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D201710)

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Database: EPODOC

Records: 105.504.655

Terms: 1.470.054.672

Occurrences: 20.730.799.230

Last Update: 20170926

[EPODOC: SS 1] wallboard and gypsum

Results in EPODOC 1.123

[SS 2] 1 and resistant and fire

Results in EPODOC 32

[SS 3] 2 and water

Results in EPODOC 7

[SS 4] ..li

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PN - [AU2011202916](#) A1 20110707

PR - AU20110202916 20110617

AP - AU20110202916 20110617

DT - I

CCI - [C04B28/14](#)

CLC - [C04B28/14](#), [C04B7/02](#), [C04B14/42](#),
[C04B18/146](#), [C04B20/002](#) , INV

CCA - [C04B2111/0062](#) ; [C04B2111/28](#) ; [Y02W30/94](#)

PA - UNITED STATES GYPSUM CO

TI - Non-combustible reinforced cementitious
lightweight panels and metal frame system for
a **fire** wall and other **fire** resistive assemblies

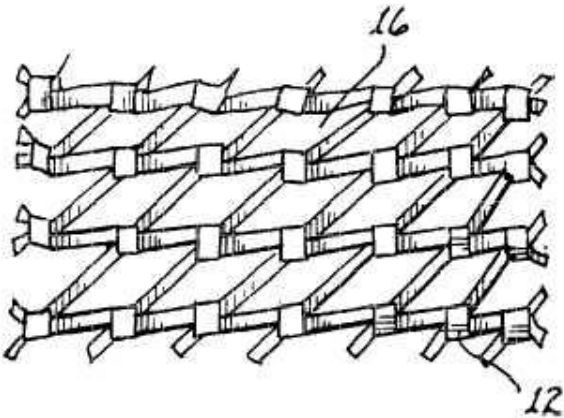
AB - The present invention relates to a non-
combustible **fire**-wall system for construction
located in a building structure as a **fire** resistive
building assembly comprising: a first shear
diaphragm comprising a first plurality of
reinforced, lightweight, dimensionally stable
cementitious panels;a first light gauge cold
formed metal framing comprising cold formed
metal framing elements; and a second

diaphragm comprising a second plurality of panels selected from the group consisting of Type X **fire** rated **gypsum wallboard** panels and reinforced, lightweight, dimensionally stable cementitious panels, each of the panels of the second plurality having an opposed first side and second side; a second framing, the second framing comprising studs between the first diaphragm and the second diaphragm; and break away fasteners; the cementitious panels of the first and second diaphragm having a density of 65 to 90 pounds per cubic foot and capable of resisting shear loads when fastened to the first framing and comprising a continuous phase resulting from the curing of an aqueous mixture comprising **water** and optional superplasticizer and, on a dry basis, 49 to 68 weight % a blend of reactive powder, 23 to 36.1 weight % lightweight filler particles comprising uniformly distributed ceramic microspheres, and 5 to 20 weight % alkali-**resistant** glass fibers, the continuous phase being uniformly reinforced with the alkali-**resistant** glass fibers, wherein the glass fibers are monofilaments having a diameter of about 5 to 25 microns (micrometers) and a length of about 0.25 to 3 inches (6.3 to 76 mm), the lightweight filler particles having a particle specific gravity of from 0.02 to 1.00 and an average particle size of about 10 to 500 microns (micrometers), wherein the reactive powders comprise: 45 to 75 wt. % calcium sulfate alpha hemihydrate, 20 to 40 wt % Portland cement, 0.2 to 3.5 wt. % lime, and 5 to 25 wt. % of an active pozzolan comprising silica fume, wherein, the system is a **fire** wall and a load bearing shear wall for carrying shear load and axial load when exposed to **fire**, and wherein, the structural cement panels of the first diaphragm have opposed first and second sides, and are fastened on the first metal framing the first side of the structural panels of the first diaphragm supported on the first metal framing; wherein each of a plurality of the break away fasteners are attached to both the second side of the structural panels of the first diaphragm and to a said stud of the second frame; wherein each panel of the second plurality of panels of the second diaphragm has an opposed first wall and a second wall, the first wall of the panels of the second diaphragm being opposed to the second wall of panels of the first diaphragm, wherein the panels of the second diaphragm are attached to the studs of the second framing such that the first wall of the panels of the second diaphragm opposes the studs; the first diaphragm being between the first metal

