositing the slurry between paper cover sheets, and permitting the cementitious slurry to set. In a further embodiment an emulsion formed of asphalt and wax is added to the cementitious slurry to impart water resistance, the polyvinyl alcohol of the foaming agent cooperating with the asphalt and wax emulsion to improve the water resistant properties of the set gypsum wallboard.

Classifications:**International (IPC 8-9):** C04B24/26 C04B28/14

C04B38/10 (Advanced/Invention);

C04B24/00 C04B28/00 (Core/Invention)

International (IPC 1-7): B32B5/18 C04B38/10**CPC:** Y10T428/249968 C04B28/14 C04B24/2623 C04B2111/0062**European:** C04B24/26F C04B28/14 M04B111/00T6B**US:** 106/111 106/88 156/41 156/43 428/312.4 428/703 521/83

PatBase - CA1211480-A1

**SUBSTITUTE
REPLACEMENT**
there are NO DRAWINGS
il n'y a PAS DE DESSINS

Family:

Publication number	Publication date	Application number	Application date
CA1211480 A1	19860916	CA19840456774	19840618
US4518652 A	19850521	US19830514349	19830715

Priority:

US19830514349 19830715 CA19840456774 19840618

Probable Assignee: UNITED STATES GYPSUM CO**Assignee(s):** (std): UNITED STATES GYPSUM CO**Assignee(s):** UNITED STATES GYPSUM CO A DE CORP ; UNITED STATES GYPSUM COMPANY ; WILLOUGHBY MICHAEL D**Inventor(s):** (std): WILLOUGHBY MICHAEL D**Agent(s):** MACRAE AND CO**19) Family number: 2964461 (EP0286149A2)**

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Title: Method and apparatus for the production of cellular concrete and foam concentrate used therein.

Abstract: A foam concentrate consisting of a stabilizer, solvent, surfactant, water and alkaline polymer mixed in specified order and proportions, is foamed in a foam generator. A predetermined amount of the foamed foam is injected into a normal density concrete slurry in a continuous mixer. After sufficient mixing, the foamed, cellular concrete is ready for placement.

Classifications:**International (IPC 8-9):** B01F3/04 C04B28/02

C04B38/10 (Advanced/Invention);

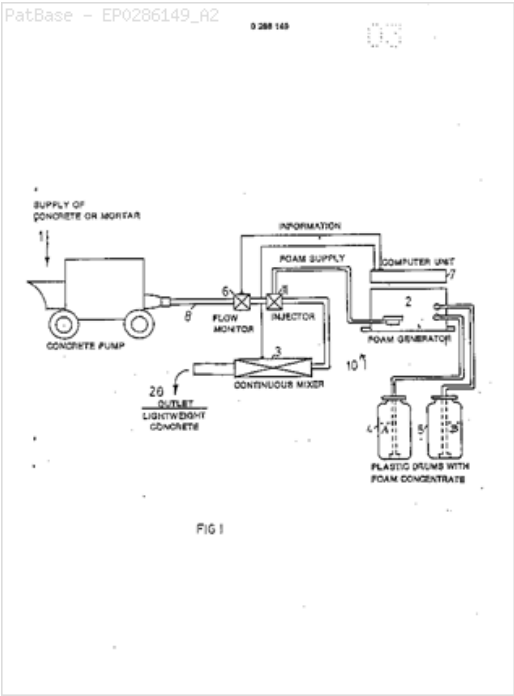
C04B38/10 (Advanced/Non-invention);

B01F3/04 C04B28/00 C04B38/10 (Core/Invention)

International (IPC 1-7): B01F17/00 B01F5/04 B28C5/00 B28C7/00

C04B24/00 C04B24/02 C04B24/12 C04B24/16 C04B24/24

C04B24/26 C04B24/34 C04B28/00 C04B38/02 C04B38/10 C08J3/00 E04C



Family:

Publication number	Publication date	Application number	Application date
AU198812600 A1	19880908	AU19880012600	19880303
CN88101149 A	19880914	CN19881001149	19880306
DE3807250 A1	19880915	DE19883807250	19880305
EP0286149 A2	19881012	EP19880200421	19880303
EP0286149 A3	19890322	EP19880200421	19880303
FR2611696 A1	19880909	FR19880003238	19880304
GB2204309 A1	19881109	GB19880005187	19880304
GB8805187 A0	19880407	GB19880005187	19880304
IT1234884 A	19920602	IT19880083333	19880304
IT8883333 A0	19880304	IT19880083333	19880304
JP63236779 A2	19881003	JP19880053430	19880307
KR19880011045 A	19881026	KR19880002337	19880307
SE8800765 A	19880907	SE19880000765D	19880303
SE8800765 A0	19880303	SE19880000765	19880303
SE8800765 L	19880907	SE19880000765	19880303
ZA8801468 A	19880823	ZA19880001468	19880302

Priority:

CA19870531444 19870306

Probable Assignee: ANTHES INDUSTRIES INC

Assignee(s): (std): ANSHIZU IND INC ; ANTHES INC

Assignee(s): ANTHES IND INC ; ANTHES INDUSTRIES INC ; ANTHES INDUSTRIES INC MISSISSAUGA ONTARIO CA

Inventor(s): (std): JAN SULKIEWICZ ; SULKIEWICZ J ; SULKIEWICZ JAN ; JIYAN ZURUKIIBUITSUKUTSU

Inventor(s): J SULKIEWICZ ; SULKIEWICZ JAN TOTTENHAM ONTARIO CA ; JAN SULRIEWICZ

Agent(s): COLLISON AND CO

Designated states: AT BE CH DE ES FR GB GR IT LI LU NL SE

20) Family number: 28577473 (US2003100648A)

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Title: COMPOSITIONS AND METHODS FOR TREATING SET GYPSUM

Abstract: A composition and method for treating a set gypsum-containing material are disclosed. The composition is formed from at least water at least one trimetaphosphate salt, at least one monobasic phosphate salt, and at least one acyclic polyphosphate salt having at least three phosphate units. The method comprises applying to a set gypsum material at least two of the following inorganic phosphates: at least one monobasic phosphate salt, at least one trimetaphosphate salt, and at least one acyclic polyphosphate salt having at least three phosphate units. The method can be for inhibiting re-calcination of a set gypsum containing material, and/or for enhancing the strength, surface hardness, paintability, abrasion resistance, and/or water erosion resistance of a set gypsum-containing material. Also disclosed is a method of making a set gypsum-containing material.

Classifications:

International (IPC 8-9): C04B41/50 C04B41/67 (Advanced/Invention); C04B41/45 C04B41/60 (Core/Invention)

International (IPC 1-7): C04B28/34 C04B41/67 C08J3/00 C08K3/32

CPC: C04B41/009 C04B41/5015 C04B41/67

European: C04B41/00V C04B41/50F10 C04B41/67

US: 106/205.2 106/205.200S 106/286.8 106/286.800S 106/287.29 106/287.290S 106/69 106/690 106/690S 524/414 524/416 524/417 524/417S

END

Family:

Publication number	Publication date	Application number	Application date
AU2002352807 AA	20030610	AU20020352807	20021119
AU2002352807 BB	20080221	AU20020352807	20021119
CA2467543 AA	20040517	CA20022467543	20021119
CA2467543 C	20110118	CA20022467543	20021119
DE60227095 D1	20080724	DE20026027095	20021119
EP1446369 A1	20040818	EP20020789761	20021119
EP1446369 B1	20080611	EP20020789761	20021119
ES2306803 T3	20081116	ES20020789761T	20021119
MXPA04004778 A1	20050411	MX2004PA04778	20021119
NZ532991 A	20051028	NZ20020532991	20021119
RU2004118496 A	20050327	RU20040118496	20021119
RU2294907 C2	20070310	RU20040118496	20021119
US2003100648 AA	20030529	US20010992302	20011119
US6822033 BB	20041123	US20010992302	20011119
WO03043955 A1	20030530	WO2002US37171	20021119

Priority:

US20010992302 20011119 WO2002US37171 20021119

Probable Assignee: UNITED STATES GYPSUM CO**Assignee(s):** (std): JUNAJTED STEJTS DZHIPSUM KOMPA ; UNITED STATES GYPSUM CO**Assignee(s):** UNITED STATES GYPSUM COMPANY ; YU QIANG ; GRUSSING JEFFREY F ; JUNAJTED STEJTS DZHIPSUM KOMPANI ; LIU QINGXIA ; MOYER KEVIN W ; SPENCER RICHARD**Inventor(s):** (std): GRUSSING JEFFREY F ; JEFFREY F GRUSSING ; JU KVIANG ; KEVIN W MOYER ; LIU KVIANGSIA ; LIU QINGXIA ; MOYER KEVIN V ; MOYER KEVIN W ; QIANG YU ; QINGXIA LIU ; RICHARD SPENCER ; SPENCER RICHARD ; SPENCER RICHARD ; YU QIANG ; GRASSING DZHEFFRI F**Agent(s):** GRIFFITH HACK; SMART AND BIGGAR; MOFFAT AND CO; PFENNING MEINIG AND PARTNER GBR**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW**21) Family number: 15362519 (US3926650A)**

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Title: FOAMING AGENT FOR PLASTER AND CEMENT COMPOSITIONS

Abstract: This invention relates to a foamable composition comprising water, calcined gypsum or hydraulic cement and, as a foaming agent, the sodium salt of an a-olefin sulfonate of an olefin having 14 to 20 carbon atoms in the molecule, or the sodium salt of the sulfuric acid ester of an alkyl polyglycol ether, which ether is prepared by hydroxyethylation of one mole of a fatty alcohol having a carbon chain of 10 to 14 carbon atoms with, on the average, 3 moles of ethylene oxide, or a mixture of both of the said sodium salts. 2 Claims, No Drawings

Classifications:**International (IPC 8-9):** C04B11/00 C04B24/16 C04B28/02

C04B28/14 (Advanced/Invention);

C04B11/00 C04B24/00 C04B28/00 (Core/Invention)

International (IPC 1-7): B28B C04B11/00 C04B13/00 C04B13/28

C04B15/02 C04B21/00 C04B21/02 C04B21/04 C04B21/10 C04B5/02

C04B7/02

CPC: C04B24/16 C04B28/02 C04B28/14**European:** C04B24/16 C04B28/02 C04B28/14**US:** 106/678 106/90

**SUBSTITUTE
REPLACEMENT**

**SECTION is not Present
Cette Section est Absente**

Family:

Publication number	Publication date	Application number	Application date
AT319126 B	19741210	AT19710009836	19711115
CA980369 A1	19751223	CA19710127468	19711112
CH577945 A	19760730	CH19710016409	19711111
DE2056255 A1	19720525	DE19702056255	19701116
DE2056255 B2	19780921	DE19702056255	19701116
DE2056255 C3	19810226	DE19702056255	19701116
DE2150395 A1	19730412	DE19712150395	19711009
DE2150395 C2	19830217	DE19712150395	19711009
FR2114734 A5	19720630	FR19710040909	19711116
IT944885 A	19730420	IT19710054029	19711112
NL7115273 A	19720518	NL19710015273	19711105
US3926650 A	19751216	US19740445980	19740226

Priority:

