

# PRODUCT BROCHURE

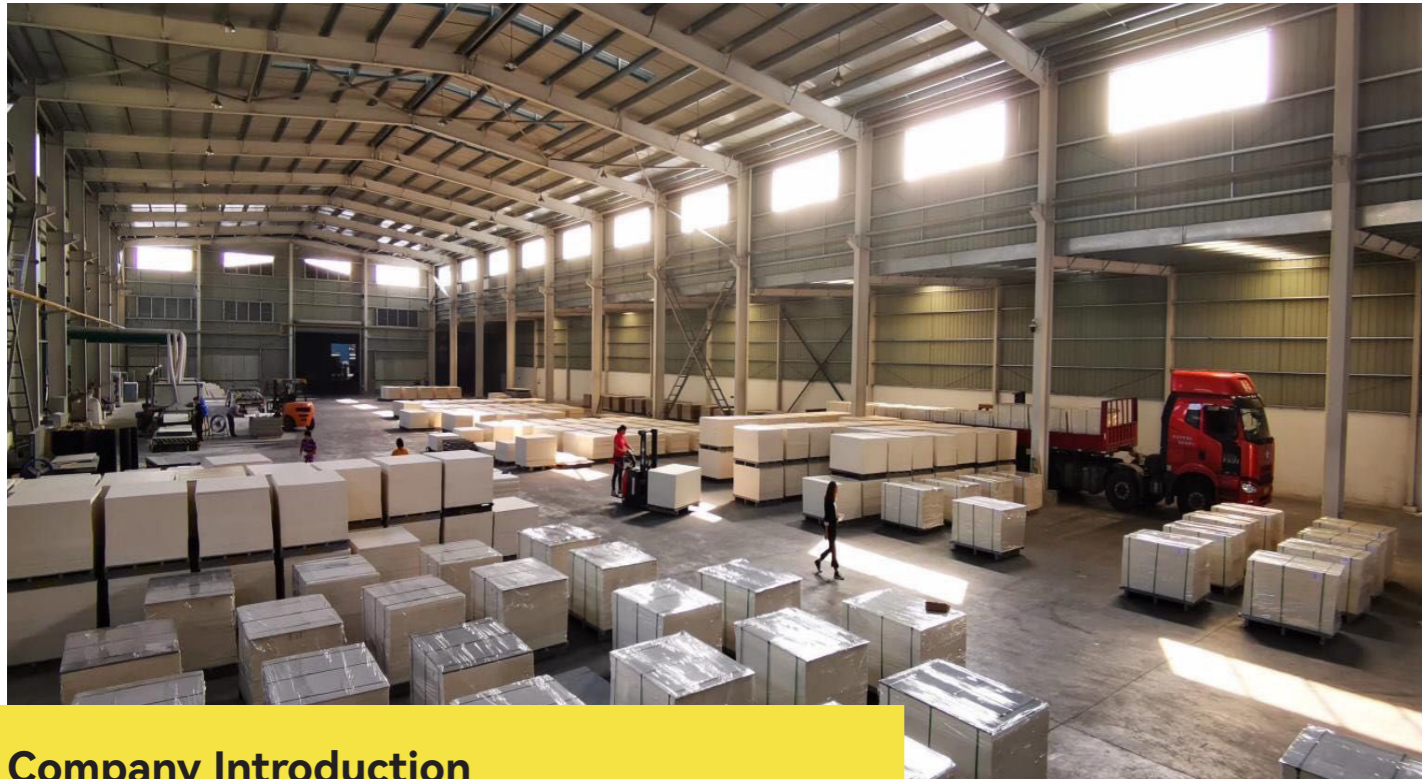


NEW MGO FIRE RATED  
STRUCTURAL SHEATHING  
PANEL



MAGMATRIX  
INTERNATIONAL

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

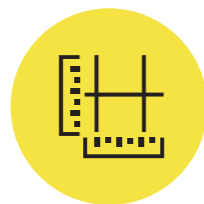
200 million RMB about 31 million USD dollar in the land purchase, plant and production lines set up and huge investment in the research of the BMSC formulation of the MgO panels industry with China top scientists from Beijing University and Tsinghua University, to be a high-and-new-tech enterprise covering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



**2015**  
Since



**50000+**  
Covered area



**200 million**  
Initial investment

## 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 faster installation and offsite job efficacy that also help cut off about 30% greenhouse gas

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 when recycled, light weight that cut green gas during its transportation process versus the traditional Portland cement. It's structurally, what would make offsite and fire rated walls

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 I II in the steel frame buildings system and big market in the Type III IV V building market as wall sheathing panels get the fire-resistant building construction.



