PRODUCT BROCHURE



NEW MGO FIRE RATED STRUCTURAL SHEATHING PANEL











JIANGSU JINPENG GROUP CO., LTD. JINCHENG MAGNESIUM MATRIX (JIANGSU) INTERNATIONAL TRADE CO., LTD.



Company Introduction

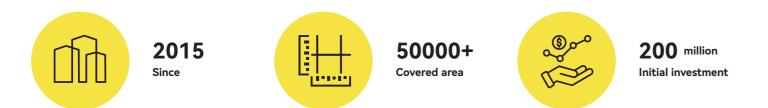
Jincheng Magnesium Matrix (Jiangsu) International Co., Ltd in brief called as MagMatrix as the international high end BMSC (Basic Magnesium Sulfate Cementitious) which is the most advanced and innovative chlorine free MgO panels supplier and manufacturer that who are fully invested by Jiangsu Jinpeng Fireproof Panels Co., Ltd and MagMatrix keep its independent run and operation for its international market.

With its backed plant of Jinpeng group, founded in 2015, Jiangsu Jinpeng Fireproof Panels Co., Ltd. is located in the High-Tech Industrial Zone in Taixing, Jiangsu Province, which is one of the key cities in the Yangtze River Delta. It is built on the site over 50 thousand square meters, initially invested with

200 million RMB about 31 million USD dollar in the land purchase, plant and production lines set up and huge investment in the research of the BMSC formulation of the MgO panels industry with China top scientists from Beijing University and Tsinghua University, to be a high-and-new-tech enterprise covering R&D, manufacture of magnesium oxide boards.

Jincheng Magnesium Matrix (Jiangsu) International Trade, Co., Ltd is 100% owned by Jinpeng Group and takes independent running for its international businesses. The whole series of our BMSC formulation MgO panels are certificated and patented after years of scientific research and tackling the key projects under the support of

abundant investments. Our Basic Magnesium Sulfate Cementitious MgO panel is a newly innovative chlorine free magnesium oxide panel which owns the advantages of fire rated, structurally, green & low carbon footprint and easily installation building panels. Our new generation MgO board is superior fire resistant and structural performance in the same panel -it is a kind of fire rated structural sheathing panel in the building industry, especially serve for the modular & offsite construction. Our panel is a patented, code-compliant, and owns the ASTM E136 noncombustible grade of our Perseverance model MgO board, also owns Class A Flame Spread Rated with ASTM E84 standard of fire retardant on surface burning.



BMSC Formulation Fire Rated Structural Sheathing Panel

The MagMatrix MgO fire rated structural panel can be used in fire-rated wall applications, as well as for fire retardant structural sheathing on the exterior and interior walls, structurally roofs and fire rated structurally subfloor sheathing. It offers superior performance with both increased fire resistance and improved

structural capacity in a single panel. It provides a fire-resistant solution that could help reduce the number of layers needed 1-, 2-, 3- and 4-hour fire-rated wall assemblies. It could be applied for all code request from ICC Type I II to III IV and V. And is in testing and certification for the NFPA 285 assemblies.

Environmentally Friendly and Healthy Green Panel

Our MgO panel is free of hazardous chemicals, with no VOC (off-gas) present during fabrication. Our panel could help you get offsite construction and fire rated constructions and help offer faster construction and reduced installation costs.

From a carbon footprint perspective, our panel is about 60% greenhouse gas emission less than traditional cement board industry. Due to its during its transportation process versus the faster installation and offsite job efficacy that traditional Portland cement. It's structurally, also help cut off about 30% greenhouse gas what would make offsite and fire rated walls

emission versus other building materials like cement board and drywall board in the whole building cycles. Our newest but most innovative MgO panel is a kind of green fire rated structural building panel it help you cut carbon emissions from each aspects from the 100% recycled raw materials without pollution for the environment I II in the steel frame buildings system and big when recycled, light weight that cut green gas



Wall Assembly Advantages

And, when used as an exterior wall sheathing, MagMatrix MgO Boards can replace other sheathing materials in certain assemblies, potentially reducing the number of layers required. And the Perseverance model sheathing panel is evaluated to meet code requirement for fire-resistant construction and does not require reductions in strength. MagMatrix has several variety MgO fire rated structural sheathing panels to be used in all types of construction and is a listed component in fire-resistance rated wall assemblies. Our MgO sheathing panel could be used in exterior walls of Type I II for all kinds of noncombustible construction and covers the Type III IV V





and SIPs that would saving the fabrication and constructed time for your project to help cut carbon emission and save labor costs. It makes about 60% energy saving compared with the traditional fiber cement board industry during its production process. It could totally help the Type market in the Type III IV V building market as wall sheathing panels get the fire-resistant building construction.



Certification In Plan

We are in more and more professional third-party certifications applying like Intertek CCRR, ICC-ESR, UL, BBA, ETA, and Code mark in the building industry and also the UL and Certifier in the passive fire protection fields and also green certifications as well.

We would help you reinforce your building projects in green and safety sustainable and innovative solutions that help make our planet greener, safer, and humanity. Warm welcome with us to get a green and sustainable and decarbonization actions for our mother of planet!



Upgrade & New Formulation



Basic magnesium sulfate cement (BMS) is a new type of Magnesium cementitious material, which is developed on the base of the research of magnesium oxychloride cement(MOC) and magnesium oxysulfate cement (MOS).



The hydration product of the new cement is a new type of needle and rod phase, namely 5Mg(OH)2 · MgSO4 · 7H2O phase (5 • 1 • 7 phase), which is different from the traditional MOC and MOS.

5MG(OH)2 • MgSo4 • 7H2O

breakthrough in the chlorine-free MgO board owns inner crystal is 517 newly improved that could make a real chloride-free new generation phases as its main hydration reaction is 5Mg (OH)2-MgSO4-7H2O. We of magnesium sulfate cementitious building board to serve as the fireuse the third time of in-house curing process to make it best with 7% rated structural panels in the loading bearing and no-load bearing as moisture content before ex-works.

Magnesium oxide sulfate crystal structure is comprised of a strong rated wall assemblies in the Type I II III IV V building code. chemical bond which makes it an ideal building material, which can be used for a variety of applications where cement boards, OSB, and

Basic Magnesium Sulfate Cementitious which is the most successful plywood panels often used. Magnesium oxide sulfate formulation is the fire-rated structurally sheathing panel and subflooring panels to help reduce the number of layers needed in 1 and 2 and 3-hour fire-

Intertek CCRR Certification

MagMatrix Perseverance Model MgO Fire Rated Structural Sheathing Panel CCRR certification from Intertek just gets valid and gets publication and listing on the Intertek website.