DE19702056255 19701116 DE19712150395 19711009 US19710199302 19711116
US19740445980 19740226

Probable Assignee: HOECHST AG

Assignee(s): (std): HOECHST AG ; KALLE AG ; KALLE AG DT

Assignee(s): KALLE AKTIENGESellschaft ; LANGE JOST ; ZEH ALBERT ; SCHNEIDER GERHART ; HOECHST AG 6000 FRANKFURT ; HOECHST AG 6000 FRANKFURT DE ; HOECHST AKTIENGESellschaft

Inventor(s): (std): LANGE JOST DIPL CHEM DR ; SCHNEIDER GERHART DIPL CHEM DR ; ZEH ALBERT ; AG KALLE ; SCHNEIDER GERHART ; LANGE JOST ; KALLE AG

Inventor(s): ZEH ALBERT 6229 NIEDERWALLUF DE ; ZEH ALBERT 6229 NIEDERWALLUF ; SCHNEIDER GERHART DIPL CHEM DR 6000 FRANKFURT DE ; SCHNEIDER GERHART DIPL CHEM DR 6000 FRANKFURT ; LANGE JOST DIPL CHEM DR 6202 WIESBADEN DE ; LANGE JOST DIPL CHEM DR 6202 WIESBADEN BIEBRICH

22) Family number: 47544561 (US2011210164A)

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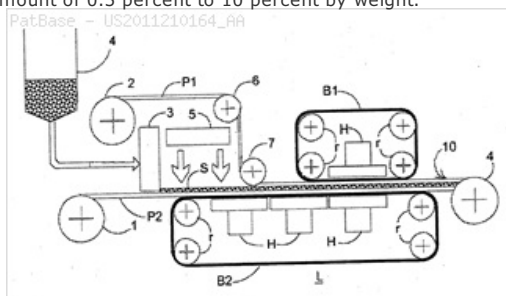
Title: PACKAGING MATERIALS WITH ENHANCED THERMAL-INSULATING PERFORMANCE

Abstract: A packaging material including a paper-based substrate having a first surface and a second surface and a thermal-insulating composition on the first surface of the substrate, wherein the thermal-insulating composition includes, based on the total weight of the composition, filler in an amount of 20 percent to 70 percent by weight, organic binder in an amount of 15 percent to 70 percent by weight, and plasticizer in an amount of 0.5 percent to 10 percent by weight.

Classifications:

International (IPC 8-9): B05D3/02 B29D22/00 B29D23/00 B31B1/00 B31B1/62 B32B1/08 B32B15/12 B32B23/06 B32B27/00 B32B27/10 B32B27/18 B32B29/00 B32B29/02 B32B3/00 B32B3/26 B32B5/16 B32B5/18 B32B5/22 B32B7/02 B65D3/06 B65D3/22 B65D3/28 B65D81/38 (Advanced/Invention)

CPC: B32B27/18 B65D81/3874 B32B29/002 B32B23/06 B32B5/16 B32B3/26 B32B15/12 B65D3/06 B32B27/10 B65D3/28 Y10T156/10 Y10T428/13 Y10T428/1303 Y10T428/1352 Y10T428/1393 Y10T428/24851 Y10T428/2495 Y10T428/253 Y10T428/26 Y10T428/31703 Y10T428/31895 Y10T428/31899 Y10T428/31902 Y10T428/31975 Y10T428/31982 Y10T428/31993 Y10T428/31996 Y10T428/249953 Y10T428/249962 Y10T428/249974 B32B5/20 B32B9/02 B32B9/06 B32B27/205 B32B27/22 B32B27/302 B32B27/306 B32B27/32 B32B29/005 B32B29/007 B32B29/02



B32B29/04 B32B2255/12 B32B2255/26 B32B2260/025 B32B2260/046 B32B2262/06 B32B2264/06 B32B2266/0207
B32B2266/0228 B32B2266/0242 B32B2266/025 B32B2270/00 B32B2307/304 B32B2307/7163 B32B2307/7246 B32B2439/70
B31B50/62
European: B32B27/10 B32B27/18 B32B29/00 B32B5/18 B65D81/38H4
US: 156/306.3 156/60 229/122.32 229/122.320P 229/403 229/403P 427/372.2 427/372.200S 427/397.8 427/397.800S
428/201 428/213 428/213S 428/304.4 428/304.400S 428/311.11 428/313.9 428/326 428/326S 428/332 428/332S 428/34.1
428/34.2 428/35.7 428/36.91 428/464 428/511 428/512 428/513 428/533 428/535 428/537.5 428/537.500S 428/537.7
493/114 493/115 493/115S

Family:

Publication number	Publication date	Application number	Application date
AU2010245971 AA	20101111	AU20100245971	20100505
AU2010245975 AA	20101111	AU20100245975	20100505
AU2010245975 BB	20130718	AU20100245975	20100505
CA2760933 AA	20101111	CA20102760933	20100505
CA2761502 AA	20101111	CA20102761502	20100505
CA2761502 C	20150217	CA20102761502	20100505
CN102421594 A	20120418	CN201080019465	20100505
CN102448715 A	20120509	CN201080020120	20100505
EP2427328 A1	20120314	EP20100719851	20100505
EP2427329 A2	20120314	EP20100719852	20100505
JP2012526006 T2	20121025	JP20120509936T	20100505
JP2012526026 T2	20121025	JP20120509938T	20100505
JP5623509 B2	20141112	JP20120509936T	20100505
MX2011011054 A1	20111216	MX20110011054	20100505
MX2011011355 A1	20120112	MX20110011355	20100505
RU2011149225 A	20130610	RU20110149225	20100505
RU2011149315 A	20130610	RU20110149315	20100505
US2011210164 AA	20110901	US20110080064	20110405
US2012043373 AA	20120223	US20100318380	20100505
US2013190154 AA	20130725	US20130770028	20130219
US2013312894 AA	20131128	US20130958086	20130802
US2013344304 AA	20131226	US20130958071	20130802
US8389079 BB	20130305	US20100318380	20100505
US8541074 BB	20130924	US20110080064	20110405
US8647717 BB	20140211	US20130958086	20130802
US8652598 BB	20140218	US20130958071	20130802
WO10129629 A1	20101111	WO2010US33653	20100505
WO10129633 A2	20101111	WO2010US33658	20100505
WO10129633 A3	20110505	WO2010US33658	20100505

Priority:

US20090175569P 20090505 US20090287990P 20091218 US20100318380 20100505
WO2010US33653 20100505 WO2010US33658 20100505 US20110080064 20110405
US20110318380 20111101 US20130770028 20130219 US20130958086 20130802
US20130958071 20130802

Probable Assignee: MEADWESTVACO CORP

Assignee(s): (std): ARENANDER SVEN S ; ARENANDER SVEN SAMUEL ; BABCOCK BRUCE W ; BABINSKY VLADISLAV ;
NEWMAN DOBBIE C ; MEADWESTVACO CORP ; HAWES DAVID H ; BABINSKY VLADISLAV A ; KRUG
TERESA ; NEWMAN DOBRIDGE CELESTE

Assignee(s): WESTROCK MWV LLC

Inventor(s): (std): KRUG TERESA ; BABINSKY VLADISLAV ; NEWMAN DOBRIDGE CELESTE ; ARENANDER SVEN SAMUEL ;
TERESA KRUG ; NEWMAN DOBRIDGE C ; BABCOCK BRUCE W ; HAWES DAVID H ; ARENANDER SVEN S
; BABINSKY VLADISLAV A ; NEWMAN DOBBIE C

Inventor(s): SVEN S ARENANDER ; DOBBIE C NEWMAN ; DAVID H HAWES ; BRUCE W BABCOCK ; VLADISLAV A
BABINSKY

Agent(s): SPRUSON AND FERGUSON; RIDOUT AND MAYBEE LLP; RULE JOHN ERIC; WALTERS AND WASYLYNA
LLC; MEADWESTVACO INTELLECTUAL PROPERTY GROUP; MEADWESTVACO INTELLECTUAL PROPERTY
GROUP; SRISIRI SISSON WARUNEE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU
CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HK HN HR HU ID IE IL
IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT
MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST
SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

23) Family number: 2132577 (US4488909A)

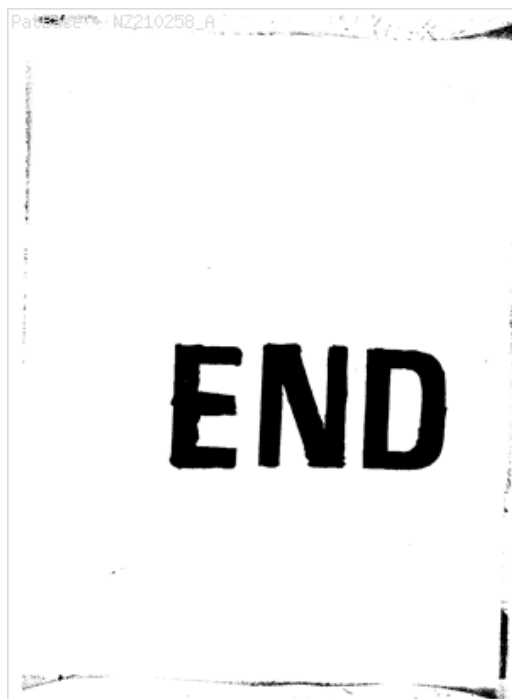
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Title: NON-EXPANSIVE, RAPID SETTING CEMENT

Abstract: An ettringite-producing hydraulic cement especially adapted to the high speed production of carbon dioxide
resistant cement board produces essentially all of its potential ettringite within about 20 minutes after it is mixed with water.
The cement is non-expansive and sets within about 25 minutes at a temperature of from about 65 DEG F. to about 150 DEG
F.

Classifications:

International (IPC 8-9): C04B22/06 C04B28/02 C04B28/14
C04B7/02 C04B7/32 (Advanced/Invention);
C04B28/00 C04B7/00 (Core/Invention);
C04B (Subclass/Invention)
International (IPC 1-7): C04B22/06 C04B28/02 C04B28/04
C04B28/06 C04B28/14 C04B7/02 C04B7/04 C04B7/32 C04B7/345
C04B7/35
CPC: Y02W30/92 Y02W30/94 C04B28/065 C04B7/323 C04B28/04
C04B2111/0062
European: C04B28/04 C04B28/06B C04B7/32B M04B111/00T6B
US: 106/104 106/109 106/118 106/695 106/89

**Family:**

Publication number	Publication date	Application number	Application date
AT55591 E	19900915	AT19840308176T	19841126
AU198436198 A1	19850613	AU19840036198	19841109
AU562572 B2	19870611	AU19840036198	19841109
CA1220792 A1	19870421	CA19840467144	19841106
DE3482987 D1	19900920	DE19843482987	19841126
DK164360 B	19920615	DK19850003361	19850724
DK164360 C	19921102	DK19850003361	19850724
DK336185 A	19850724	DK19850003361	19850724
DK336185 A0	19850724	DK19850003361	19850724
EP0143633 A2	19850605	EP19840308176	19841126
EP0143633 A3	19870311	EP19840308176	19841126
EP0143633 B1	19900816	EP19840308176	19841126
FI78285 B	19890331	FI19850002792	19850716
FI78285 C	19890710	FI19850002792	19850716
FI852792 A	19850716	FI19850002792	19850716
FI852792 A0	19850716	FI19850002792	19850716
FI852792 L	19850716	FI19850002792	19850716
GB2150130 A1	19850626	GB19840028428	19841109
GB2150130 B2	19880323	GB19840028428	19841109
GB8428428 A0	19841219	GB19840028428	19841109
JP2083447 C3	19960823	JP19840504246	19841109
JP6065618 B4	19940824	JP19840504246T	19841109
JP61500726 T2	19860417	JP19840504246T	19841109
NO166033 B	19910211	NO19850002955	19850724
NO166033 C	19910522	NO19850002955	19850724
NO852955 A	19850724	NO19850002955	19850724
NO852955 L	19850724	NO19850002955	19850724
NZ210258 A	19870831	NZ19840210258	19841120
US4488909 A	19841218	US19830555136	19831125
WO8502396 A1	19850606	WO1984US01831	19841109