## 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



## 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!





# 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-IV V.

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.

**intertek** Division 09 – Finishes  
09 28 15 Magnesium Oxide Backing Panels

JINCHENG MAGNESIUM MATRIX (JIANGSU) INTERNATIONAL TRADE CO., LTD.  
Design No. JMM/MOSP 120-01  
Loadbearing Steel Stud Wall Assembly  
MagMatrix MgO Fire Rated Structural Panel - Perseverance Model  
ASTM E119-20  
Rating: 2 Hour

**Figure 1 – Wall Assembly**

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Version: 0 June 2022 SFT-RC-CP-20

**intertek** Division 09 – Finishes  
09 28 15 Magnesium Oxide Backing Panels

**1. 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 self-tapping pan-head screws.

**2. STUDS:** Use 3-1/2 in. wide x 1-5/8 in. flange, 20 GA, steel studs spaced 24 in. on center (oc).

**3. LATERAL SUPPORT:** 16 GA, steel bracing channel, placed in the center cutout of the studs across the 10 ft. 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.

**4. 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.

**5. INSULATION:** 3 in. thick x 24 in. wide x 48 in. long, 4 pcf Rockwool™ Centryrock® is friction-fit within the stud cavities. The ends of the batts are staggered to avoid continuous joints.

**CERTIFIED PRODUCT:** MagMatrix MgO Fire Rated Structural Panel - Perseverance Model

Two layers of 12mm x 1220mm (4 ft.) wide x 2440mm (8 ft.) long MagMatrix MgO Fire Rated Structural Panel - Perseverance Model are installed vertically onto both sides of the frame. The base layer of board is attached to the framing with 1-1/8 in. long Type 5-12 self-drilling high-head screws at 12 in. oc at the perimeter and field. The face layer of board is attached to the framing with 1-5/8 in. long Type 5-12 screws at 12 in. oc, staggered 6 in. from the base layer fasteners. Edge screws at the vertical joints are located 1/2 in. from the board edge, perimeter screws are located 3/4 in. from the outside edges, and screws along the horizontal joints are located 1 in. from the board ends.

Consult the listing report on the Directory of Building Products (<https://www.intertek.com>) 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 herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

Date Revised: July 7, 2022 Page 2 of 2 Spec ID: 67067  
Version: 06 June 2022 SFT-RC-CP-20



# Perseverance Model MgO Wall Sheathing Panel

MagMatrix Perseverance Model MgO Fire Rated Structural Sheathing Panel CCRP Certification from Intertek. It covers up all the noncombustible grades of ASTM E136 noncombustible and it breakthrough in the MgO board industry 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.

It is designed for type I II for all kinds of noncombustible buildings and also wood frame loading and non-loading bearing walls and also steel & wood-framed floor/ceiling 1-3 hours fire rated constructions.



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 Assembly

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 assemblies. It Meets the ASTM E136 Noncombustible grade for use in all types of noncombustible construction.



## Technical DataSheet

Property	Test Standard	Result	Requirement	Verdict
Density	ASTM C1185	67.5 lbs/ft <sup>3</sup>	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 ≤ 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

Property	Test Standard	Result	Acceptance
Noncombustible Construction	ASTM E136	Meet the requirement of ASTM E136	Meet the requirement of ASTM E136.
Fire Resistance Rated Construction	ASTM E119		Tests shall be conducted in accordance with ASTM E119.
Racking Shear Resistance-on a Standard wood frame	ASTM E72	Dry condition: Ultimate load: 3026 lbf Failure appeared at the vertical joint. Allowable racking shear: 126 lbf	Allowable loading shall be based on a factor of safety of 3.
		Wet condition: Ultimate load: 3093 lbf Failure appeared at the vertical joint. Allowable racking shear: 129 plf	
Exterior Wall Sheathing Resistance to Transverse Loads	ASTM E72	Positive: Ultimate uniform load: 159 psf Failure: Crack in panel. Allowable load: 53 psf	Allowable loading shall be based on a factor of safety of 3.
		Negative condition: Ultimate uniform load: 65 psf Failure: Crack in panel. Allowable load: 22 psf	