framing and the second diaphragm, and the break away fasteners being between the first diaphragm and the second diaphragm; wherein the cementitious panels of the first and second diaphragm have a thickness of about 3/8 to 1 1/2 inches, and wherein, the structural cement panels of the first diaphragm have opposed first and second sides, and are fastened on the first metal framing with metal screws with winged drillers, the winged drillers are located above the point and below the threads of the screw and protruding laterally from a shaft of the screw, the first side of the structural panels of the first diaphragm supported on the first metal framing. 270

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PN	- US6054088 A 20000425
PR	- US19970917088 19970825; US19900633940 19901226; US19880280317 19881206
AP	- US19970917088 19970825
DT	- **
CT	- STSE (A) US13775 A 18551113 []; US312864 A 18850224 []; US600212 A 18980308 []; US862440 A 19070806 [] (BRADFORD OSCAR [US]); US884714 A 19080414 [] (NAT METAL FABRIC COMPANY [US]); US930349 A 19090810 [] (CLARK NORRIS ELMORE [US]); US1439954 A 19221226 [] (EMERSON JOSEPH W); US1681493 A 19280821 [] (JAY D MILLER); US1694542 A 19281211 [] (HEDDEN VERN D); US1905541 A 19330425 [] (WIENER JOHN A, et al); US2105324 A 19380111 [] (FREDERICK O ANDEREGG); US2108761 A 19380215 [] (HOMASOTE COMPANY); US2183113 A 19391212 [] (WILLARD BENNETT FRANK); US2268965 A 19420106 [] (ARTUR SCHUMANN); US2300137 A 19421027 [] (FIR TEX INSULATING BOARD CO); US2340370 A 19440201 [] (DOYLE ROBERT A); US2526066 A 19501017 [] (CERTAIN TEED PROD CORP); US2626864 A 19530127 [] (GREAT LAKES CARBON CORP);



[US2634207](#) A 19530407 [] (GREAT LAKES CARBON CORP);
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[US2705198](#) A 19550329 [] (SEYBOLD HERMANN G);
[US2839812](#) A 19580624 [] (BERLINER HENRY A);
[US2853394](#) A 19580923 [] (UNITED STATES GYPSUM CO);
[US3001907](#) A 19610926 [] (WOOD CONVERSION CO);
[US3095347](#) A 19630625 [] (JOHNS MANVILLE PERLITE CORP);
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[US3379609](#) A 19680423 [] (UNITED STATES GYPSUM CO);
[US3437457](#) A 19690408 [] (HUYCK CORP);
[US3454456](#) A 19690708 [] (UNITED STATES GYPSUM CO);
[US3459026](#) A 19690805 [] (STANRAY CORP);
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[US3616173](#) A 19711026 [] (GEORGIA PACIFIC CORP);
[US4043862](#) A 19770823 [] (EUCATEX S A IND E GOMERCIO);
[US4089090](#) A 19780516 [] (AGA AB);
[US4132555](#) A 19790102 [] (CAPE BOARDS & PANELS LTD);
[US4149649](#) A 19790417 [] (EXPLOSAFE AMERICA);
[US4185437](#) A 19800129 [] (OLYMPIAN STONE);
[US4242407](#) A 19801230 [] (STAMICARBON [NL]);
[US4249669](#) A 19810210 [] (EXPLOSAFE AMERICA [CA]);
[US4265317](#) A 19810505 [] (KNECHT WERNER);
[US4267136](#) A 19810512 [] (STAMICARBON);
[US4299872](#) A 19811110 [] (US NAVY);
[US4345001](#) A 19820817 [] (STAMICARBON);