Priority:

US19830555136 19831125 CA19840467144 19841106 WO1984US01831 19841109
EP19840308176 19841126 EP19840308176 19841126

Probable Assignee: UNITED STATES GYPSUM CO A DE CORP

Assignee(s): (std): UNITED STATES GYPSUM CO

Assignee(s): UNITED STATES GYPSUM CO A DE CORP ; UNITED STATES GYPSUM CO CHICAGO ILL US ; UNITED STATES GYPSUM COMP ; UNITED STATES GYPSUM COMPANY ; YUU ESU JII CORP ; WEBB PAUL C ; GALER RICHARD E

Inventor(s): (std): CHRISTIAN WEBB PAUL ; EUGENE GALER RICHARD ; EUGENE GALER RICHARD ; GALER R E ; GALER R E WEBB P C ; GALER RICHARD E ; GALER RICHARD EUGENE ; WEBB P C ; WEBB PAUL C ; WEBB PAUL CHRISTAIN ; WEBB PAUL CHRISTIAN ; GALER RICHARD EUGENE

Inventor(s): PAUL CHRISTAIN WEBB ; RICHARD EUGENE GALER ; UETSUBU HOORU KURISUTEIAN ; WEBB PAUL CHRISTIAN LAKE VILLA ILLINOIS 60046 US ; WEBB PC ; GARAA RICHAAO YUUIJIN ; GALER RE WEBB PC ; GALER RE ; GALER RICHARD EUGENE HANOVER PARK ILLINOIS 60103 U ; GALER RICHARD EUGENE HANOVER PARK ILLINOIS 60103 US ; GALER RICHARD EUGENE HANOVER PARK ILLINOIS...

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; MACRAE AND CO

Designated states: AT AU BE DE DK FI FR IT JP NL NO SE

Title: LIGHTWEIGHT CEMENTITIOUS COMPOSITIONS AND BUILDING PRODUCTS AND METHODS FOR MAKING SAME

Abstract: Cementitious compositions and methods for making same, in which the cementitious compositions include 35-60 weight percent cementitious reactive powder (also termed Portland cement-based binder), 2-10 weight percent expanded and chemically coated perlite filler, 20-40 weight percent water, entrained air, and optional additives such as water reducing agents, chemical set-accelerators, and chemical set-retarders. In addition, the lightweight cementitious compositions may contain 0-25 weight percent on a wet basis secondary fillers such as expanded clay, shale aggregate, and pumice.

Classifications:

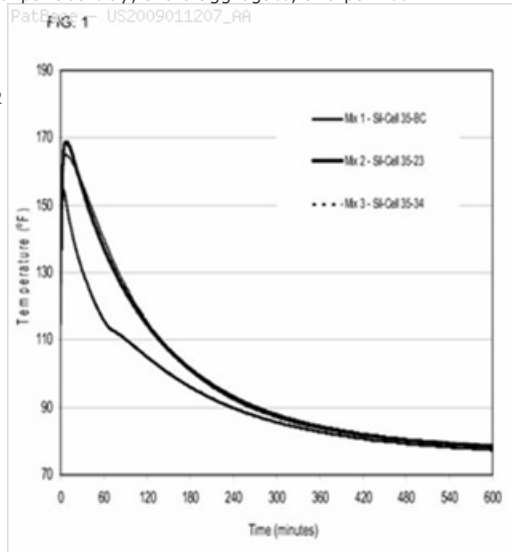
International (IPC 8-9): B32B13/02 B32B13/14 C04B C04B111/20 C04B111/40 C04B14/00 C04B14/08 C04B14/10 C04B14/12 C04B14/18 C04B18/08 C04B20/10 C04B22/14 C04B24/06 C04B24/12 C04B24/16 C04B28/00 C04B28/04 C04B38/00 C04B7/02 C04B7/32 E04C E04C2/04 (Advanced/Invention); C04B111/20 C04B111/40 (Advanced/Non-invention); C04B14/02 C04B28/00 E04C2/04 (Core/Invention)

International (IPC 1-7): C04B14/18

CPC: Y10S106/02 E04C2/049 C04B20/1051 C04B28/04 Y10T442/10 Y02W30/92 Y02W30/94 C04B2111/40

European: C04B20/10D C04B28/04 E04C2/04F M04B111/60

US: 106/669 106/669S 106/670 106/670S 106/675 106/675S 106/698 106/698S 106/713 106/DIG.2 156/39 264/333 428/219 428/219P 428/220 428/220P 442/1 442/1S



Family:

Publication number	Publication date	Application number	Application date
BRPI0814006 A2	20150203	BR2008PI14006	20080630
CA2691670 AA	20090108	CA20082691670	20080630
CA2691670 C	20161011	CA20082691670	20080630
CL2008001942 A1	20090116	CL20080001942	20080630
CN101687703 A	20100331	CN200880022983	20080630
CN101687703 B	20130918	CN200880022983	20080630
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IN291459 B	20180112	IN2010CN00035	20100104
JP2010532309 T2	20101007	JP20100515228T	20080630
JP5685760 B2	20150318	JP20100515228T	20080630
RU2009146889 A	20110810	RU20090146889	20080630
RU2470884 C2	20121227	RU20090146889	20080630
US2009011207 AA	20090108	US20070773865	20070705
US2012040165 AA	20120216	US20110282689	20111027
US8070878 BB	20111206	US20070773865	20070705
US8298332 BB	20121030	US20110282689	20111027
WO09006428 A2	20090108	WO2008US68830	20080630
WO09006428 A3	20090226	WO2008US68830	20080630

Priority:

US20070773865 20070705 WO2008US68830 20080630 US20110282689 20111027

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): DUBEY ASHISH ; JUNAJTED STEHJTS DZHIPSUM KOMPANI ; UNITED STATES GYPSUM CO

Assignee(s): UNITED STATES GYPSUM COMPANY

Inventor(s): (std): DUBEY ASHISH ; ASHISH DUBEY ; DABEJ ASHISH

Agent(s): GOWLING WLG CANADA LLP; CLARKE; DANILO ROMERO RAAD; LLOYD ROBIN; FINDLAY ALICE ROSEMARY; SULEIMAN I AL AMMAR LAW OFFICE; GE BO; NOVAK DRUCE AND QUIGG LLP ANTHONY P VENTURINO; NOVAK DRUCE AND QUIGG LLP; DAVID F; PHILIP T; VENTURINO ANTHONY P

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

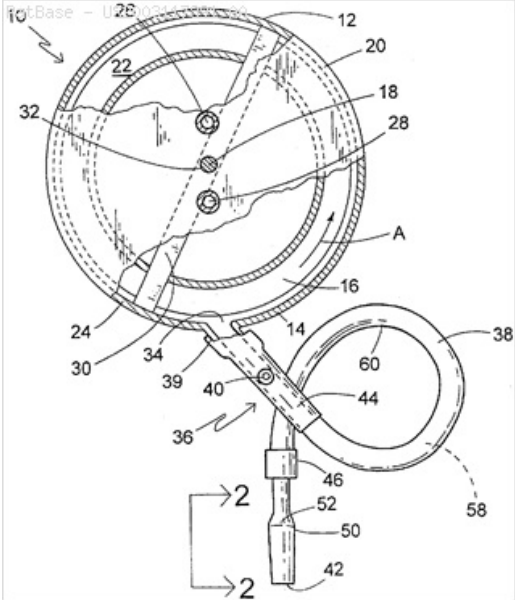
Title: SLURRY MIXER OUTLET

Abstract: An apparatus configured for connection to a mixer for receiving a slurry and altering the flow characteristics of the slurry includes a conduit having a main inlet in slurry receiving communication with the mixer outlet and extending to a spout for discharging the slurry, at least one conduit restrictor associated with the conduit for creating back-pressure between the conduit restrictor and the mixer outlet for keeping the mixer full, and at least one pressure reducer associated with the

discharge spout and configured for reducing the pressure of the slurry dispensed from the discharge spout. The apparatus is configured for maintaining a generally laminar flow from the mixer outlet to the discharge spout.

Classifications:

International (ipc 8-9): B01F15/02 B01F3/12 B01F7/16 B28B19/00 B28C5/00 B28C5/08 B28C5/12 B28C5/16 B28C5/38 B28C7/16 (Advanced/Invention); B01F5/00 (Advanced/Non-invention); B01F15/02 B01F3/12 B01F7/16 B28B19/00 B28C5/00 B28C7/00 (Core/Invention); B01F5/00 (Core/Non-invention)
International (ipc 1-7): B01F15/02 B01F7/16 B28C5/00 B28C5/08 B28C5/12 B28C5/16
CPC: B01F15/0266 B01F3/1221 B01F7/163 B01F2005/0028 B01F2215/0047 B28B19/0092 B28C5/16 B28C5/386 B28C7/16
European: B01F15/02C B01F3/12C B01F7/16F2 B28B19/00K B28C5/16 B28C5/38B4 B28C7/16 L01F215/00A56 L01F5/00A14
US: 366/192 366/192P 366/194 366/194S 366/315 366/315S



Family:

Publication number	Publication date	Application number	Application date
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CA2446672 C	20110111	CA20022446672	20020703
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Priority:

US20010905553 20010716 WO2002US21263 20020703 US20020318636 20021213

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): UNITED STATES GYPSUM CO

Assignee(s): UNITED STATES GYPSUM COMPANY ; WITTBOLD JAMES R ; DUVEDI AMIT P ; FLEMING WAYNE A ; HEMPHILL MARK K ; MOORE KIRK S ; NELSON CHRISTOPHER ; PITTMAN WILFORD GARY
Inventor(s): (std): DUVEDI AMIT P ; FLEMING WAYNE A ; HEMPHILL MARK K ; MOORE KIRK S ; NELSON CHRISTOPHER ; PITTMAN WILFORD GARY ; SHAKE MICHAEL P ; WILFORD GARY PITTMAN ; WITTBOLD JAMES R ; LEMING WAYNE A ; ELSON CHRISTOPHER

Inventor(s): AMIT P DUVEDI ; CHRISTOPHER NELSON ; WAYNE A FLEMING ; JAMES R WITTBOLD ; KIRK S MOORE ; MARK K HEMPHILL

Agent(s): GRIFFITH HACK; MACRAE AND CO; MOFFAT AND CO; MUELLER BORE AND PARTNER
PATENTANWAELE; GREER BURNS AND CRAIN LTD; MICHAEL M; DAVID F

Designated states: AT AU BE BG CA CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC MX NL NZ PT SE SK TR

26) Family number: 30421644 (US4203788A)

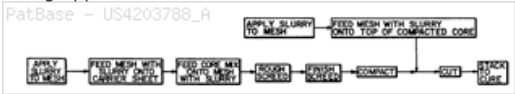
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Title: METHODS FOR MANUFACTURING CEMENTITIOUS REINFORCED PANELS

Abstract: Reinforced facings, including reinforcing webs entrained in hydraulic cement via a slurry bath, adhere to a nailable lightweight aggregate cementitious core to form a panel web. The reinforced web is formed on abutting conveyed carrier sheets, and the web is transversely cut, between the sheets, while moving or when stopped, in response to sensing of the sheets. The cut panels, on respective sheets are stacked for curing without damaging the panel edges and in a manner to minimize panel flex. Slurry bath, facing applicators, and cutter and stacking apparatus are included.