### 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



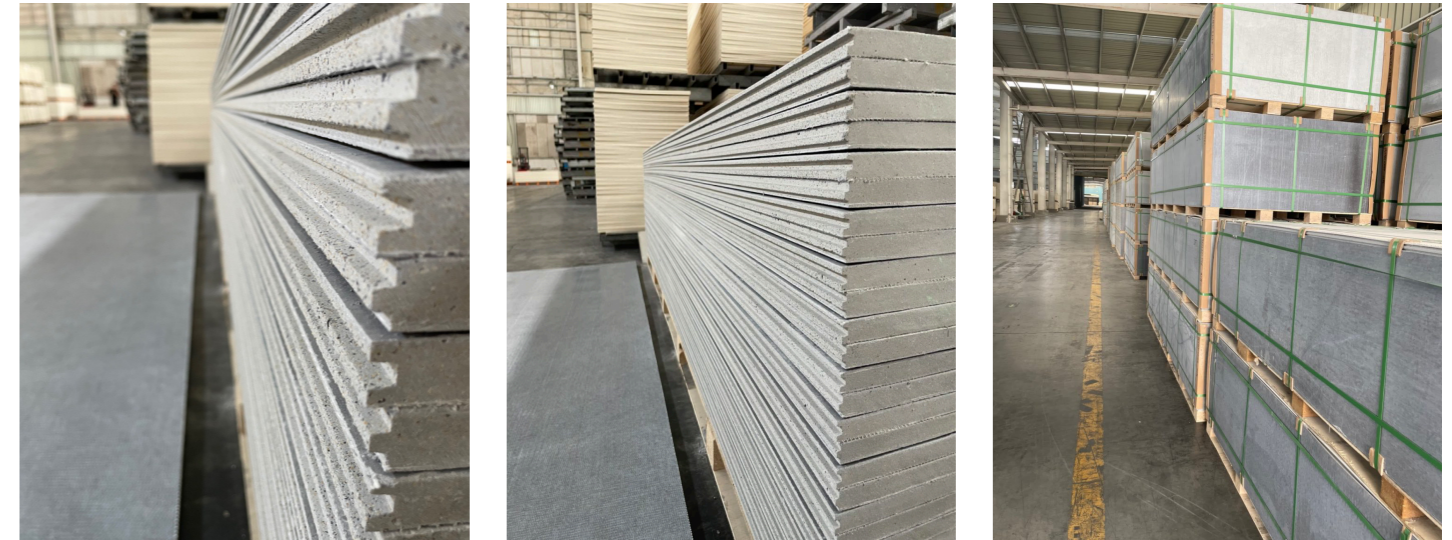
MagMatrix newest generation MgO fire rated structural subflooring panel is a fiber-reinforced magnesium cementitious structural subfloor and roof panel that can be combined with other non-combustible materials to create fire rated floor and roof / ceiling assemblies. It is super fastener withdraw power – holds nails and screws like plywood. It owns advantage of dimension stable – panel will not buckle or warp 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 noncombustible 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. Numerous 1-, 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.



- Modular design
- Dimension stability
- Quick installation



## Perseverance Model MgO Structural Subfloor Sheathing Panel – Data Sheet

Grade	Basic Magnesium Sulfate MgO formula with inorganic substances, 6 layers high tensile glassfiber reinforced layers.
Noncombustible Grade	ASTM E136 noncombustible to meet the ICC & IBC Type I II noncombustible construction
Reaction to Fire	ASTM E84
Density	1200kg/m <sup>3</sup>
Edges	Tongue & Groove
Fire Class Materials	Flame spread - index 0 & smoke - index 0
Tolerance in Thickness / Length / Width	ASTM C 1185-02: +/-0.5%
Mold Resistance	ASTM D3273-12, Scale 1-10 and 10 best: 10
Flexual Strength	ASTM C1185-08 Dry 20Mpa; Wet 18Mpa
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%

# Perseverance Model MgO Structural Subfloor Sheathing Panel



# Perseverance Subfloor Sheathing Test Report

**intertek**  
Total Quality Assured

Intertek Testing Services Shenzhen Ltd. Shanghai Fengan Branch  
Plant 5, No. 6958 Daye Road, Fengan District, Shanghai, China  
Tel: +86 21-61186116 Fax: 021-61189911  
Website: www.intertek.com

### Test Report

Issue Date: 2022-09-08 Intertek Report No. 2208220095HF-003  
Applicant: JINCHENG MAGNESIUM MATRIX (JIANGSU) INTERNATIONAL CO., LTD.  
Address: No.9 Daiwang Road of High Tech. Industrial Zone of Chengfong, Takling City, Jiangsu Province, CHINA.  
ATTN: David Zhao  
Test Type: Performance test, samples provided by the applicant.