MagMatrix Perseverance Model MgO Fire Rated Structural Sheathing Panel is a totally upgrading and technology innovation for the MgO board industry get the world leading Fire Rated Structural Sheathing Panel that is fire rated and structurally at the same panel also meet the ASTM E136 noncombustible grade for all kinds of noncombustible construction buildings and we can cover up the ICC & IBC type I II for the noncombustible construction and also type III IV V.

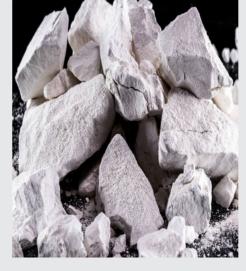
We have model for the wall structurally sheathing panel and fire rated subfloor structural flooring sheathing with Tongue & Groove edges. We are the game changer for the modular construction, off-site construction and also fire rated loading bear wall construction in timber frame and steel frame and also passive fire protection board industry. We meet ASTM E136, E84, E119, E72.

Congratulations! Per the Intertek Engineering and Inspections, Jincheng Magnesium Matrix (Jiangsu) International Trade Co., Ltd. submitted all required certification paperwork, passed the Initial Factory Audit, and is approved for labeling; this completes the certification onboarding process. Your customers and AHJs can now view your listing on the Intertek Directory of Buildings.

https://lnkd.in/grJX94i5

CCRR Number: 0457







Intertek CCRR Certification

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LISTING INFORMATION O Jincheng Magnesium Matrix (JiangSu) International Trade Co., Ltd. - MagMatrix MgO Fire Rated Structural Panel-Perseverance Model

ium Matrix (JiangSu) International Trade Co., Ltd. Road of High Tech Industrial Zone Dongcheng Taixing, Jiangsu 225400 China

heng Magnesium Matrix (JiangSu) International Trade Co., Ltd. | 67067 | Rev: Jul 11 2022 8:10AM | Uncontrolled Copy Page 1 of 5

	Issue Date: 06-23-2022 Renewal Date: 06-30-2023	4.4 Resistance to Transverse Loads: The allowable transverse load is 55 pril positive and 22 pril negative when installed on wood framing as denothed in Section 5.1 of this report. Allowable transverse loads are A50 subars	6.2 The panels are limited to use an interior surfaces a defined in IBC Section 202 and must not be used in not area as defined in IBC Section 2000. Under the IRC, the panel must not be used in showers.
vtSiON: 09 – FINISHES ction: 09 28 15 – Magnesium Oxide Backing Panels	 Substrate for decoration with paint, wallpaper, resilient flowing, coramic tile, notated stone or dimensional stone wereary on floors and walls in interior dry areas 	determined by dividing average ultimate test values by a factor of 3.0.	6.3 Support framing shall be designed for a maximum almospher assembly deflection of 1/80 under science of
VISION: 06 - WOOD, PLASTICS, AND COMPOSITES cline: 06 36 00 - Sheething	 Enterior wall sheathing 	4.5 Non-combustibility: The panels comply with ASTM £106.	wind loads for exterior or interior walls.
	2.0 STATEMENT OF COMPLIANCE		6.4 A super retarder shall be installed in exterior wall
PORT HOLDER		4.6 Fire-resistance-rated Construction: Fire-resistance- rated construction is subjet the score of this result.	when required.
cheng Magnesium Matrix (Jongso) International Trade	The MagMatrix MgO Fire Rated Structural Panel Perseverance	water construction is outside the scope of this report.	6.5 Recognition as listed protective assemblies, a
, Inf. • Coloury Read of Mark Twob. Industrial Zone of	Model complies with the Codes listed in Section 1.1, for the	A INSTALLATION	6.5 Recognition as letted protective assemblies, a referenced in Section 208 of the International Mechanica
 9 Datwarg Road of High Teck. Industrial Zone of englised, Taking Chy. Jungsu Province, China 	properties stated in Section 1.2, and uses stated in Section 1.3, when included as described in this report, including the		Cade is noticed the scene of this scenet
engelong, haking Ory, sungsa Province, China 6 523 87320182	when included as described in this report, including the Conditions of the student in Section 6.0	\$1 General: The MarMatrix MrD Fire Rated Structural	and a second contract of the speed
to://www.megnetrisboards.com	comprises or owneed to accord \$10.	Panel Perseverance Model must be installed in accordance	6.6 The MagMatrix MgO Fire Bated Structural Pane
	NO DESCRIPTION	with the manufacturer's published installation instructions,	Perseverance Model is manufactured under a qualit
PORT SUBJECT		the applicable Code, and this Research Report. A copy of the	cantrol program with inspectices by intertek Testin
agMatrix MgO Fire Rated Structural Panel-Perseverance	3.1 MagMatrix MgO Fire Rated Structural Panel-	manufacturer's instructions must be available on the jobsite	Services NA, Inc.
odel	Peneverance Model: The panel is a 12 mm thick	during installation.	2.0 SUPPORTING PADENCE
SCORE OF DURING THEM	magnesium-oxide sheet, reinforced with multiple Sherglass	The panels may be attached to wood framed walls with	7.6 SUPPORTING EVIDENCE
D SCOPE OF EVALUATION	mesh and non-waven layers on both faces. The panels are	the panels may be attached to wood marked walls with framine spaced a maximum of 36 in, on center for interior	7.1 Reports of texts in accordance with ASTM F86-18
11 The Research Report addresses compliance with the	available in a 1220 mm (40 in.) width and lengths of 2880 mm (96 in.) 2785 mm (108 in.) and 8008 mm (120 in.)	ar exterior applications. The sheathing must be attached to	ACM F136.15a
11 This Research Report addresses compeance with the following Codes:	2440 mm [% m.], 2745 mm [308 m.], and 8068 mm [320 m.].	wood framing with minimum 0.11 in x 2.5 in, ring shark	
 2021 and 2008 Internetional Building Code* (IBC) 	4.0 PERFORMANCE CHINACTERISTICS	sails spaced a maximum of 8 in. on center.	7.2 Data in accordance with the ICC-ES AC 386, Acceptance
2021 and 2018 International Amidential Code* (IRC)			Otheria for Fiber-reinforced Magnesium-Oxide-Base
	4.1 Physical Properties: The panels comply with the	Wood framing must have a minimum specific gravity of 0.5.	Sheets, dated October 2007 (editorially revised Februar
NOTE: This report references the must recent Code editions.	physical property requirements of ICC-ES.AC386. Maximum	The allowable deflection of framing members is U/360.	2015).
cited. Section numbers in earlier editions may differ.	water absorption is 25.4% and maximum mobilize	When used an exterior walk. The MarMatria parels must be	7.8 Data in accordance with ICC-IS ACIDE Accordance
	movement is 0.18%, when tested in accordance with ASTM C1185.	covered with an approved wall covering.	Criteria for Beinforred Comentitious Sharts Used as Wa
12 The MagMatrix MgO fire Rated Structural Panel- Personance Model has been evaluated for the following	C1588.	contras netral approved nan contring.	and Celling Sheathing and Floor Underlayment, date
anagerties (see Table 1)	6.2 Surface Barraise Characteristics: The canels achieved a	When the panels are used as flooring underlayment, the	August 2012 (editorially revised February 2016).
Physical properties	Cless A surface burning classification in accordance with	subfloor must have tongue and groove edges or blocked	
Surface huming characteristics	2021 BC Section 803.1.2, with a fame sarved index of 25 or	edges in accordance with IBC Table 2304.8(3).	7.4 Data in accordance with ICC-ES ACS78, Acceptance
Structural	less and a smoke developed index of 450-or less when tested	6.0. CONDITIONS OF USE	Criteria for Fiber-Consent Interior Substrate Sheets Used i
Non-combaritbility	in accordance with ASTM EM.		Wet and Dry Areas, dated August 2012 (editorially revise 2018)
13 The MapMatrix MpO Fire Rated Structural Panel-	4.3 Racking Shear Resistance: The maximum allowable	6.1 Installation must comply with this Research Report, the	
Forumerance Model has been evaluated for the following	racking shear load is 126 plf when installed on wood framing	manufacturer's published installation instructions, and the	2.5 Intertek Listing Report "Jincheng Magnesium Matr
eses bee Table 1):	as described in Section 5.1 of this report. Allowable sacking	applicable Code. In the event of a conflict, this report asserts.	(Jangu) International Trade Co., Ltd MagMatrix MgO File Rated Structural Panel Perseverance Model." on th
	shear load is ASD values determined by dividing average	Boneur	Rated Structural Paser Perseverance Model," on th Intertex Directory of Building Products.
 Use in Types L II, III, IV, and V construction 	altimate test values by a factor of 3.0.		THE REPORT OF A DESCRIPTION OF A DESCRIP
 Interior wall Snish 			
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LISTING INFORMATION