Classifications:

International (ipc 8-9): B28B1/16 B28B1/52 B28B11/14 B28B19/00 B28B23/02 B28B5/00 B28B5/02 B32B13/00 B32B13/14 B65G57/03 B65G57/06 B65H29/34 E04C2/06 (Advanced/Invention); B28B1/52 B28B23/02 B28B5/00 B32B13/00 (Advanced/Non-invention); B28B1/16 B28B1/52 B28B11/14 B28B23/02 B28B5/00 B32B13/00 B65G57/02 B65H29/26 E04C2/06 (Core/Invention)
International (ipc 1-7): B28B1/08 B28B1/16 B28B11/14 B28B13/04 B28B15/00 B28B17/00 B28B19/00 B28B23/02 B28B5/04 B28B7/14 B29C17/14 B29D3/02 B32B13/00 B32B13/02 B32B13/04 B32B13/14 B32B17/02 B32B17/06 B32B17/12 B32B31/12 B32B5/26 B32B7/02 B65G57/00 B65G57/06 B65H29/34 C04B39/02 E04C2/04 E04C2/06 E04C2/30
CPC: Y10S264/43 Y10S264/57 B65G57/06 B65H29/34 Y10T156/1084 B65G57/035 B28B1/16 B28B5/027 B28B11/14 Y10T156/12 Y10T428/249968 B32B13/04 B32B27/12 B32B27/32 B32B2305/38 B32B2323/04 B32B2607/00 B32B13/14 E04C2/06
European: B28B1/16 B28B11/14 B28B5/02C2 B32B13/14 B65G57/03S B65G57/06 B65H29/34 E04C2/06
US: 118/126 118/304 118/419 156/243 156/269 156/324 156/346 156/353 156/39 156/44 156/510 264/228 264/258 264/259 264/316 264/333 264/70 264/DIG.43 264/DIG.57 271/189 414/794.2 414/802 414/82 425/106 425/115 425/122 425/308 425/92 425/93 428/312.4 428/703 52/414 52/600 52/630



Family:

Publication number	Publication date	Application number	Application date
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SE7902345 L	19790917	SE19790002345	19790315
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SE8203210 L	19820524	SE19820003210	19820524
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USRE32037 E	19851126	US19820379937	19820519
USRE32038 E	19851126	US19820379936	19820519

Priority:

US19780887324 19780316	CA19780308550 19780801	GB19790008865 19790313
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Probable Assignee: CLEAR T E

Assignee(s): (std): CLEAR T ; CLEAR T E ; CLEAR THEODORE ; CLEAR THEODORE E ; CLEAR THEODORE EDWARD ; DINKEL PAUL E ; SEODOOA II KUREAA ; THEODORE E CLEAR ; THEODORE E CLEAR TE HAMILTON OHIO VER ST V AM

Assignee(s): MODULARS INC ; CLEAR THEODORE E HAMILTON OHIO US ; CLEAR THEODORE E HAMILTON OHIO V ST A

Inventor(s): (std): CLEAR T ; CLEAR THEODORE E ; DINKEL PAUL E ; SEODOOA II KUREAA ; SOK ; THEODORE E CLEAR

Inventor(s): CLEAR THEODORE E HAMILTON OHIO US ; CLEAR THEODORE E HAMILTON OHIO V ST A

Agent(s): SPRUSON AND FERGUSON; MACRAE AND CO

27) Family number: 33992676 (US2006278132A)

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Title: METHOD OF IMPROVING DISPERSANT EFFICACY IN MAKING GYPSUM PRODUCTS

Abstract: The invention generally provides gypsum-containing slurries including stucco, trimetaphosphate salt, and naphthalenesulfonate dispersant, wherein the trimetaphosphate salt is present in an amount of at least about 0.12 percent by weight based on the weight of stucco. Other slurry additives can include accelerators, binders, starch, and paper fiber, glass fiber, and other known ingredients. The invention also comprises the gypsum-containing products made with such slurries, for example, gypsum wallboard, and a method of making gypsum wallboard.

Classifications:

International (IPC 8-9): B01F17/12 B01F17/14 C04B24/20 B22B1/04 B23B B23B13/00 B23B3/04 B23B37/00 B28B19/00 B28B3/12 B32B B32B1/00 B32B1/04 B32B13/00 B32B13/02 B32B13/04 B32B13/08 B32B13/14 B32B15/00 B32B17/02 B32B21/00 B32B27/02 B32B29/00 B32B3/00 B32B3/26 B32B3/30 B32B37/00 B32B37/02 B32B37/15 B32B37/24 B32B38/10 B32B38/16 B32B5/02 B32B5/24 B32B7/02 B52B13/00 C04B C04B11/00 C04B11/28 C04B11/40 C04B14/28 C04B14/38 C04B14/42 C04B14/46 C04B16/00 C04B16/02 C04B16/08 C04B18/24 C04B20/06 C04B22/06 C04B22/14 C04B22/16 C04B24/00 C04B24/10 C04B24/16 C04B24/22 C04B24/38 C04B24/40 C04B26/28 C04B28/00 C04B28/12 C04B28/14 C04B28/34 C04B28/100 C04B38/02 C04B38/08 C04B38/10 C04B40/00 C04B7/34 C04B9/00 E04B1/94 E04C2/00 E04C2/04 E04C2/26 E04C2/28 E04F13/02 E04F13/14 (Advanced/Invention); B23B13/00 B23B37/00 C04B103/00 C04B103/42 C04B11/00 C04B111/00 C04B111/40 C04B14/28 C04B22/14 C04B24/16 C04B24/38 C04B28/14 C04B38/10 (Advanced/Non-invention); B23B13/00 B23B37/00 B28B3/00 B32B1/00 B32B13/00 B32B3/00

B32B3/26 B32B37/00 B32B38/10 C04B11/00 C04B14/02 C04B14/38
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C04B28/14 C04B9/00 (Core/Invention);
B23B B32B C04B (Subclass/Invention)
International (IPC 1-7): B23B13/00 B23B37/00 B32B13/00
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Y10T428/24496 Y10T156/1052 Y10T428/27 Y10T428/24479
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Y10T428/31993 Y10T442/665 B32B2419/00 B32B2607/02
B32B2307/72 B32B2307/3065 Y10T428/31982 B32B27/02
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European: B32B13/02 B32B13/04 B32B13/08 B32B13/14
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156/42 156/45 156/45S 252/62 428/156 428/158 428/220 428/220P
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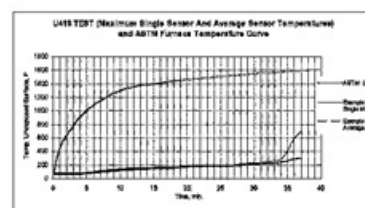
PatBase - W012116313_A1

WO 2015/16103

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PCT/JP2013/06899

FIGURE 1



Family:

Publication number	Publication date	Application number	Application date
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AR054389 AA	20070620	AR2006P102433	20060609
AR063772 AA	20090218	AR2007P104860	20071031
AR068668 AA	20091125	AR2008P104345	20081003
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AR074030 AA	20101222	AR2007P104327	20070928
AR085491 AA	20131009	AR2012P100628	20120224
AR095695 AB	20151104	AR2014P101307	20140320
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US20170802048	20171102				

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Designated states:	AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: FOAMING AGENT FOR GAS CONCRETE AND COMPOSITION

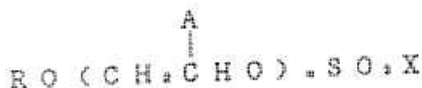
Abstract: PURPOSE: To improve the power and stability of foams in the production of gas concrete by incorporating a specified oxyethylene sulfate as a foaming component and a specified aliphatic alcohol. CONSTITUTION: A foaming agent for producing gas concrete is composed of a compd. represented by formula as a foaming component and 8-20C aliphatic alcohol. In the formula, R is 8-20C aliphatic hydrocarbon group, A is H or methyl, (m) is 0 or 1-5 and X is an alkali metal, NH₃ or an amine cation. Ammonium oxyethylene (1) laurylsulfate may be used as the foaming component. The foaming agent, cement, aggregate and water are used as essential components to obtain a gas concrete compsn. This compsn. does not cause shrinkage due to defoaming before hardening and many fine foams are distributed in a hardened body.

Classifications:**International (IPC 8-9):** C04B24/02 C04B24/16

C04B38/10 (Advanced/Invention)

International (IPC 1-7): C04B24/02 C04B24/16 C04B38/10

PatBase - JP3050168_R2

**Family:**

Publication number	Publication date	Application number	Application date
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JP3050168 A2	19910304	JP19890069048	19890320
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Priority:

JP19890069048 19890320

Probable Assignee: SANYO CHEMICAL IND LTD**Assignee(s):** (std): SANYO CHEMICAL IND LTD**Assignee(s):** SANYO CHEM IND LTD**Inventor(s):** (std): YAMAMOTO MANABU ; TANAKA SATOSHI ; OKADA SHIGERU**29) Family number: 30569692 (US2003219580A)**

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Title: CONSTRUCTION MATERIALS CONTAINING SURFACE MODIFIED FIBERS

Abstract: Construction materials containing surface modified reinforcements are used to fabricate composite structures. The composite structures comprise a matrix material and surface modified reinforcements, such as fibers and particulates. The surface modifier may be applied to a fiber surface using conventional sizing equipment and provides a durable film on the fiber. The surface modifier may be selected to have multifunctional properties, for example, increasing fiber pull-out strength, imparting bio-active properties, improving moisture resistance and other desirable properties to the composite structure.