Product Name	Brand
MagMatrix Perseverance Model MgO Fire Rated Structural Subfloor Sheathing Panel	MagMatrix

Sample Description	Sample Amount	Received Date
Good Condition	10 pcs	2022-08-15

Sample ID	Model	Specification
SZ208220095HF-002	Perseverance	19*1220mm*2440mm

**Test Methods And Standards**

Test Standard
ASTM C1185-08 (2016)

**Test Conclusion:**  
The samples were tested according to the above standards, and the results are shown in the following page.

**Note:**  
1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.  
2.Test results of equilibrium conditioning were cited from Intertek Report No. 2208220095HF-002.

**intertek**  
Total Quality Assured

### Test Report

Issue Date: 2022-09-08 Intertek Report No. 2208220095HF-003

**Test Items, Method and Results:**

Test Item: Flexural Strength (Modulus of Rupture)  
Test Method: ASTM C1185-08(2016) section 5  
Test Span: 254 mm

Equilibrium Conditioning: Place the test specimens for at least 7 days in a controlled atmosphere of 23 ± 2°C and 50 ± 5 % relative humidity.  
Test Result:

Machine Direction	Flexural Strength	
	(MPa)	(Psi)
	19.2	2779

Note: Only machine direction specimen was provided and tested as per applicant's requirement.

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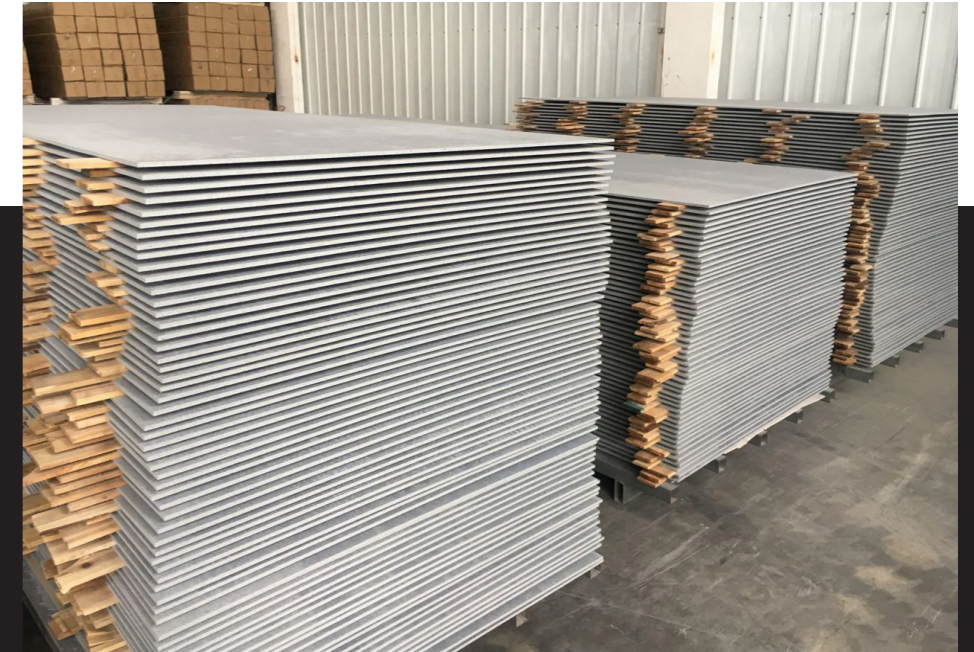


# Multi-Support MgO Board

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 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.

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.



# 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

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.