MagMatrix MgO Fire Rated Structural Panel-Perseverance Model: The panel is a 12 mm thick magnesium-oxide sheet, reinforced with multiple fiberglass mesh and non-woven layers on both faces. The panels are available in a 1220 mm (48 in.) width and lengths of 2440 mm (96 in.), 2745 mm (108 in.) and 3048 mm (120 in.).

Evaluation Method	Building Code	CCRR Number
CC ES AC 386	2021 and 2018 IBC	CCRR 0457
	2021 and 2018 IRC	
LAME SPREAD RATIN		I
LAME SPREAD RATIN		Smoke Development

FIRE RATINGS			
Test Standard	Rating	Design Number	
	Loadbearing Steel Stud Wall Assembly 2 Hours	JMM-MOBP 120-01	

Attribute	Value
Code Reports	Yes
Criteria	ICC-ES AC376 (2007)
Criteria	ICC-ES AC378 (2007)
Criteria	ASTM E119 (2020)
Criteria	ASTM E84 (2018b)
Criteria	ICC-ES AC386:2007+R:01Feb2016
CSI Code	06 16 00 Sheathing
CSI Code	09 28 15 Magnesium Oxide Backing Panels
Intertek Services	Certification
Intertek Services	Code Compliance Research Report
Listed or Inspected	LISTED
Listing Section	BUILDING PANELS
Listing Section	BUILDING MATERIALS WITH SURFACE BURNING CHARACTERISTICS
Spec ID	67067

Jincheng Magnesium Matrix (JiangSu) International Trade Co., Ltd. | 67067 | Rev: Jul 11 2022 8:10AM | Uncontrolled Copy Page 2 of 5



ASTM E119 Fire Test Certification

MagMatrix BMSC (Upgrading MOS) Chlorine Free MgO Fire Rated Structural Panel ASTM E119 120 minutes loading bearing steel wall assembly fire test report.

The specimen was evaluated in accordance with the following:

ASTM E119-20

Standard Fire Test Method for Fire Tests of Building Construction and Materials

CAN/ULC S101-14

Standard Methods of Fire Endurance Tests of Building Construction and Materials

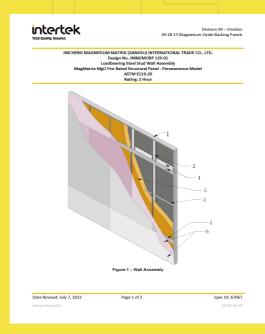


SUMMARY OF TEST RESULTS

The (BMSC) MOS board assembly described within this test report met a fire endurance period of 120 minutes with no passage of flames to the unexposed side, and with a maximum unexposed temperature of 201 °F.

Our Newly Generation MgO serves as the fire-rated structural sheathing panel in the construction industry to get a fire-resistant and structural in the same panel and help you meet the building code. This Perseverance Model MgO panel also owns the ASTM E136 noncombustible grade to cover the building code of type I II and III-IVV.

It offers superior performance with both increased fire resistance and improved structural capacity in a single panel and helps reduce the number of layers for fire-rated wall assemblies.









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- TRACK: Use 3-1/2 in. wide x 1-1/2 in. legs, 20 GA steel as top and bottom track. Studs attached to the top and bottom track with 1/2 in. long selftapping pan-head screws.
- STUDS: Use 3-1/2 in. wide x 1-5/8 in. flange, 20 GA, steel studs spaced 24 in. on center (oc).
- LATERAL SUPPORT: 16 GA, steel bracing channel, placed in the center cutout of the studs across the 101t, width of the assembly. Steel clip angles are fastened to the studs below the channel and then attached to the channel using 1/2 in. No. 8 self-drilling screws.
- PANEL JOINT BACKING: 4 in. wide x 10 ft. long, 20 GA steel backing plate is installed 24 in. oc from the top and bottom of the frame on both sides. The backing plate is attached to the studs with 1/2 in. long self-tapping pan-head screws.