Classifications:**International (IPC 8-9):** B32B13/08 C04B C04B111/30 C04B18/28

C04B20/00 C04B24/14 C04B24/38 C04B28/02 C04B28/14

D06M15/356 D06M16/00 E04C2/04 (Advanced/Invention);

C04B111/30 (Advanced/Non-invention);

C04B18/04 C04B20/00 C04B24/00 C04B28/00 D06M15/21

D06M16/00 E04C2/00 E04C2/04 (Core/Invention);

C04B (Subclass/Invention);

C04B (Subclass/Non-invention)

International (IPC 1-7): B32B13/00 B32B3/26 B32B31/00 B32B7/08 C04B C04B111/30 C04B24/38 C04B28/14 D04H1/00 E04C2/04**CPC:** C04B20/0048 C04B24/383 D06M15/3562 D06M16/00 Y10T428/256 Y10T428/1372 Y10T428/1393 Y10T428/17

Y10T428/269 C04B28/14 C04B18/28 C04B2111/00612 C04B2111/27 C04B20/1033 C04B20/1048 C04B24/38 C04B28/02

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Y10T428/249932 Y10T428/249961

European: B32B13/08 C04B18/28 C04B20/00F C04B20/10B4D C04B20/10B4K C04B24/38 C04B24/38B C04B28/02

C04B28/14 C04B28/14H C04B28/14H4 C04B28/16 D06M15/356N D06M16/00 E04C2/04C M04B111/00M14 M04B111/00T6

M04B111/00T6B M04B111/10 M04B111/27 M04B111/30 M04B201/20

US: 106/638 156/39 156/39S 206/524.3 428/223 428/292.1 428/292.100P 428/294.7 428/294.700S 428/304.4 428/310.5

428/312.8 428/328 428/339 428/36.4 428/36.91 428/364 428/53 524/42 524/42P 524/43 524/43S 524/44 524/44S

PatBase - US2003219580A_01

**Family:**

Publication number	Publication date	Application number	Application date
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AU2003286582 AH	20040603	AU20030286582	20031021
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HU029974 T2	20170428	HU20040704924T	20040123
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IN01602KN2005 A	20060901	IN2005KN01602	20050810
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WO04043872 A2	20040527	WO2003US33496	20031021
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WO04065319 A2	20040805	WO2004US01957	20040123
WO04065319 A3	20050512	WO2004US01957	20040123
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Priority:

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Probable Assignee: SAINT GOBAIN PLACO

Assignee(s): (std): INNOVATIVE CONSTR AND BUILD MAT ; INNOVATIVE CONSTRUCTION AND BU ; INNOVATIVE CONSTRUCTION AND BUILDING MATERIALS ; POLLOCK JACOB FREAS ; TAGGE CHRISTOPHER D ; TORRES LENNARD ; SOANE DAVID S ; INNOVATIE CONSTRUCTION AND BUI ; SAINT GOBAIN PLACO

Assignee(s): INNOVATIVE CONSTRUCTION AND BUILDING MATERIALS LLC ; INNOVATIE CONSTRUCTION AND BUILDING MATERIALS ; COMMATONE LTD ; INNOVATIVE CONTRUCTION AND BUILDING MATERIALS

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Agent(s): MCCARTHY TETRAULT LLP; MAIWALD PATENTANWALTS GMBH; NAYLOR MATTHEW JOHN; VALLEJO JUAN PEDRO; VIVIEN CHAN AND CO; CANAN OEZTUERKER; FOWLER WHITE BOGGS BANKER PA; CHRISTOPHER; PARADIES CHRISTOPHER; OSTROLENK FABER GERB AND SOFFEN LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: GYPSUM BOARD HAVING POLYVINYL ALCOHOL BINDER IN INTERFACE LAYER AND METHOD FOR MAKING THE SAME

Abstract: Paper and/or mat-faced gypsum board is prepared by applying a relatively thin coating of aqueous gypsum slurry containing a polyvinyl alcohol binder to one or two facer sheets. The polyvinyl alcohol binder provides adequate adhesion between the set gypsum core and the adjacent facer sheet(s) without the need for starch or other conventional binders. In one embodiment, polyvinyl alcohol is concentrated in one or more regions of the core adjacent to the facer sheet(s). In another embodiment, polyvinyl alcohol is applied to an aqueous gypsum slurry used to form the bulk core, such that the polyvinyl alcohol is present throughout the core.

Classifications:

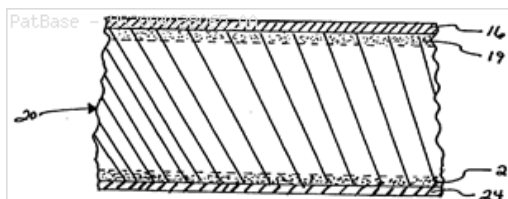
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International (IPC 1-7): B28B B28B0/00 B28B1/00 B28B1/30 B28B3/12 B32B13/08 B32B27/08 B32B29/00 C04B24/26 E04C2/04

CPC: Y10T428/31909 Y10T428/31993 Y10T428/31996 B32B13/04 B32B13/14 B32B2607/00 B28B19/0092 B32B13/08 C04B24/2623 C04B28/14 C04B2111/00413 C04B2111/0062 C04B2111/1006 E04C2/043

European: B32B13/04 C04B24/26F C04B28/14 E04C2/04C M04B111/00P35 M04B111/00T6B M04B111/10A

US: 156/39 156/39S 427/389.8 427/393.6 428/515 428/515S 428/537.5 428/537.7 428/537.700P



Family:

Publication number	Publication date	Application number	Application date
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CN1774337 A	20060517	CN20038019804	20030730
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KR20050050648 A	20050531	KR20057002891	20030730
MXPA05001372 A1	20050829	MX2005PA01372	20030730
US2004038065 AA	20040226	US20020224591	20020821
US6746781 BB	20040608	US20020224591	20020821
WO04018172 A2	20040304	WO2003US19883	20030730
WO04018172 A3	20041104	WO2003US19883	20030730

Priority:

US20020224591 20020821

WO2003US19883 20030730

WO2003US19883 20050221

Probable Assignee: GEORGIA PACIFIC GYPSUM LLC

Assignee(s): (std): G P GYPSUM CORP ; GEORGIA PACIFIC GYPSUM LLC

Assignee(s): KSIONZYK ANNE H ; CITICORP NORTH AMERICA INC ; ESGUERRA FABIO E ; FRANCIS HUBERT C

Inventor(s): (std): ESGUERRA FABIO E ; FRANCIS HUBERT C ; FRANCIS HUBERT C KSIONZYK ANNE ; KSIONZYK ANNE H

Inventor(s): ANNE H KSIONZYK ; HUBERT C FRANCIS ; FABIO E ESGUERRA

Agent(s): PHILLIPS ORMONDE FITZPATRICK; SMART AND BIGGAR; MARKS AND CLERK

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

Title: SLURRY SPREADER FOR CEMENTITIOUS BOARD PRODUCTION

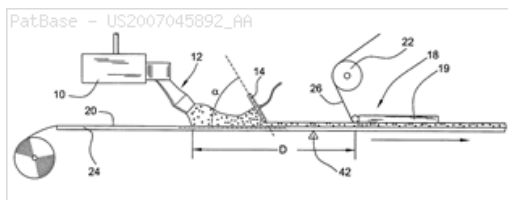
Abstract: The invention provides a board forming system comprising a forming table comprising a belt with a surface for conveying a backing layer; a mixer fitted with a mechanism capable of depositing cementitious slurry material over a top surface of the backing layer; and a slurry spreader positioned downstream of the mixer, wherein a portion of the slurry spreader comprises a plurality of apertures which are connected to a source of pressurized fluid. The slurry spreader is configured such that the pressurized fluid flows out of the slurry spreader through the apertures so as to provide a continuous film of fluid across an outer surface of the slurry spreader. The slurry spreader is positioned such that it can contact at least a portion of the cementitious slurry after the slurry exits the discharge and before the slurry is spread across the width of the backing layer such that the thickness of the slurry is approximately equal to the desired slurry thickness for board formation. The invention further provides methods for forming cementitious board comprising the use of the slurry spreader.

Classifications:

International (IPC 8-9): B05C11/04 B28B1/14 B28B1/16 B28B13/02 B28B3/00 B28B5/02 B32B B32B1/00 B32B13/00 B32B3/00 B32B37/00 B32B5/02 (Advanced/Invention); B32B1/00 B32B3/00 B32B37/00 (Advanced/Non-invention); B28B3/00 B28B5/00 B32B1/00 B32B3/00 B32B37/00 B32B5/02 (Core/Invention); B32B (Subclass/Invention)

International (IPC 1-7): B28B 3/00 B28B3/00 B32B 37/00 B32B1/00

CPC: B28B19/0092 B32B13/02 B32B13/04 B32B13/06 B32B13/08



B32B13/14 B32B15/20 B32B37/24 B32B2250/03 B32B2250/40 B32B2262/0276 B32B2262/101 B32B2315/06 B32B2607/00
European: B28B19/00K B32B13/02 B32B13/04 B32B13/06 B32B13/08 B32B13/14 B32B15/20 B32B37/24 L32B250/03
L32B250/40 L32B262/02L L32B262/10A L32B315/06 L32B607/00
US: 264/169 264/171.13 264/171.130P 264/172.19 264/172.190S 264/212 264/333 264/333S 264/42 425/102 425/115
425/115S 425/224 425/224S 425/364R

Family:

Publication number	Publication date	Application number	Application date
AR058656 AA	20080220	AR2006P103833	20060901
AU2005336106 AA	20070315	AU20050336106	20050902
AU2005336106 BB	20110728	AU20050336106	20050902
BRPI0520500 A2	20090929	BR2005PI20500	20050902
CA2620037 AA	20080221	CA20052620037	20050902
CN101253040 A	20080827	CN200580051454	20050902
EP1919700 A2	20080514	EP20050794156	20050902
EP1919700 A4	20100804	EP20050794156	20050902
HK1118509 A1	20090213	HK20080110247	20080916
HK1118509 A3	20090213	HK20080110247	20080916
IL189724 A0	20080807	IL20080189724	20080225
IL189724 A1	20110428	IL20050189724	20050902
IN01029CN2008 A	20080912	IN2008CN01029	20080229
JP2009506910 T2	20090219	JP20080528994T	20050902
KR20080048469 A	20080602	KR20087004898	20050902
MX2008002772 A1	20080407	MX20080002772	20050902
NO20081130 A	20080521	NO20080001130	20080304
NO20081130 L	20080521	NO20080001130	20080304
NZ566311 A	20100326	NZ20050566311	20050902
RU2008108003 A	20090910	RU20080108003	20050902
RU2377124 C2	20091227	RU20080108003	20050902
TH89356 A	20080410	TH20061004223	20060901
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UA90332 C2	20100426	UA20080002672	20050902
US2007045892 AA	20070301	US20050217720	20050901
US7364676 BB	20080429	US20050217720	20050901
WO07030102 A2	20070315	WO2005US31466	20050902
WO07030102 A3	20070927	WO2005US31466	20050902
ZA200801899 A	20081231	ZA20080001899	20080228

Priority:

US20050217720 20050901 WO2005US31466 20050902

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): ENGLERT MARK H ; FRANK WILLIAM A ; JUNAJTED STEHJTS DZHIPSUM KOMP ; MLINAC RAYMOND JOHN ; SUCECH STEVEN W ; UNITED STATES GYPSUM CO ; VEERAMASUNENI SRINIVAS

Assignee(s): UNITED STATES GYPSUM COMPANY ; JUNAJTED STEHJTS DZHIPSUM KOMPANI

Inventor(s): (std): CHASE MICHAEL ; CHASE MICHAEL L ; EHNLERT MARK KH ; ENGLERT MARK H ; FRANK WILLIAM A ; FREHNK UILL JAM A ; JOHN MLINAC RAYMOND ; LERNER ILYA ; MALINAC RAYMOND JOHN ; MLINAC RAYMOND J ; MLINAC RAYMOND JOHN ; MLINEHK REHJMOND DZHON ; PETERSEN BRUCE L ; PETERSON BRUCE L ; SUCECH STEVEN U ; SUCECH STEVEN W ; SUSEK STIVEN U ; SRINIVAS VEERAMASUNENI ; VEERAMASUNENI SRINIVAS ; VERAMASUNENI SRINIVAS