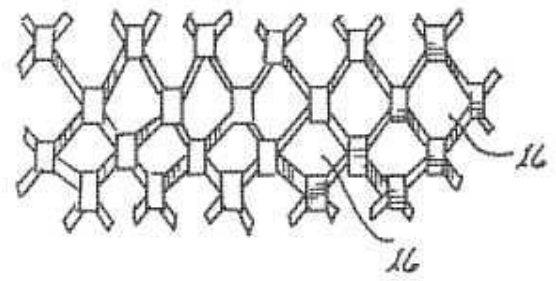
[US4361190](#) A 19821130 [] (VULCAN IND PACKAGING);
[US4454702](#) A 19840619 [] (BONILLA LUGO JUAN, et al);
[US4557961](#) A 19851210 [] (BOEING CO [US]);
[US4557973](#) A 19851210 [] (UNITED STATES GYPSUM CO [US]);
[US4564544](#) A 19860114 [] (NAT GYPSUM CO [US]);
[US4621397](#) A 19861111 [] (SCHRENK HANNES [AT]);
[US4647515](#) A 19870303 [] (ALPHACRETE CONSTR LINING [GB]);
[US4767491](#) A 19880830 [] (MOPLEFAN SPA [IT]);
[US4785602](#) A 19881122 [] (CORPORACION MARAMAR C A [VE]);
[US4793892](#) A 19881227 [] (GLASCRETE INC [US]);
[US4816091](#) A 19890328 [] (MILLER ROBERT G [US]);
[US4828932](#) A 19890509 [] (UNIX CO [JP], et al);
[US4836472](#) A 19890606 [] (SUTTER R FRANK [US]);
[US4923664](#) A 19900508 [] (FRAUNHOFER GES FORSCHUNG [DE]);
[US5143670](#) A 19920901 [] (ISOREN ANSTALT [LI]);
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[US5338499](#) A 19940816 [] (GERESTEK OY [FI]);
[US5507427](#) A 19960416 [] (BURGETT LEO H [US]);
[EP0256239](#) A1 19880224 [] (EKSPLO KONTROL PATLAMAYI ONLEY [TR]);
[DE2438595](#) A1 19760219 [] (HILLESHEIM HANS);
[DE2708434](#) A1 19780503 [] (HILLESHEIM HANS);
[JPH03230907](#) A 19911014 [] (KUBOTA KK);
[JPH0497835](#) A 19920330 [] (MISAWA HOMES CO);
[SU1766663](#) A1 19921007 [] (UNIV RIZHSKIY TECH [SU]);
[GB2067105](#) A 19810722 [] (TOYODA GOSEI KK)

CTNP	- [] Chesterman, Perluta, 1975, pp. 927 934 [] Ladoo et al, Perlita, 195, pp. 375 378 [] Chemical Abstracts, 101:115869m, Lightweight fire resistance [] Chemical Abstracts, 84:110644e, Light Gypsum Material
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CCI	- A62C3/06 ; B21D31/04 ; B21D31/046 ; B31D1/0031 ; B31D3/04 ; B31D5/0065 ; B65D81/02
CCA	- B31D2205/0023 ; B31D2205/0082 ; Y10S428/92 ; Y10S428/921 ; Y10T428/24347
TI	- Method of making a highly fire resistant construction board
AB	- A highly fire resistant construction board is produced by embedding a sheet of expanded metal net in a building board made from a water settable inorganic binder. In a preferred embodiment, the wallboard is made from a combination of gypsum , cement, and a particulate mineral filler such as perlite or vermiculite, and contains an embedded layer of expanded metal net made from a magnesium alloy.

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PN	- US5871857 A 19990216
PR	- US19900633940 19901226; US19880280317 19881206
AP	- US19900633940 19901226
DT	- **
CT	- STSE (A) US312864 A 18850224 [] ; US600212 A 18980308 [] ; US767723 A 19040816 [] (TERPENING FRANK W [US]); US869116 A 19071022 [] (KEASBEY & MATTISON COMPANY [US]); US884714 A 19080414 [] (NAT METAL FABRIC COMPANY [US]); US930349 A 19090810 [] (CLARK NORRIS ELMORE [US]); US1334796 A 19200323 [] (BEAVER COMPANY); US1439954 A 19221226 [] (EMERSON JOSEPH W); US1472956 A 19231106 [] ; US1528310 A 19250303 [] (JULIAN STRZYCZKOWSKI); US1694542 A 19281211 [] (HEDDEN VERN D) ; US1905541 A 19330425 [] (WIENER JOHN A, et al); US2108761 A 19380215 [] (HOMASOTE COMPANY); US2183113 A 19391212 [] (WILLARD BENNETT FRANK); US2300137 A 19421027 [] (FIR TEX INSULATING BOARD CO); US2340370 A 19440201 [] (DOYLE ROBERT A); US2526066 A 19501017 [] (CERTAIN TEED

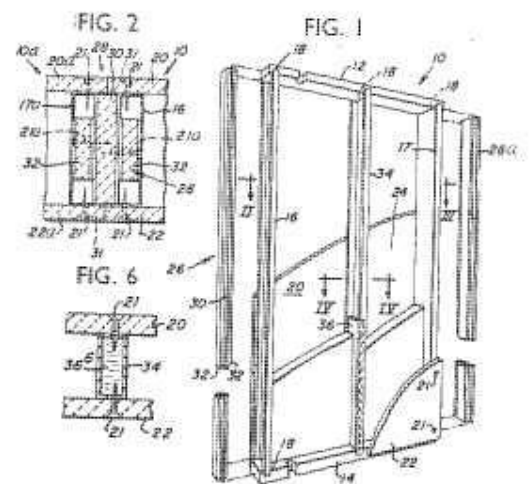


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[US2626864](#) A 19530127 [] (GREAT LAKES
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[US2634207](#) A 19530407 [] (GREAT LAKES
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[US2705198](#) A 19550329 [] (SEYBOLD
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[US2836863](#) A 19580603 [] (DENKER CHARLES
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[US2853394](#) A 19580923 [] (UNITED STATES
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[US2931751](#) A 19600405 [] (GLADDING
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[US3085037](#) A 19630409 [] (LINDSTAEDT
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[US3095347](#) A 19630625 [] (JOHNS MANVILLE
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[US3192098](#) A 19650629 [] (PHILLIPS JAMES
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[US3244632](#) A 19660405 [] (SCHULZ KURT W,
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[US3293725](#) A 19661227 [] (HUDSON
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[US3308597](#) A 19670314 [] (UNION CARBIDE
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[US3379609](#) A 19680423 [] (UNITED STATES
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[US3437457](#) A 19690408 [] (HUYCK CORP);
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[US3459026](#) A 19690805 [] (STANRAY CORP);
[US3465566](#) A 19690909 [] (STANRAY CORP);
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[US3616173](#) A 19711026 [] (GEORGIA PACIFIC
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[US3825465](#) A 19740723 [] (STOCK R);
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PANELS LTD);
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[US4249669](#) A 19810210 [] (EXPLOSAFE
AMERICA [CA]);
[US4265317](#) A 19810505 [] (KNECHT
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[US4267136](#) A 19810512 [] (STAMICARBON);
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[US4349398](#) A 19820914 [] (KEARNS EDWARD
C);

[US4361190](#) A 19821130 [] (VULCAN IND PACKAGING);
[US4454702](#) A 19840619 [] (BONILLA LUGO JUAN, et al);
[US4557961](#) A 19851210 [] (BOEING CO [US]);
[US4557973](#) A 19851210 [] (UNITED STATES GYPSUM CO [US]);
[US4564544](#) A 19860114 [] (NAT GYPSUM CO [US]);
[US4621397](#) A 19861111 [] (SCHRENK HANNES [AT]);
[US4767491](#) A 19880830 [] (MOPLEFAN SPA [IT]);
[US4785602](#) A 19881122 [] (CORPORACION MARAMAR C A [VE]);
[US4793892](#) A 19881227 [] (GLASCRETE INC [US]);
[US4816091](#) A 19890328 [] (MILLER ROBERT G [US]);
[US4828932](#) A 19890509 [] (UNIX CO [JP], et al);
[US4836472](#) A 19890606 [] (SUTTER R FRANK [US]);
[US5001017](#) A 19910319 [] (ALHAMAD SHAIKH G M Y [SA], et al);
[EP0256239](#) A1 19880224 [] (EKSPLO KONTROL PATLAMAYI ONLEY [TR]);
[GB2067105](#) A 19810722 [] (TOYODA GOSEI KK);
[GB554562](#) A 19430709 [] (JAMES BENNIE)

CTNP	- [] Chesterman, Perlita, 1975, pp. 927 934 [] Ladoo et a, Perlite, 1951, pp. 375 378 [] Chemical Abstracts, 101:115869m, Lightweight fire resistant panels [] Chemical Abstracts, 84:1106442e, Light Gypsum Material
CCI	- A62C3/06 ; B21D31/04 ; B21D31/046 ; B31D1/0031 ; B31D3/04 ; B31D5/0065 ; B65D81/02
CCA	- B31D2205/0023 ; B31D2205/0082 ; Y10S428/92 ; Y10S428/921 ; Y10T428/24347
TI	- Fire resistant construction board
AB	- A highly fire resistant construction board is produced by embedding a sheet of expanded metal net in a building board made from a water settable inorganic binder. In a preferred embodiment, the wallboard is made from a combination of gypsum , cement, and a particulate mineral filler such as perlite or vermiculite, and contains an embedded layer of expanded metal net made from a magnesium alloy.

AP	- GB19690029434 19690610
DT	- *
CCI	- E04B2/7409 ; E04B1/942
PA	- UNITED STATES STEEL CORP [US]
TI	- WALL CONSTRUCTION
AB	- 1277895 Partition walls; building panels UNITED STATES STEEL CORP 10 June 1969 [14 June 1968] 29434/69 Headings E1B and E1W A partition wall comprises a plurality of aligned panels 10 each including a pair of wallboards 20, 22 spaced apart by outwardly open channels 16, 17 along two opposite edges, which at each joint form a cavity in which a fire-resistant barrier member 30 is disposed to bridge the cavity in the transverse direction of the wall, and to opposite transversely extending faces of which carrier member, fire resistant spacer members 32 are secured, the spacer members 32 having less width measured transversely of the wall than the barrier member. The barrier member 30 and the spacer member 32 may be formed of gypsum wallboard . The wallboards 20, 22 are secured to the channels 16, 17 by fasteners 21 which may project into spaces defined by the spacer members. A channel shaped or hollow internal support member 34 receives a heat sink member 36 which controls the temperature rise of the fastener 21 which may be used to connect the panels to the support member. The heat sink may be formed of material, e.g. gypsum or cement containing water chemically bonded thereto, or may have water mechanically incorporated therein. A double partition wall Fig. 8 may be formed by a pair of walls, each constructed in accordance with the invention, the joints in a first of the pair of walls being staggered in relation to the joints in the second of the pair. The first and second walls of the pair may have interposed therebetween a filler wall board which is spaced from the first and second walls.



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PN	- EP0258064 A2 19880302
PNFP	- EP0258064 A3 19891018
PR	- US19870086820 19870821; US19860901239 19860828
AP	- EP19870307648 19870828
DT	- *; Rep
CT	- STSE (A3) DE3322067 A1 19841220 [Y] (RIGIPS GMBH [DE]); FR903137 A 19450925 [Y]; GB2026500 A 19800206 [A] (KATAFLOX PATENT);

	US2681863 A 19540622 [AD] (MICHELE CROCE, et al)
CCI	- C04B28/14 ; C04B11/00 ; C04B11/024 ; E04C2/043
CLC	- C04B28/14 , C04B20/0048 , C04B22/00 , C04B22/0013 , C04B40/0028 , INV - C04B28/14 , C04B14/303 , C04B20/0048 , C04B22/0013 , C04B40/0028 , INV - C04B28/14 , C04B14/06 , C04B20/0048 , C04B22/0013 , C04B40/0028 , INV - C04B28/14 , C04B12/04 , C04B20/0048 , C04B22/0013 , C04B40/0028 , INV - C04B11/024 , C04B11/032 , C04B20/0076 , INV
CCA	- C04B2111/00482 ; C04B2111/0062 ; C04B2111/00672 ; C04B2111/28
PA	- (A2) WINROC HOLDINGS LTD [CA]
TI	- (A2) High-strength, fire-resistant gypsum composition. - (A3) HIGH-STRENGTH, FIRE-RESISTANT GYPSUM COMPOSITION
AB	- (A2) A high-strength, fire-resistant composition containing calcium sulphate hemihydrate, a boron compound having fire-resistant properties including boric acid, anhydrous boric acid, sodium tetraborate decahydrate (borax) and sodium borate anhydrous, and aluminium and/or silicon compound including aluminium hydroxide, aluminium oxide and sodium aluminate and sodium silicate, silicon dioxide, silica gel and silicic acid, natural or synthetic fibres and water . Such compositions can be used in building materials such as wallboard , thermal insulation, fire breaks and soundproofing panels. More particularly the composition has greater strength and fire -resistance when compared to standard gypsum wallboard and fire related gypsum wallboard . The application of this composition in slurry form and the use of this composition for use in finishing joints between wallboard are also contemplated.

PN	- CN2250383Y Y 19970326
PR	- CN1996200557U 19960119
AP	- CN1996200557U 19960119
DT	- I
PA	- INST OF BUILDING ENGINEERING M [CN]
TI	- Water -resisting reinforced gypsum ceramsite wall partition plate

AB - The utility model relates to a **water resistant** reinforced **gypsum** haydite partition **wallboard**, skeletal material of which is super light haydite. Cementing material is tailor-made **water resistant** reinforced **gypsum**. A frame of a steel reinforcement mesh sheet in the board is 3 mm to 5 mm distant from the surface of a board body. Two connecting edges of the board body are provided with tongue-and-groove. One edge is a convex shape, and the other edge is a concave shape. The utility model has the advantages of high efficiency of sound insulation, **water** resistance, **fire** prevention, capabilities of being nailed and being planed, simple manufacture and installation, high strength, good **water** resistance and low cost. The utility model can be used for damp environment, such as large bay building, kitchen, toilet, etc., equipment room with high noise, luxurious villa whose surface is stuck with ceramic tiles or various decorative materials, inner partition wall of xiezilou and all non bearing interior wall.

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PN	- CA1279877 C 19910205
PR	- US19860901239 19860828; US19870086820 19870821
AP	- CA19870545352 19870826
DT	- I
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CCA	- C04B2111/00482 ; C04B2111/0062 ; C04B2111/00672 ; C04B2111/28
PA	- FLANAGAN RICHARD J [CA]
TI	- HIGH-STRENGTH, FIRE-RESISTANT GYPSUM COMPOSITION
AB	- The invention relates to a novel high-strength, fire-resistant composition containing calcium sulphate hemihydrate, a boron compound having fire-resistant properties including boric acid, anhydrous boric acid, sodium tetraborate decahydrate (borax) and sodium borate anhydrous, and aluminum and/or silicon compound including aluminum hydroxide, aluminum oxide and sodium aluminate and sodium silicate, silicon dioxide,

silica gel and silicic acid, natural or synthetic fibers and **water**. Such compositions can be used in building materials such as **wallboard**, thermal insulation, **fire** breaks and soundproofing panels. More particularly the invention constitutes a much improved type of composition having greater strength and **fire**-resistance stance when compared to standard **gypsum wallboard** and **fire**-related **gypsum wallboard**. The application of this composition in slurry form and the use of this novel composition for use in finishing joints between **wallboard** are also contemplated.

[SS 4]