Division 09 – Finishes 09 28 15 Magnesium Oxide Backing Panels

- INSULATION: 3 in. thick x 24 in. wide x 48 in. long, 4 pcf Rockwool[™] Cavityrock[®] is friction-fit within the stud cavities. The ends of the batts are stamaged to avoid continuous joints.
- CERTIFID PRODUCT: MagMatrix MgO Fire Rate Structural Panel - Perseverance Model

Two layers of 12mm x 1220mm (f 1) wide x 420mm (f 1) loger 32mm (f - 1) wide x 30mm (f - 1) loger 32mm (f - 1) wide x 420mm (f - 1) loger 32mm (f - 1) wide x 420mm (f - 1) wide

Spec ID: 67067

Consult the listing report on the Directory of Building Products (<u>https://bpdirectory.intertek.com</u>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described hermin. Intertex certified products may be verified by the approved Intertek label; after products must be verified by the Authority Hoving Jurisdiction as meeting the specifications stated berein.

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Date Revised: July 7, 2022





Perseverance Model MgO Wall Sheathing Panel

CCRR Certification from Intertek. It covers up all the noncombustible grades of wood frame loading and non-loading bearing walls and also steel & wood-ASTM E136 noncombustible and it breakthrough in the MgO board industry framed floor/ceiling 1-3 hours fire rated constructions. to use our patents of BMSC formulation of the chlorine-free and also the most breakthrough in noncombustible construction of the ICC & IBC Type I II and also covers up the type III-IV and V.

MagMatrix Perseverance Model MgO Fire Rated Structural Sheathing Panel It is designed for type I II for all kinds of noncombustible buildings and also



Assembly

construction.



Technical DataSheet

Property	Test Standard	Result	Requirement	Verdict
Density	ASTM C1185	67.5 lbs/ft ³	Reported	N/A
Flexural Strength	ASTM C1185	Dry: 2685 psi Wet: 1496 ps	≥ 580 psi	Pass
Freeze / Thaw Cycling	ASTM C666	The test samples showed no disintegration following 25 cycles	The test samples show no disintegration following 25 cycles	Pass
Dimensions and Tolerances	ASTM C1185	Length: 96.11 in. Max. variation: 0.11 in.	96 ± 0.48 in. Max. variation ± 1/4 in.	Pass
		Width: 48.06 in. Max. variation: 0.06 in.	48 ± 0.24 in. Max. variation ± 1/4 in.	Pass
		Thickness: 0.467 in. Extreme value: 1.1%	0.472 ± 0.05 in. Extreme value $\leq 15\%$	Pass
Moisture Movement	ASTM C1185	Linear change 0.18% (Machine Direction) 0.17% (Cross Direction)	Reported	N/A
Water Absorption	ASTM C1185	26.2% by mass	Reported	N/A
Nail-head Pull Through	ASTM D1037	437 lbf	≥ 125 lbf	Pass
Falling Ball Impact	ASTM D1037	No damage at a 12-inch drop	No damage at a 12-inch drop	Pass
Shear Bond Strength Dry-set Portland Cement	ANSI A 118.4	95 psi	≥ 50 psi	N/A
Shear Bond Strength Later- Portland Cement Mortar	ANSI A 118.4	108 psi	≥ 50 psi	Pass
Humidified Deflection	ASTM C473	0.008 in	When used as a base for tile ≤ 0.0639 in.	Pass
Flame-Spread Characteristics	ASTM E84	Flame Spread Index: 0 Smoke Developed Index: 0	Flame Spread Index ≤ 10 Smoke Developed Index ≤ 5	Pass

Technical DataSheet

Test Standard	Result
ASTM E136	Meet the requirement of ASTM E136
ASTM E119	
ASTM E72	Dry condition: Ultimate load: 3026 lbf Failure appeared at the vertical joint. Allowable racking shear: 126 lbf
	Wet condition: Ultimate load: 3093 lbf Failure appeared at the vertical joint. Allowable racking shear: 129 plf
ASTM E72	Positive: Ultimate uniform load: 159 psf Failure: Crack in panel. Allowable load: 53 psf
	Negative condition: Ultimate uniform load: 65 psf Failure: Crack in panel. Allowable load: 22 psf
	ASTM E136 ASTM E119 ASTM E72



MagMatrix Perseverance Model MgO Fire Rated Structural Sheathing Panel is with the Tested & Certified | High Bending Structural Strength | Asbestos Free | Moisture Resistance | Non-Flame and Smoke Spread | Score & Snap Cutting | Strong Srew Holding Strength | Environmental Friendly | Chloride Free | Non-corrosive on Metal & Steel Structures | ICC & IBC Building Code Type I II Noncombustible 2-3 hour Loading Bear Wall

MagMatrix MgO Fire Rated Structural Panel -- Perseverance Model breakthrough in the non-combustible construction offering 1 hour, 2 hours, 3 hours, and 4 hours of fire-rated walling and ceiling and subflooring assembles. It Meets the ASTM E136 Noncombustible grade for use in all types of noncombustible

Acceptance

Meet the requirement of ASTM E136.

Tests shall be conducted in accordance with ASTM E119.

Allowable loading shall be based on a factor of sfety of 3.

Allowable loading shall be based on a factor of sfety of 3.

DIMENSIONS

MagMatrix Green Fire-rated Structural Panel Length: 2440, 2740, 3050 mm Width: 1220 mm Thickness: 3mm - 20 mm

TOLERANCES

Length and Width: + / - 2mm Thickness: + / - 0.2mm Edge Straightness: 1mm / metre

Perseverance Model MgO Structural Subfloor Sheathing Panel





MagMatrix newest generation MgO fire rated structural subflooring panel is a fiber-reinforced magnesium cementitious structural subfloor and roof panel that can be combined with other non-combustible materials to create fire rated floor and roof / ceiling assemblies. It is super fastener withdraw power - holds nails and screws like plywood. It owns advantage of dimension stable - panel will not buckle or wrap like wood sheathing and it installs like wood sheathing, circular saw for cutting, screws for fastening. It meets the criteria of ASTM E84 and ASTM E136 noncombusible grade working as the fire rated structural subflooring in ICC & IBC Type I and II building code. It is ASTM E136 noncombustible grade offer the fast installation, structural stability, and 1- and 2-hour fire rated assemblies.