Inventor(s): WILLIAM A FRANK ; VEERAMASUNENI SRINIVAS AND ; STEVEN W SUCECH ; SUCECH STEVEN ; RAYMOND JOHN MLINAC ; MARK H ENGLERT ; MLINAC RAYMOND ; FREHNK UILL'JAM A. ; FRANK WILLIAM ; ENGLERT MARK

Agent(s): GRIFFITH HACK; EMERY JAMIESON LLP; PFENNING MEINIG AND PARTNER GBR; DEQI INTELLECTUAL PROPERTY LAW CORP; REINHOLD COHN AND PARTNERS; LEYDIG VOIT AND MAYER LTD; JANCI DAVID F; SAHU PRADIP K; DAVID F; PRADIP K

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

32) Family number: 42522839 (US2010247702A)

© PatBase

Title: SYSTEMS AND METHODS FOR A CONTROLLED PROCESS FOR PRODUCING MIXTURES OF LIGHTWEIGHT CONSTRUCTION MATERIALS AND SYSTEMS FOR AUTOMATIC PRODUCTION OF LIGHTWEIGHT BRICKS

Abstract: A system for producing ready-to-use mixtures of lightweight construction materials is provided. The system includes a subsystem for mixing and controlling the dry construction materials, a subsystem for mixing and controlling the additive materials, a main mixer which produces the ready-to-use mixture of lightweight construction material and a computerized control unit which controls the manufacturing process and thereby producing a ready-to-use mixture of lightweight construction material which is substantially uniform and has a controlled specific gravity. The present invention further provides an automated line of production for manufacturing ready-to-ship porous lightweight brick walls, controlled by the computerized control unit

Classifications:

International (IPC 8-9): B01F13/10 B01F15/04 B01F3/04 B01F3/12 B01F7/00 B01F7/18 B28B1/50 B28B15/00 B28B5/04 B28B7/00 B28B7/10 B28C5/12 B28C7/04 B29C41/42 G06F19/00 (Advanced/Invention);

B28B1/50 B28B7/10 B29C41/34 G06F19/00 (Core/Invention); B28B (Subclass/Invention)

CPC: B01F3/04453 B01F3/1221 B01F7/00908 B01F7/18 B01F13/1055 B01F15/0441 B28B1/503 B28B5/04 B28B7/0041 B28B15/005 B28C5/1269 B28C7/0418

European: B01F13/10G B01F15/04H B01F3/04C3B B01F3/12C B01F7/00K B01F7/18 B28B1/50B B28B15/00B B28B5/04

Family:

Publication number	Publication date	Application number	Application date
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CN101743104 A	20100616	CN200880024376	20080327
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EP2155454 A4	20111207	EP20080720045	20080327
IL202136 A0	20100616	IL20080202136	20080327
US2010247702 AA	20100930	US20080600305	20080327
WO08139439 A2	20081120	WO2008IL00422	20080327
WO08139439 A3	20091105	WO2008IL00422	20080327
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Priority:

US20070917682P 20070514
IL20090202136 20091115

WO2008IL00422 20080327

US20080600305 20080327

Probable Assignee: ROMPYPAZ ENGINEERING LTD

Assignee(s): (std): BEN LULU GILBERT GAL ; GAL BEN LULU GILBERT ; LULU GILBERT GAL BEN ; ROMPYPAZ ENGINEERING LTD

Assignee(s): GILBERT GAL BEN LULU

Inventor(s): (std): BEN LULU GILBERT GAL : LULU GILBERT GAL BEN : GAL BEN LULU GILBERT

Inventor(s): GILBERT GAL BEN LULU

Agent(s): WILLIAMS MICHAEL IAN; ARENT FOX LLP; FRIEDMAN MARK

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

33) Family number: 4934901 (US4916004A)

Title: CEMENT BOARD HAVING REINFORCED EDGES

Abstract: A cement board having bare surfaces and a mesh of reinforcing fibers underlying the top, bottom, and longitudinal edge surfaces is made continuously on an improved apparatus which comprises a pair of edger rails which slidably rest on a conveyor belt and define the path of the cement board being made on the conveyor belt and a means for folding and pressing outer margins of the bottom mesh into the edge surfaces and the top surface.

Classifications:

International (IPC 8-9): B28B1/30 B28B1/52 B28B23/00 B28B23/02
B32B13/02 B32B3/04 B32B5/14 E04C2/04 E04C2/06

E04F13/14 (Advanced/Invention);

B28B1/30 B28B1/52 B28B23/02 B32B3/04 E04C2/04

E04F13/14 (Advanced/Non-invention):

B28B1/30 B28B1/52 B28B23/00 B28B23/02 B32B13/00 B32B3/04

B32B5/14 E04C2/04 E04C2/06 E04F13/14 (Core/Invention):

B28B (Subclass/Invention)

International (IPC 1-7): B28B1/30 B28B1/52 B28B23/02 B28B23/18 B28B3/00 B32B13/02 B32B23/02 B32B3/04 B32B3/18 B32B5/14 E04C2/00 E04C2/04 E04C2/06 E04F13/14

CPC: E04C2/06 B28B23/0006 Y10T428/24124 Y10T428/24777 Y10T428/24785

European: B28B23/00A E04C2/06

US: 156/348 156/40 156/42 428/113 428/192 428/193 428/247 428/251 428/255 428/273 428/703

Family:

Publication number	Publication date	Application number	Application date
AT105233 E	19940515	AT19870901221T	19870128
AU198770215 A1	19870909	AU19870070215	19870128
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NO874345 A0	19871019	NO19870004345	19871019
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US5221386 A	19930622	US19890335020	19890407
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Priority:

US19860831706 19860220 CA19870528059 19870123 AU19870070215 19870128
EP19870901221 19870128 JP19870501222 19870128 WO1987US00155 19870128
US19880290841 19881227 US19890335020 19890407

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): UNITED STATES GYPSUM CO ; YUU ESU JII CORP ; USG CORP

Assignee(s): UNITED STATES GYPSUM CO LIBERTYVILLE ILL US ; WENZLOW LUKASCH LUDWIG ; UNITED STATES GYPSUM CO CHICAGO ILL ; UNITED STATES GYPSUM CO CHICAGO ILL US ; UNITED STATES GYPSUM COMPANY ; ENSMINGER ROBERT P ; MCCLEARY ROBERT E

Inventor(s): (std): ENSUMINGAA ROBAATO PIIRU ; LUDWIG WENZLOW LUKASCH ; MAKURIARII ROBAATO ERIOTSUTO ; MCCLEARY ROBERT E ; ENSMINGER ROBERT P ; ROBERT E MCCLEARY ; ROBERT P ENSMINGER ; UENZURO RUKATSUSHU RUDOITSUGU ; WENZLOW LUKASCH LUDWIG ; UENZUROU RUKATSUSHIYU RUDOUITS ; MCCLEARY ROBERT ELLIOT ; MCCLEARY ROBERT ; ENSMINGER ROBERT PEEL ; ENSMINGER ROBERT

Inventor(s): ENSMINGER ROBERT PEEL CARMAN IL 61425 US ; MCCLEARY ROBERT ELLIOT GENEVA IL 60134 US ; UENZUROU RUKATSUSHIYU RUDOUITSUGU ; WENZLOW LUKASCH LUDWIG DEERFIELD IL 60015 ; WENZLOW LUKASCH LUDWIG DEERFIELD IL 60015 US ; ROBERT PEEL ENSMINGER ; ROBERT ELLIOT MCCLEARY ; ENSMINGER ROBERT PEEL CARMAN IL 61425 ; MCCLEARY ROBERT ELLIOT GENEVA IL 60134

Agent(s): GRIFFITH HACK; MACRAE AND CO

Designated states: AT AU BE DE DK FI FR IT JP NL NO SE

34) Family number: 30347954 (US2004040474A)

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Title: VERY FAST SETTING CEMENTITIOUS COMPOSITION

Abstract: Extremely fast setting of cementitious compositions for producing cement-based products such as cement boards is made possible by adding an alkanolamine to a hydraulic cement such as portland cement, and forming a slurry with water under conditions that provide an initial slurry temperature of at least 90 degrees Fahrenheit Use of alkanolamine under conditions disclosed herein allows an extremely rapid setting of the cementitious composition. Additional reactive materials may be included such as high alumina cement, calcium sulfate and a pozzolanic material such as fly ash. The extremely fast rapid set permits rapid production of cementitious products.

Classifications:

International (IPC 8-9): C04B C04B103/12 C04B18/08 C04B18/14
C04B22/08 C04B22/10 C04B22/14 C04B24/06 C04B24/12
C04B28/02 C04B28/04 C04B28/06 C04B7/32 (Advanced/Invention);
C04B103/12 (Advanced/Non-invention);
C04B18/04 C04B22/00 C04B24/00 C04B28/00
C04B7/00 (Core/Invention)

International (IPC 1-7): C04B16/00 C04B18/08 C04B18/14
C04B22/08 C04B22/10 C04B22/14 C04B24/00 C04B24/06
C04B24/12 C04B28/04 C04B7/00 C04B7/32

CPC: Y02W30/92 Y02W30/94 C04B28/04 C04B28/06 C04B2103/12

European: C04B28/04 C04B28/06 M04B103/12

US: 106/695 106/695S 106/708 106/708S 106/727 106/781
106/781S 106/808 106/819 106/823

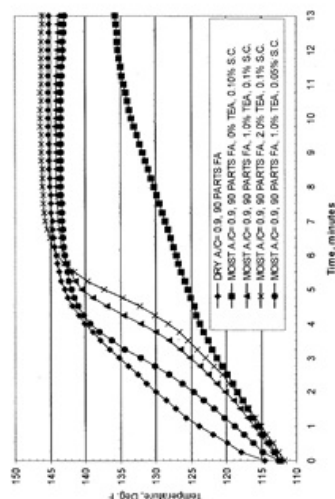


Fig. 1

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HK1075447 A3	20051216	HK20050109651	20051031
JP2005537208 T2	20051208	JP20040532594T	20030710
US2004040474 AA	20040304	US20030414686	20030416
US6869474 BB	20050322	US20030414686	20030416
WO04020359 A1	20040311	WO2003US21565	20030710

Priority:

US20020407203P 20020829 US20030414686 20030416 EP20030791571 20030710
 WO2003US21565 20030710

Probable Assignee: UNITED STATES GYPSUM CO**Assignee(s):** (std): DUBEY ASHISH ; PEREZ PENA MARIANELA ; UNITED STATES GYPSUM CO**Assignee(s):** UNITED STATES GYPSUM CO 125 SOUTH FRANKLIN STREET CHICAGO ; UNITED STATES GYPSUM CO CHICAGO ; UNITED STATES GYPSUM COMPANY**Inventor(s):** (std): DUBEY ASHISH ; PEREZ PENA MARIANELA**Inventor(s):** PEREZ PENA MARIANELA GRAYSLAKE ; DUBEY ASHISH GRAYSLAKE ; MARIANELA PEREZ PENA ; ASHISH DUBEY**Agent(s):** MARKS AND CLERK LUXEMBOURG LLP; FINDLAY ALICE ROSEMARY; JOHNSON STOKES AND MASTER 19TH FLOOR PRINCE S BUILDING 10 CHATER ROAD CENTRAL; JENKENS AND GILCHRIST; JOHN M; DAVID F**Designated states:** DE FR GB**35) Family number: 29550960 (US5683635A)**

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Title: Method for preparing uniformly foamed gypsum product with less foam agitation

Abstract: The invention provides an improved method for preparing foamed gypsum products. The invention can utilize a single mixing chamber and significantly improve the efficiency of foaming agent usage. In the method of the invention the point of insertion of aqueous foam into calcined gypsum slurry is positioned such that the foam is agitated less than the calcined gypsum to thereby minimize destruction of the foam while still uniformly dispersing the foam in the calcined gypsum slurry. This is accomplished, for example, by locating an inlet for foam closer to the discharge outlet of a slurry mixing chamber than the location of the inlet for calcined gypsum or by locating the foam inlet in a discharge conduit connected to the discharge outlet of the slurry mixing chamber.