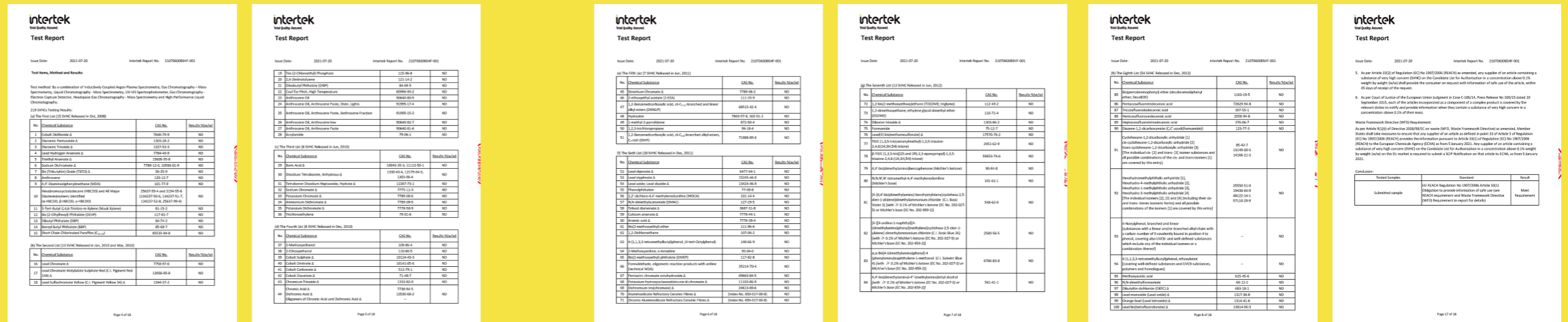
The ASTM E-84 is the standard test method for assessing the surface burning characteristics of building products to explore how the material might contribute to flame spread in the event of a fire. The test reports the Flame Spread index and Smoke Developed index of the tested product

# Multi-Support MgO Board

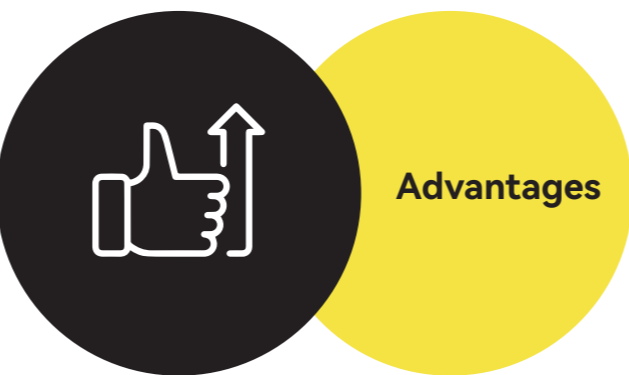
Our board is the revolutionary building board as it is fire rated, structurally, green panels, no VOCs, no asbestos, no heavy metal salts, no toxic antifungal additives, mold-resistant, moisture resistant, and breathable, and cutting off huge Co2 emissions versus fiber cement board and we are very stronger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



# Multi-Support MgO Board Advantages



- 01 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.
- 02 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.
- 03 Chemically Stable**  
 The MgO Multi-Support Board is produced from natural inorganic raw materials, resulting in a strong, durable chemically stable board.
- 04 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<sup>2</sup>/k to achieve a very good & excellent thermal protective level to keep warm very well.
- 05 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.
- 06 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.
- 07 MOISTURE/WATER RESISTANT**  
 Suitable for exposure to elements during construction phase, but should always be finished with a weather protective coat for permanent exposure. Feathers with Impervious to water & Dimensionally stable when wet & Structural when wet & Does not warp & Does not swell & Does not delaminate.
- 08 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.
- 09 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.
- 10 IMPACT RESISTANT**  
 MgO Multi-Support Model is tough to withstand risk of damage during manufacture, transit & fitting with an impact resistance of 34N/mm2.
- 11 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





## Multi-Support Mgo Fire Rated Structural Sheathing Panel

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## 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 Cementitious) chloride-free MgO technology. It is lightweight and high strength. The multi-support model fire-rated structural subfloor panel is resistant to fire, water, and mildew, and insulates to sound and heat. It offers a superior and price-competitive, environmentally friendly alternative to fiber cement and plasterboard products. The subflooring panel also gives a unique engineered cementitious

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

Multi-support fire rated structural subfloor panel is a high-strength, reinforced magnesium-based mineral cementitious panel for use on either the timber frame that can be used to deliver Fire Resistance Level (FRL) 60 - 120 minutes in the down direction. This, in conjunction with its exceptional acoustic performance, makes the structural subfloor panel ideally suited for multi-level lightweight

construction. Lighter than precast or poured 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 of lightweight construction. It begins as a cost-effective substrate flooring for all applications such as bathrooms, living areas, or external decks.