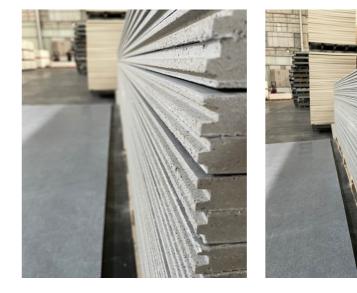
Our Perseverance model panel is fully meeting the full criteria of ASTM E136 noncombustible for use in all types of noncombustible construction. and it is inorganic, and mold-, moisture-, and termite- resistant. The panels are cured in-factory and dimensionally stable for use in subfloor assemblies for many floor finishes. Numerous1-, 2-. and 3-hour fire designs are available for modular, penalized and conventionally constructed buildings to meet the noncombustible floor-ceiling assembly any applications. The panel are easily cut with standard framing tools, rapidly applied using mechanical fasteners and require no adhesive for installation.



Dimension Quick stability Quick







Perseverance Model MgO Structural Subfloor Sheathing Panel – Data Sheet

Grade	Basic Magnesium Sulfate MgO formu
Noncombustible Grade	ASTM E136 noncombustible to mee
Reaction to Fire	ASTM E84
Density	1200kg/m ³
Edges	Tongue & Groove
Fire Class Materials	Flame spread - index 0 & smoke - in
Tolerance in Thickness / Length / Width	ASTM C 1185-02: +/-0.5%
Mold Resistance	ASTM D3273-12, Scale 1-10 and 10
Flexual Strength	ASTM C1185-08 Dry 20Mpa; Wet 18
Chloride Content	0.038% (Intertek Testing Report)
Durability	ASTM C1186, Sec.12: 50 cycles
Fasteners Pull Through	ASTM D1037, Sec.12: 2500 N
Water Absorption	ASTM C1185-08 : 19.3%





nula with inorganic substances, 6 layers high tensile glassfiber reinforced layers.

et the ICC & IBC Type I II noncombustible construction

index 0

10 best: 10

8Mpa

Multi-Support MgO Board

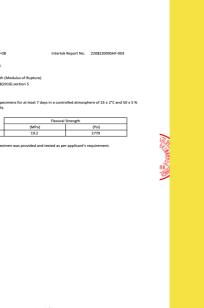
Perseverance Model MgO Structural Subfloor Sheathing Panel





Perseverance Subfloor Sheathing Test Report

Intert			8 Daye Road, Fengxia Tel: +86 21-61136	Shanghai Fengxian Brancl n District, Shanghai, Chin 116 Fax: 021-6118992 'ebsite: www.intertek.con	a 1	Total Quality. Assu	red.			
Test Repo	ort									
						Issue Date:	2022-09-0	8	Intertek R	eport No. 22
Issue Date:	2022-09-0	8 Intertek Re	port No. 220822	0095HF-003		Test Items, M	ethod and Results:			
Applicant:	JINCHENG MAGN	ESIUM MATRIX (JIANGSU) INTERNATIO	NAL CO., LTD.							
Address:	No.9 Daiwang Roa	ad of High Tech. Industrial Zone of Cher	ngdong, Taixing City	, Jiangsu Province,		Test Item:		(Modulus of Rupture)		
	CHINA.	-				Test Method: Test Span:	ASTM C1185-08(2 254 mm	2016) section 5		
Attn:	David Zhao					rest span:	434 mm			
Test Type:	Performance test,	samples provided by the applicant.				Equilibrium Conditioning:	Place the test spe relative humidity.	cimens for at least 7 days	in a control	ied atmosphere
Product Informa						Test Result:				
roduct morma		Madel Madel Made Fire Based			1				Flexural St	
Product Name		erseverance Model MgO Fire Rated ral Subfloor Sheathing Panel	Brand	MagMatrix		Mark	ne Direction	(MPa) 19.2		()
Sample	50 000	rai subilicor sileau ling railei	Sample Amount	10 pcs	-	Machi	ne Direction	19.2		2)
Description		Good Condition	Received Date	2022-08-15	-	Note: Only ma	chine direction speci	imen was provided and te	ted as per a	opplicant's requ
	ple ID	Model		cification						
	095HF.002	Perseverance		mm*2440mm						
					NZHEA					
Test Methods Ar	d Standards									
Test Standard	ASTM C1185-08 (2	2016)								
Specification Standard	/				接渡寺					
Test Conclusion	The samples were following page.	tested according to the above standar	ds, and the results a	are shown in the						
	epresentativeness ar	The report only reflects conformity of the ad authenticity of the submitted samples ar g were cited from Intertek Report No. 2201	e responsibilities of th		-					







MagMatrix Multi-Support Model MgO board is a new age medium density multi-purpose magnesium oxide board. Multi-Functional Support Model MgO board is suitable for use in semi exposed external applications and areas where occasional damp may occur providing the boards are correctly primed and painted prior to fixing. An Acrylic based primer must be applied to edges and face and allowed to dry prior to finishing. For many internal applications the appearance and durability of Multi-Support Model MgO board will be enhanced by finishing with paint, plaster or paper. Prior to finishing an acrylic based primer must be applied to edges and face.

MagMatrix Multi-Support Model MgO board is manufactured using inorganic substances and alkaline resistant fiberglass mesh. The product is naturally cured using no energy through cold fusion unlike similar competitive products on the market which use autoclaving technology. This ensures that Premium MgO Multi-Support has a relatively low impact on the environment. Multi-Support achieves its superior strength and flexibility by the introduction of two to four layers of alkaline resistant glass fibre mesh. Consistent high quality of the product is maintained and monitored through a sophisticated digitally controlled process to ensure a superior finished board always reaches our commitment to quality assurance.





Multi-Support MgO Board

MagMatrix Multi-Support Fire Retardant MgO Sheathing is a patent-pending, code-compliant, fire retardant, MgO panel system that incorporates the extraordinarily flame and heat resistance of magnesium oxide with the structural ability and overall utility of OSB and Plywood panel to create a uniquely high performing fire-resistance-rated structural sheathing product.