Classifications:**International (IPC 8-9):** B28B19/00 B28C5/12 B29C65/00 B32B5/20

C04B11/024 C04B11/028 C04B24/16 C04B28/14

C04B38/10 (Advanced/Invention);

C04B103/48 C04B111/40 C04B38/10 (Advanced/Non-invention);

B28B19/00 B28C5/00 C04B11/00 C04B24/00 C04B28/00

C04B38/10 (Core/Invention)

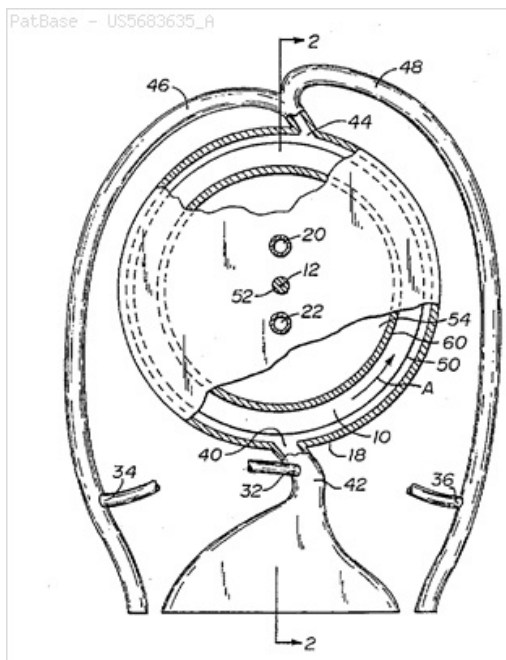
International (IPC 1-7): B01F17/02 B01F17/16 B28B1/50 B28B19/00

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C04B11/024 C04B11/028 C04B111/40 C04B24/16 C04B28/14

C04B38/10 C04B41/00

CPC: B28B19/0092 B28C5/1269 C04B28/14 C04B211/0062



Family:

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AT258491 E	20040215	AT19960945004T	19961218
AU199713471 A1	19970717	AU19970013471	19961218
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CA2213499 AA	19970820	CA19962213499	19961218
CA2213499 C	20050301	CA19962213499	19961218
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CN1175922 A	19980311	CN19961092104	19961218
DE69631414 D1	20040304	DE19966031414	19961218
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EP0810920 A1	19971210	EP19960945004	19961218
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EP0810920 B1	20040128	EP19960945004	19961218
ID19660 A	19980723	ID19970002933	19970822
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KR100464464 B1	20050613	KR19970705904	19970822
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MX9706303 A1	19980628	MX19970006303	19970819
MX9706303 A1	19980630	MX19970006303	19970819
PL187374 B1	20040630	PL19960321861	19961218
PL321861 A1	19971222	PL19960321861	19961218
US5683635 A	19971104	US19950577367	19951222
WO9723337 A1	19970703	WO1996US20550	19961218

Priority:

US19950577367 19951222 WO1996US20550 19961218

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): UNITED STATES GYPSUM CO ; UNITED STATES GYPSUM CO ; UNITED STATES GYPSUM COMPANY

Assignee(s): UNITED STATES GYPSUM CO CHICAGO ; SUCECH STEVEN W ; BUSTER KIP R ; HINSHAW STEWART E ; NEMETH BRADLEY S

Inventor(s): (std): BUSTER KIP R ; BUSTER R ; HINSHAW E ; HINSHAW STEWARD E ; HINSHAW STEWART E ; NEMETH BRADLEY S ; NEMETH S ; SUCECH STEVEN W ; SUCECH W ; STEWART E HINSHAW ; STEWARD E HINSHAW ; STEVEN W SUCECH ; KIP R BUSTER ; BRADLEY S NEMETH

Agent(s): GRIFFITH HACK; MARKS AND CLERK

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CN CU CZ DE DK EE ES FI FR GB GE GR HU IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG UZ VN

36) Family number: 30141977 (US2002045074A)

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Title: GYPSUM-CONTAINING PRODUCT, AND COMPOSITION, AND METHOD FOR PRODUCING A GYPSUM-CONTAINING PRODUCT

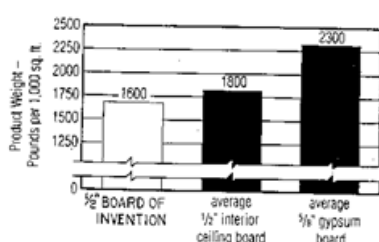
Abstract: The invention provides a set gypsum-containing product having increased resistance to permanent deformation and a method for preparing it comprising forming a mixture of a calcium sulfate material, water, and an appropriate amount of one or more enhancing materials chosen from condensed phosphoric acids, each of which comprises 2 or more phosphoric acid units; and salts or ions of condensed phosphates, each of which comprises 2 or more phosphate units. The mixture is then maintained under conditions sufficient for the calcium sulfate material to form a set gypsum material.

Classifications:

International (IPC 8-9): B28B B28B11/00 B28B11/08 B32B13/00 B32B37/12 B32B37/14 C01B25/14 C04B C04B103/00 C04B11/00 C04B11/06 C04B11/26 C04B12/02 C04B14/00 C04B14/18

C04B14/38 C04B16/02 C04B16/04 C04B2/10 C04B22/16 C04B24/38
C04B28/14 C04B28/34 C04B38/10 C04B41/00 C04B41/52
C04B41/70 E04B1/04 E04C2/04 (Advanced/Invention);
B32B13/00 C04B11/00 C04B11/50 C04B11/52 C04B11/54
C04B14/10 C04B14/18 C04B16/02 C04B22/12 C04B22/16
C04B24/16 C04B24/26 C04B24/38 C04B28/14
E04C2/04 (Advanced/Non-invention);
B28B11/00 B28B11/08 B32B13/00 C04B11/00 C04B22/00
C04B22/16 C04B28/00 C04B28/14 C04B41/45 C04B41/60 E04B1/02
E04C2/04 (Core/Invention);
C04B22/00 (Core/Non-invention);
C04B (Subclass/Invention);
B28B (Subclass/Non-invention)
International (IPC 1-7): B05D1/00 B28B11/00 B32B 13/00 B32B1/04
B32B13/00 B32B13/02 B32B3/18 C04B11/00 C04B11/024
C04B11/06 C04B11/26 C04B11/50 C04B22/16 C04B28/14
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E04C2/04 C04B38/10 C04B14/185 C04B24/26 C04B2103/44
C04B24/32 C04B14/46 C04B14/38 C04B22/004 C04B24/383
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Y10T428/31971 Y02W30/97
European: C04B22/16 C04B28/14 C04B28/14H4 C04B41/00V
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M04B11/52 M04B11/54
US: 106/677 106/680 106/680S 106/690 106/690S 106/691
106/691S 106/772 106/772S 106/776 106/778 106/779 106/779S
106/785 106/786 106/819 106/823 156/325 156/325S 156/39
156/42 156/43 156/44 264/333 366/342 366/342S 423/303
423/303S 423/314 427/427 427/427S 427/445 427/445S 428/332
428/532 428/532P 428/58 428/58P 428/697 428/697S 428/70
428/703 428/703P 428/703S 428/704 5/234.4 52/344 524/5

FIG.1



Family:

Publication number	Publication date	Application number	Application date
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AR016861 AA	20010801	AR1998P104177	19980824
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AT517070 E	20110815	AT19980943276T	19980821
AU199886747 A1	19990308	AU19980086747	19980730
AU199891105 A1	19990308	AU19980091105	19980821
AU199932856 A1	20000221	AU19990032856	19990218
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AU209932856 A1	20000221	AU19990032856	19990218
AU747208 B2	20020509	AU19980091105	19980821
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CA2268105 AA	19990408	CA19982268105	19980821
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CA2338941 AA	20010130	CA19992338941	19990218
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CN100354227 C	20071212	CN19998010893	19990218
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ES2368617 T3	20110516	ES19980943276T	19980821
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HK1085994 A1	20060908	HK20060107417	20060630
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HK1117494 A1	20090116	HK20080107763	20080715
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Priority:

US19970916058 19970821	US19980815874 19980730	WO1998US15874 19980730
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US20120630125 20120928	US20130934028 20130702	

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): GROZA BRENT E ; HENKELS PAUL J ; JONES FREDERICK T ; JUNAJTED STEJTS DZHIPSUM KOMPA ; MLINAC RAYMOND J ; SUCECH STEVEN W ; UNITED STATES GYPSUM CO ; US GYSUM CO ; YU QIANG ; US GYSUM COMPANY

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Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZW

37) Family number: 44967977 (US2010143682A)

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Title: MAT-FACED CEMENTITIOUS ARTICLE AND METHOD FOR PREPARING SAME

Abstract: A cementitious composite article comprising (a) a cementitious core, (b) a skim coat cementitious layer in contact with the cementitious core having a density greater than the cementitious core, and (c) a fibrous mat comprising (i) microfibers and (ii) continuous fibers having a length of about 0.6 cm or more, wherein the fibrous mat comprises an inner surface in contact with the skim coat cementitious layer; as well as a method for manufacturing same.