Multi-support MgO fire-rated flooring board is with Tongue & Groove (T&G) edges for substrate floor application. It could be internal or external. It is with a neat secure surface. It could be designed primarily as a substrate for most finishes such as tiles, vinyl, carpet, or timber. It could also be suitable as a finished surface itself.

offices, shops, transportable, kit homes, or additions and renovations to an existing building. It is ideal for: sub-floors; suspended floors and areas where moisture resistance is necessary. It is also an excellent product to receive a wide variety of floor coverings.

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 only 16mm or 19mm thick it outperforms any other comparable product in strength.



- 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





# SIP

## MagMatrix MgO SIP Panels Applications

### MgO Structural Insulated Panel Advantages



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.

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.

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.

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.

## 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 one-

hour 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.

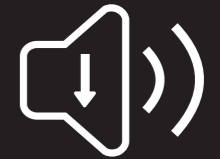
Our Fire Rated Magnesium Oxide Oxysulphate SIP wall offers a flexible modular design that can be reused and reconfigured. The walls also include a wide range of customizable design options such as various wall heights, doors, windows, colors, and finishes. Additionally, the MgO SIP panel offers superior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

# 1200°C

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



Modular design



Noise reduction

## Whole MgO SIP System Benefits and Application

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.

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.

04

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.

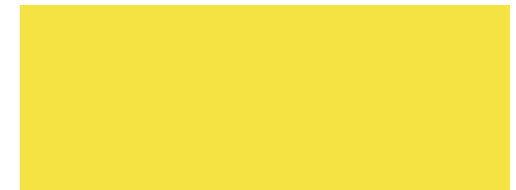
# Whole MgO SIP System Benefits and Application



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.



# OUR MGO PANELS PACKAGE



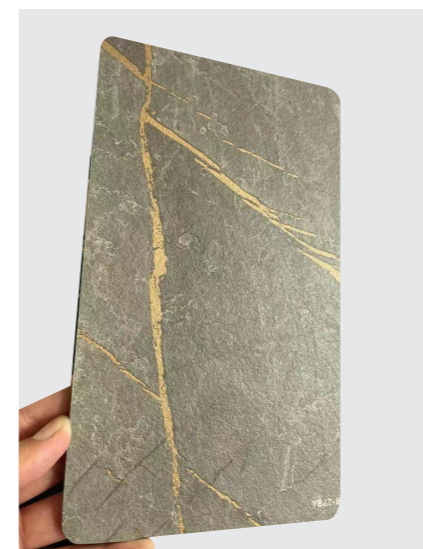
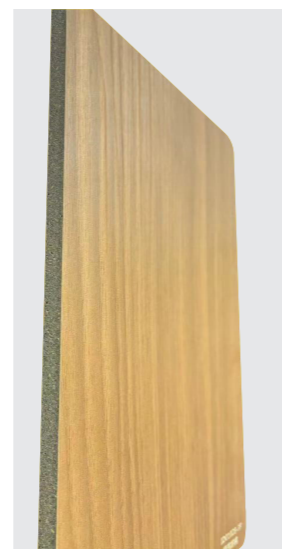
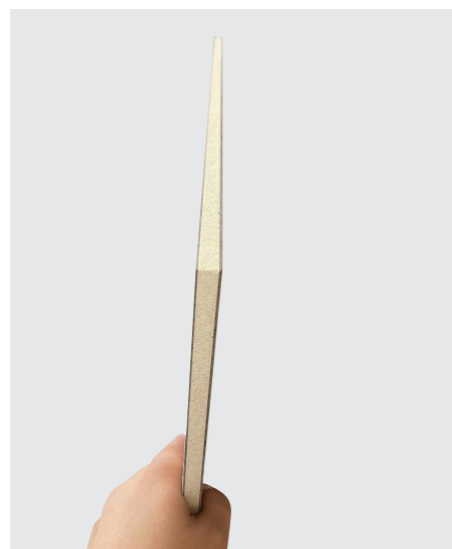
These MgO SIP insulated panels are ideal for residential buildings because they do not spread flames if there is a fire, they are durable, and energy-efficient and they are resistant to mold and mildew. They are also perfect for a residence because they result in lower energy costs, they are basically 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.

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.



**Fire prevention**

**Waterproof**

**Sound insulation**

# We Welcome Your Visit !

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