The Multi-Support MgO fire-rated structural sheathing panel is different and the resulting product is an extraordinarily high performing fire retardant MgO sheathing that offers a variety of assembly options not previously available with other fire retardants sheathings. The sheathing panel provides protection against fire damage through the use of a magnesium oxide panel that significantly

It owns the ASTM E84 surface burning criteria and is designed for the wood frame modular construction & offsite construction serves as the fire rated structurally sheathing panel in type III IV V for 1-2 hours in exterior and interior wall sheathing system and also subfloor structural sheathing for 1 -2 hours of the fire rated construction for the subfloor and ceilings systems. It also serve as the fire rated structural sheathing panel in the SIP panel industry to help replace the OSB & Plywood and the fire retardant wood panels.

decreases flame and smoke spread. Ideal for load-bearing building applications, It can be used in the same way that traditional OSB is used but provides serious protection against fire damage and is a more environmentally friendly solution.

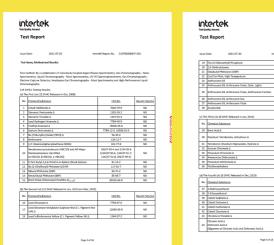
It meets the ASTM E84 test that it owns the flame spread index is zero; the smoke spread index is zero.

Multi-Support MgO Board

Our board is the revolutionary building board as it is fire rated, structurally, green panels, no VOCs, no asbestos, no heavy metal salts, no toxic antifungal additives, mold-resistant, moisture resistant, and breathable, and cutting off huge Co2 emissions versus fiber cement board and we are very stronger than drywall board and we are lighter than the fiber cement board and we are anti-hurricane design.

We also pass through the new edition of the 219 SVHC test to show that we are healthier and safe for human beings' body especially in the construction industry applications for interior design and applications.

219 SVHC Test Report





intertek Test Report

- Issee Date: 2011-07-20 Inter-	trê Resort No. 2107560085	
issue Dulle: 2023-07-20 inder (e) The Fifth List (7 SMAC Released in Jun, 2011)	iek Keport No. 210/260085	4-001
No. Operatical Substance	CRS No.	Beaulto Niterinó
45 Strontum Oromate &	7789-06-2	NO
46 2-ethospethyl acetate (2-654)	111-15-9	ND
47 1,2 Senzenedicarboxylic acid, cl-C ₂₀₀ -branched and linear aley(enters (DHMLP)	68515-42-4	ND
48 Mydradne	7803-57-8, 502-01-2	NO
49 1-methyl-2-pyrrolidore	872/50-4	ND
50 1,2,3-trickloreprepane	96-18-4	ND
51 [1,2-Senzenedicarbonylic acid, cl-C _{Lin} /branched alkylietoen, C ₂ -rich (DH7)	71888-89-6	ND
() The Seth-List (20 SVHC Released in Dec, 2011) No. Oversical Substance	CAS No.	Benults Nitechel
52 Level dejorate &	6477-64-1	NO
53 Level stuphente &	15345-44-0	NO
54 Lead adde: Lead cladde &	13424-46-9	NO
55 Pherolphthalein	77-09-8	NO
56 2,2" dchloro 4,4" methylered anilire (MOCA)	202-24-4	NO
57 N/N-dimethylacetamide (DNAC)	127-29-5	NO
58 Teleod damenate &	3687-33-8	ND
59 Gildum aservite 5	7778-44-1	ND
60 Anienic add &	7778-35-4	ND
61 Sis(2-methosyethyl) ether	111-06-6	ND
62 1,2-Okhloroethane	107-06-2	ND
63 4-(1,1,2,3-tetramethylbutyliphenol, (4-test-Octylphenol)	140-66-9	NO
64 2-Methonyanillere; o Arcisidine	90-04-0	NO
65 Bis(2-methonyethyl) phtholate (DV/EP)	117-82-8	ND
66 Formaldehyde, eligonenic reaction products with aniline (secherical MDA)	25214-73-4	ND
67 Pertating chromate octahydroxide &	49663-84-5	ND
68 Potenikum hydrosysctassodizincele di-chromate &	11103-86-9	ND
69 Dichromium trisjchromate) 5	21623-89-6	ND
70 Aluminosilicate Refractory Cerumic Vibres &	(Index No. 650-007-00-8)	ND

intertek Test Report 90-91-8 548-62-9 2580-56-5 6706-83-0 ND 561-41-1 ND



Meet ASTM E84

MagMatrix MgO Multi-Support Board is a fire-resistant board which provides a safer structure in the case of a fire. Non-Flammable & Non-Combustible to EN ISO 1182-Euro Class A1. Scores a 0/0 rating on the ASTM E84 / UL 723 Flame Spread and Smoke Developed Index.

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Low Carbon Manufacturing Process

Multi-Support MgO Board is a natural cured process with a chemical reaction using low levels of heat and a lengthy drying out stage.

03

Chemically Stable The MgO Multi-Support Board is produced from natural inorganic raw materials, resulting in a strong, durable chemically stable board.



Thermal Insulation Properties

Multi-Support Model MgO Board provides a high level of thermal movements during hot and cold cycles with U value of 0.186 w/m/ k to achieve a very good & excellent thermal protective level to keep warm very well.



EASY FIXING METHOD

MgO Multi-Support Boards can be simply hammer nailed or screw fixed without the need for pre-drilling. That would go for easily and efficiency installation and fixings.

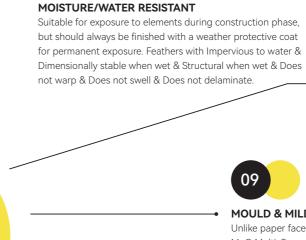


Non-Hazardous to Health

The MgO Multi-Support Board will not cause harm to persons and/or the environment, produced without asbestos or other inorganic fibres.

Multi-Support MgO Board Advantages

07





Advantages

EFFICIENT CUTTING METHOD

MgO Multi-Support Board Can be cut to size using hand & power saws or easily scored and snapped with a standard blade which makes it adaptable to large & small jobs

ſes	t Report		
	late: 2021-07-20 Inter	tek Report No. 21070600	85xF-001
No.	Overvical Substance	<u>045 No.</u>	Brouts Steried
85	Ric[percabramophenyl] ether (decabramadiphenyl ether; DecaBDE)	1163-19-5	ND
86	Pertacesafluorotridecanoic acid	72623-54-8	ND
87	Tricesafluorododecanoic acid	349-55-1	ND
88	Menicosafluoroundecanoic acid	2058-94-8	ND
89	Heptacesafluorotetradecanoic acid	336-06-7	ND
90	Diszere-1,2-ckarboxamide (C,C-azodi/formamide))	123-77-3	ND
91	Cycloheane-12-disarboryk anhytiste [1] Cio-systaheane-12-disarboryk anhytiste [2] The individual cio-[2] and trans-[1] isomer substances and al possible combanions of the Cio- and trans-isomers [1] are covered by this entry].	85-42-7 13149-00-3 14266-21-3	ND
	Keolhydrowethylatholic anhydride [1], Keolhydro 4-methylatholic anhydride [2], Keolhydro 5-methylatholic anhydride [3], Keolhydro 5-methylatholic anhydride [3], Din i chidwiol incener [2], [2] ara (5] (including their ch- act trave-stress formari, from [1] ara [3] possible combinations of the incener [1] are covered by this entry]	25550 51 0 29438 60 9 4822-341 57110 28 9	ND
93	6-Non-lyberol, branched and linear (substances with a linear and/or branched allight chain with to cation number of oxudiently bound in position 4 to phenel, owening also UXDs and well defined substances which include any of the individual isomers or a combinistion thereof]	-	ND
	6-(1,1,2,3-tetramethylbutyljphenol, ethowylated (covering well-defined substances and UVX8 substances, polymens and homologues)	-	ND
95	Methoryacetic acid	625-45-6	ND
96	N,N-dimethy¥cemanide	68-12-2	ND
97	Dibutation cichloride (DBTC) Δ	683-18-1	ND
98	Lead monoride (Lead oxide) &	1317-36-8	ND
		1314-41-6	ND

intertek Test Report

Tested Somples	Standard	Result
Submitted sample	EU REACH Regulation No 1907/2006 Article 33(1) Obligation to provide information of safe use (see REACH requirement and Watth Formework Directive (WFD) Requirement in report for details)	Meet Requirement



BREATHABLE

The MgO Multi-Support Model has the natural ability to absorb and release moisture, providing a healthy, durable working structure which ensures a healthy, durable working building with a natural ability to absorb and release moisture.

MOULD & MILDEW RESISTANT

Unlike paper faced or wood-based products, the MgO Multi-Support Board contains no cellulose and is therefore resilient to mold growth. And feathers with Completely inorganic & Does not rot or mold & Does not feed mildews.



IMPACT RESISTANT

MgO Multi-Support Model is tough to withstand risk of damage during manufacture, transit & fitting with an impact resistance of 34N/mm2.



Multi-Support Mgo **Fire Rated Structural Sheathing Panel**





Multi-Support Mgo Fire Rated Structural Subfloor **Sheathing Panel**

MagMatrix multi-support fire resistant subfloor board gives high performance in bending strength, and fire ratings with China the most advanced BMSC (Basic Magnesium Sulfate Cementitous) chloride-free MgO technology. It is lightweight Multi-support fire rated structural subfloor panel and high strength. The multi-support model fire- is a high-strength, reinforced magnesium-based rated structural subfloor panel is resistant to fire, mineral cementitious panel for use on either the water, and mildew, and insulates to sound and timber frame that can be used to deliver Fire of lightweight construction. It begins as a costheat. It offers a superior and price-competitive, Resistance Level (FRL) 60 - 120 minutes in the down environmentally friendly alternative to fiber cement direction. This, in conjunction with its exceptional and plasterboard products. The subflooring panel also gives a unique engineered cementitious

composite flooring sheet suitable for both interior construction. Lighter than precast or poured and exterior flooring applications. It has a tongue & groove joint down each long side for a flush tight fit.

acoustic performance, makes the structural subfloor panel ideally suited for multi-level lightweight

Tongue & Groove (T&G) edges for substrate floor carpet, or timber. It could also be suitable as a coverings. finished surface itself.

It has opened the excellent quality of Tongue & Groove edge which could offer an extensive support boarding system can be used in a variety comparable product in strength. of applications, whether it is a new building e.g.

Multi-support MgO fire-rated flooring board is with offices, shops, transportable, kit homes, or additions and renovations to an existing building. It is ideal application. It could be internal or external. It is with for: sub-floors; suspended floors and areas where a neat secure surface. It could be designed primarily moisture resistance is necessary. It is also an as a substrate for most finishes such as tiles, vinyl, excellent product to receive a wide variety of floor

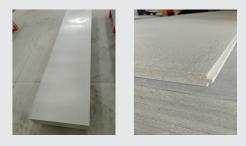
No special tools are required to fix the panel, which can be cut like any other fiber cement sheet and does not need to be pre-drilled before fixing. Yet at range of floor options and solutions. The multi- only 16mm or 19mm thick it outperforms any other

Size: 16/18/19mm x 600mm/1220mm x 2440mm/2740mm/3048mm Bending Strength: 18-21Mpa Density: 1200-1400kg/m3 Edges: Tongue & Grooves Surface Burning: Meet ASTM E84 code

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concrete, The panels install like wood sheathing and are mold-, moisture- and termite-resistant.

Providing a faster, easier, and more efficient way to build floors. It is a lightweight yet incredibly strong multi-purpose flooring material for all forms effective substrate flooring for all applications such as bathrooms, living areas, or external decks.



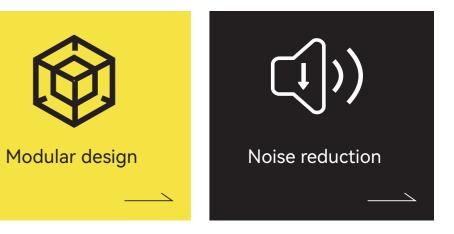


Modular Building Fire Rated Internal & External SIP Walls Application

MagMatrix Mag FirePro Structural Insulation Panel could be applied Modular Wall System which was designed to give your facility an extra level of protection. These walls have undergone some intense testing and can withstand temperatures between 1200°C consistently for 240 minutes with the worldwide construction building's best fire-rated performance. The Mag FirePro SIP walls are used as a protective barrier for offices and/ or rooms that may be working with hazardous materials. Many building codes often require the use of a onehour to the four-hour fire-rated wall. A fire-rated wall often acts as a barrier between hazardous areas and office areas. Our new Mag FirePro SIP walls provide a solution for those who require a wall to separate these kinds of occupancy situations.

Our Mag FirePro SIP panel walls are rated to withstand sustained flames of 1200°C for 240 minutes and meet the strict code requirements of the USA, Australia, and EU fire rating level standard test.

1200°C Able to withstand continuous flame at 1200 ° C for 240 minutes



Whole MgO SIP System Benefits and Applicatioin

MgO Structural Insulated Panel

Magnesium Oxide Structural Insulated Panels -MgO SIPS - is an advanced method of construction, offering superior insulation, structural strength and air-tightness over traditional construction methods or systems. MgO SIP panels are used in floors, walls, and roofs for residential, industrial, educational and commercial applications, providing ecologically friendly and energy efficient buildings.

MagMatrix MgO SIP Panels

Applications

MgO SIP technology has been developed around composite (or sandwich) panel techniques, creating a product with excellent structural and thermal characteristics. MagMatrix Mag structural insulated panels are the next generation of MGO SIPs Panels.

Their fire rating is much better than traditional fiber cement and OSP SIP panels. Magnesium Oxide SIP panel skins come in the thickness of 6 mm to 30 mm. MGO SIPS insulated panels can be used for the walls in a basement. They are waterproofed with the same methods and materials that are used to waterproof concrete walls in a basement.

Advantages

One of the benefits of MGO SIPS insulated panels is that they are a healthy option due to the fact that they no organic solvents, heavy metals, asbestos, oils, or other toxic materials in them. For this reason, they were placed in the category of "green building materials." They also will not support the growth of black mold and they have a strong resistance to absorbing moisture. That is why they are perfect for humid and wet climates. Since they are strong, tough, and able to withstand impact, they are also ideal for regions that are prone to hurricanes. When MGO Structural Insulated Panels are used, there is no need to use drywall. That lowers the cost of a construction project as well as how long it will take. The outer surface of MgO SIPS can be painted or coated with a synthetic stucco finish, lap siding, brick veneer, stone, and many other appropriate exterior finishes. MGO SIPS have superior loading, fire ratings, and acoustic values when being compared to OSB and fire cement SIPS.

04

01

MagMatrix provides a complete building envelope for floors, walls, and roofs. The system produces a quick, energy efficient, weather and mold-resistant way of building. The chloride-free MgO SIPs insulated panel is perfect for all construction applications including residential, commercial, agricultural, and special-purpose structures.

02

Our chloride free MgO SIP panel provides a lot more than structural superiority due to the fact that it has no nutrients for mold and insects to feed off of. It also has advanced fire protection which means that no flames will spread. Also, it is basically free of VOCs, which makes the best type of air inside a building and makes the building very safe to be in as well.

The installation consists of placing the Magnesium Oxide Structural Insulated Panels over a base plate and fastening them together using lumber splines, spray foams, and screws. The panels are kept in place according to architectural drawings, with all of the window openings being prefabricated and electrical chases being available every 16". The MgO SIP panel has its own integrated vapor barrier. Basically, each time a barrier is stood in place, the builder is framing, insulating, installing a vapor barrier, and sheet construction. This results in the construction basically being done in a timely manner.

Our Fire Rated Magnesium Oxide Oxysulphate SIP wall offers a flexible modular design that can be reused and reconfigured. The walls also include a wide range of customizable design options such as various wall heights, doors, windows, colors, and finishes. Additionally, the MgO SIP panel offers superior noise reduction, and various power systems can be integrated into the room's interior.

03

The process of making this MgO SIP insulated panel consists of laminating two sheets of magnesium board to either side of an EPS insulation core. The system is used for frost walls, basement floors, and every basement wall, so it gets rid of the need for concrete except for the strip footing. You can also choose to put a steel foundation in versus using concrete and this will get rid of all concrete and make it possible for you to build every day of the year no matter what the weather is like outside.

Whole MgO SIP System Benefits and Application

"

As the MgO SIP insulated panels are all made and processed in a controlled environment, away from the weather elements, and in cooperation with quality control standards. The making and processing of the panels allow time for the required site work and preparation to be finished before the panels are delivered. This creates an overall very efficient construction process, for a very efficient product.











These MgO SIP insulated panels are ideal for residential buildings because they do not spread flames if there is a fire, they are durable, and energy-efficient and they are resistant to mold and mildew. They are also perfect for a residence because they result in lower energy costs, they are basically VOC free, and they are a green product. The reasons that they are beneficial to commercial buildings are they can be built quickly, they resist rust and corrosion, and they are made in a quality control environment. When it comes agricultural buildings, they are ideal for them because they have an insulated frost wall that creates a horizontal geothermal field that is just right for them. Their skid homes or offices can be rebuilt in order to provide a very energy-efficient envelope in order for the structure to have electric heating.

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OUR MGO PANELS PACKAGE





As previously mentioned, the MgO Structural Insulated Panels are very strong and durable which is a big advantage for structures that are regularly damaged by the people that occupy them such as rental properties and commercial buildings. People that occupy buildings made of these panels can feel safe because, as previously mentioned, they do not provide nutrients for insects or mold. Flames also will not spread in them, they are basically VOC-free, so the air quality is good as well as the buildings are safe to occupy.

New Breakthrough MgO **Melamine Lamination Fire Retardant Decoration Wall and** Ceiling Board for Interiors.

"

- 1. All is ASTM E84 Class A grade, no hazard smoke when catches in fires of the interiors of the building
- 2. Structurally, fire-rated and green of our new generation MgO Backer Board for lamination
- 3. Melamine laminated directly panel and cut off the HPL layers that are 100% recycled and green board.
- 4. The green gas emission is 50% less than the fiber cement board laminated during all the manufacturing processes, excellent low carbon panel
- 5. Ideal for the seismic solution as the panels are much strong and impact resistance
- 6. Lightweight than fiber cement laminated and strongly and no crack when installations
- 7. Impact resistant, humidity resistant
- 8. Pass through the 219 items of the newest edition of the SVHC test
- 9. No leads and no heavy metal, and anti-mildew
- 10. Mold Resistance (ASTM G21) results in 0/0/0
- 11. Acoustic sound control and sound absorption and sound blocking
- 12. Cutting: A fine-tooth handsaw, gypsum board saw, or power saw are all ok to cut the panel. For power saws, using a fiber-cement blade may result in cleaner edge cuts, less dust, and longer blade life. 13. Screw directly on for installation.

14. It is water-resistant and has an optimal fire behavior which allows the installation in commercial spaces as well as kitchens and bathrooms.











We Welcome Your Visit !

Group Plant: Jiangsu Jinpeng Group Co., Ltd. Subsidiary Company: Magnesium Matrix (Jiangsu) International Trade Co., Ltd.

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