Classifications:

International (IPC 8-9): B05D1/36 B05D1/38 B23B7/00 B32B B32B13/14 B32B17/00 B32B37/02 B32B7/00 B32B7/02

C04B14/42 C04B28/02 C04B28/14 (Advanced/Invention);

B32B13/14 B32B17/00 B32B7/00 (Advanced/Non-invention);

B05D1/36 B05D1/38 B32B7/00 B32B7/02 (Core/Invention);

B32B (Subclass/Invention)

International (IPC 1-7): B32B7/02

CP: Y10T428/24992 C04B28/14 C04B2111/00413 C04B2111/00612 Y02W30/92 B32B5/022 B32B5/024 B32B7/02

B32B27/20 B32B2262/101 B32B2307/3065 B32B2307/4026 B32B2307/7145 B32B2307/7265 B32B2307/73 B32B2419/06

E04C2/043 B32B13/14

European: B32B13/14 B32B5/26 C04B28/14 E04C2/04C M04B111/00P35 M04B111/00T6

US: 427/359 427/359S 427/403 427/403S 428/218 428/218P

Family:

Publication number	Publication date	Application number	Application date
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Priority:

US20080109886P 20081030 US20090608619 20091029 WO2009US62540 20091029

Probable Assignee: UNITED STATES GYPSUM CO

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Assignee(s): UNITED STATES GYPSUM COMPANY

Inventor(s): (std): EGBRECHT DICK C ; ENGBRECHT DICK C ; FEDORIS JOSEPH J ; IMMORDINO SALVATORE C ; IMMORDINO SALVATORE C JR ; LIU QINGXIA ; NELSON CHRISTOPHER R ; QINGXIA LIU ; ROELFS DONALD ; ROELFS DONALD L ; ROHRBAUGH WAYNE J ; SHAKE MICHAEL P

Inventor(s): WAYNE J ROHRBAUGH ; SALVATORE C IMMORDINO ; SALVATORE IMMORDINO ; SHAKE MICHAEL ; ROHRBAUGH WAYNE ; MICHAEL P SHAKE ; NELSON CHRISTOPHER ; JOSEPH J FEDORIS ; IMMORDINO SALVATORE ; ENGBRECHT DIRK C ; FEDORIS JOSEPH ; ENGBRECHT DICK ; CHRISTOPHER R NELSON ; DICK C ENGBRECHT ; DONALD L ROELFS

Agent(s): GRIFFITH HACK; MOFFAT AND CO; DANILLO ROMERO RAAD; CARPMAEL ROBERT MAURICE CHARLES; LEYDIG VOIT AND MAYER LTD; GASE JOHN L ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

38) Family number: 51426979 (US2012168527A)

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Title: SLURRY DISTRIBUTION SYSTEM AND METHOD

Abstract: A slurry distributor for use in a continuous manufacturing process includes an inlet opening and a shaped duct adapted to receive a flow of slurry provided at the inlet opening. The shaped duct has a parabolic guide surface adapted to redirect the flow of slurry. An outlet opening in fluid communication with the shaped duct is adapted to discharge the flow of slurry from the slurry distributor.

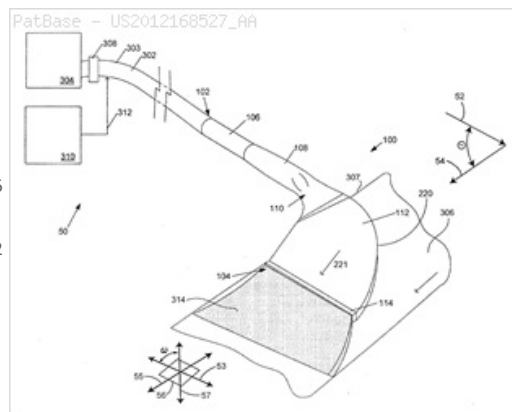
Classifications:

International (IPC 8-9): A61K39/395 A61K45/06 A62C2/08 B01F15/02 B01F5/00 B01J4/00 B05B1/00 B05B1/04 B05B1/26 B05B15/02 B05B17/00 B05B7/32 B05C B05C11/10 B05C3/02 B05C5/00 B05C5/02 B05D1/26 B05D1/28 B05D5/00 B05D7/24 B26B19/00 B28B B28B1/30 B28B1/50 B28B13/02 B28B17/00 B28B19/00 B28B5/00 B28B7/00 B28B7/16 B28C5/00 B28C5/08 B28C5/46 B28C7/04 B28C7/12 B28C7/14 B28C7/16 B29B7/74 B29B7/76 B29C33/30 B29C33/48 B29C37/00 B29C39/02 B29C39/26 B29C41/14 B29C41/38 B29C41/42 B29C47/00 B29C47/08 B29C47/16 B29C47/70 B5C5/02 C04B12/00 C07K16/32 E03B1/00 E04C2/02 F16K7/06 F16L F16L41/00 F16L41/02 F16L43/00 F16L47/32 F16L55/24 F17D1/08 (Advanced/Invention); B28B19/00 B28C5/00 (Advanced/Non-invention); B05C5/02 B28B19/00 F16L41/02 F16L43/00 (Core/Invention)

CPC: F17D1/08 B28C5/00 B28C5/003 F16L43/00 B05C11/10 B29C33/30 B29C33/44 B29C33/448 B29C33/48 B29C33/50 B29C33/505 B29C37/0017 B29C41/14 B29C33/0033 B29C33/485 B29C37/0014 B29C41/386 B29C41/42 B29L2031/757 B28C5/0881 Y10T137/87652 B05C5/0262 B29B7/74 B29B7/76 F16L41/023 Y10T137/0318 Y10T137/87571 B05D1/28 B05C5/0254 B28B19/0092 B05C5/0245 B05C5/0225 B05C5/02 Y10T137/85938

European: B28B19/00K

US: 1/1 106/638 118/412 137/1 137/1S 137/561A 137/602 137/602S 137/896 222/1 222/145.6 239/1 239/1P 239/303 239/303S 239/601 239/601S 264/301 366/1 366/10 366/177.1 366/177.100P 366/2 366/3 366/30 366/6 425/275 427/286 427/427



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Priority:

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US20170483585	20170410				

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): SONG DAVID ; NELSON CHRIS ; RAGO WILLIAM ; LORING CURT ; SCHENCK RONALD E ; NELSON CHRISTOPHER ROBERT ; RAGO WILLIAM J ; SONG WAIXIN DAVID ; LORING CURTIS B ; CHAN CESAR ; LEE CHRIS C ; LI ALFRED ; UNITED STATES GYPSUM CO ; WITTBOLD JAMES ; SONG WEIXIN DAVID ; WITTBOLD JAMES R ; UNITED STYATES GYPSUM CO ; SONG WEIXIN D ; YUNAJTED STEJTS DZHIPSAM KOMPANI ; YUNAJTED STEJTS DZHIPSAM KOMPANI

Assignee(s): CARRAZCO LUIS ; UNITED STATES GYPSUM CO CHICAGO ; LI ALFRED C ; PUNATI NAVEEN ; UNITED STATES GYPSUM COMPANY

Inventor(s): (std): SONG DAVID ; WITTBOLD JAMES ; NELSON CHRIS ; SONG WEIXIN D ; LI IFRED ; RAGO BILL ; PUNATI NAVEEN ; CARRAZCO LUIS ; CURT LORING ; JAMES WITTBOLD ; CESAR CHAN ; ALFRED LI ; CHRIS NELSON ; CHRIS C LEE ; RONALD E SCHENCK ; WEIXIN DAVID SONG ; WILLIAM RAGO ; C CHEN ; CEN CESAR ; WILLIAM J RAGO ; ALFRED C LI ; NAVEEN PUNATI ; LUIS CARRAZCO ; LORING KURT ; LI KRIS K ; UITTBOLD DZHEJMS ; SONG VEJSIN DEJVID ; SHENK RONALD E ; RAGO UILYAM ; CHAN SEZAR ; WLLAM J RAGO ; ALFRED C L ; JAMES WTTBOLD ; CHRS C LEE ; WLLAM RAGO ; NAVEEN PUNAT ; LUS CARRAZCO ; RAGO UILYAM DZH ; UITTBOLD DZHEJMS ; LI ALFRED S ; LI KRIS S ; KARRASKO LUIS ; SONG WEIXIN ; LEE CHRISTOPHER C ; NELSON CHRISTOPHER ; SONG WEIXIN DAVID ; LI ALFRED C ; LORING CURT ; RAGO WILLIAM ; LORING CURTIS B ; LEE CHRIS C ; SONG WAIXIN DAVID ; LI ALFRED ; RAGO WILLIAM J ; NELSON CHRISTOPHER ROBERT ; SCHENCK RONALD E ; WITTBOLD JAMES R ; CHAN CESAR

Inventor(s): LEE CHRIS C MT PROSPECT ; NELSON CHRIS LINDENHURST ; SCHENCK RONALD E VALPARAISO ; LORING CURT VALPARAISO ; DAVID WEIXIN SONG ; DAVID SONG ; RAGO WILLIAM GURNEE ; CHAN CESAR LIBERTYVILLE ; SONG WEIXIN DAVID VERNON HILLS ; WITTBOLD JAMES DES PLAINES ; LEE CHRIS C DEERFIELD ; LI ALFRED NAPERVILLE

Agent(s): JAMES AND WELLS INTELLECTUAL PROPERTY; MADDERNS PATENT AND TRADE MARK ATTORNEYS; MOFFAT AND CO; JOHANSSON AND LANGLOIS LTDA; MARKS AND CLERK LUXEMBOURG LLP; SCHUETTE HARTMUT; BSB INTELLECTUAL PROPERTY LAW; BSB PATENTANWAELTE SCHUETTE AND ENGELN PARTNERSCHAFT MBB; RIZZO SERGIO; ABU GAZALEH INTELLECTUAL PROPERTY LLC; BUDI RAHMAT SH; BUDI RAHMAT; RYBINOJ NA; NA RYBINOJ; NARYBINOJ; TOLGA CAYLAK; LEYDIG VOIT AND MAYER LTD; PHILIP T; PRADIP K; PETTI PHILIP T; SAHU PRADIP K; FILBIN PAUL ET AL; HASAN SALIM ET AL

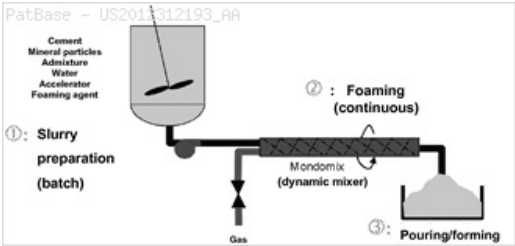
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

39) Family number: 49461994 (US2012312193A) © PatBase

Title: FOAMED CONCRETE

Abstract: A foamed concrete having a density from 100 to 800 kg/m3 including by mass relative to the total mass of the concrete: a cement; water; from 0.01 to 5 percent of a water-reducing agent, plasticizer or superplasticizer; from 0.45 to 5 percent of a foaming agent relative to the amount of water; from 0.01 to 5 percent of a water-soluble calcium salt; inorganic particles from 0.1 to 300 micro m in size; the ratio of foaming agent to calcium salt being from 0.3 to 0.8; excluding foamed concretes including 10 percent or more by mass of slag.

Classifications:
International (IPC 8-9): B32B13/02 C04B16/00 C04B22/08 C04B24/16 C04B26/00 C04B28/00 C04B28/04 C04B28/06 C04B28/10 C04B28/30 C04B38/02 C04B38/10 C04B7/02 C04B7/32 (Advanced/Invention); B82Y30/00 (Advanced/Non-invention)
CPC: C04B2111/0062 Y10T428/249986 Y02W30/92 Y02W30/94 C04B40/0039 C04B28/04 C04B28/06 C04B28/065 C04B28/30 C04B2111/40 C04B2111/00103 C04B28/105 C04B2111/00612
European: C04B28/04 C04B28/06 C04B28/06B C04B28/10M C04B28/30 C04B40/00D4 M04B111/00M9 M04B111/00T6B M04B111/40
US: 106/672 106/676 106/678 106/679 106/682 106/713 106/724 106/737 106/819 264/333 264/42 428/317.9 977/773



Family:

Publication number	Publication date	Application number	Application date
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Priority:
FR20100051157 20100218 FR20100056077 20100723 FR20100056079 20100723
WO2011EP52311 20110216 WO2011EP52312 20110216 WO2011FR50330 20110216

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PILLSBURY WINTHROP SHAW PITTMAN LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU
CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL
IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT
MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST
SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW