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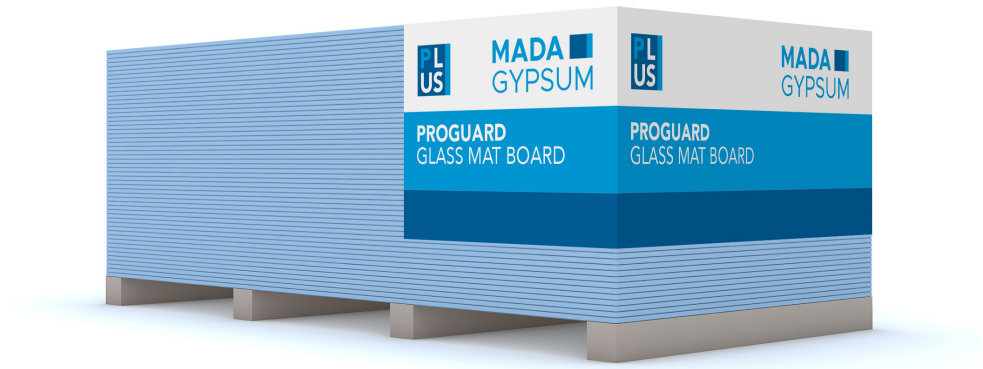
MADA GYPSUM

MADA PROGUARD GLASS MAT SHEATHING BOARD

Technical Data Sheet

TDS-PB-R12-Rev1 Mada ProGuard Glass Mat Sheathing Board - June 2022



Advantage

- Fire resistance Class A to ASTM E84
- Pest resistance
- Mold & Moisture Resistance
- Limitless Design Options
- Improved Insulation (U-Values) and Energy Efficient
- Light Weight
- Ease of Installation
- Score & snap
- Cost Saving Solution
- Excellent Weather Exposure - 12 months warranty
- 10 years System Warranty

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Product Description

Mada ProGuard glass mat sheathing board is a noncombustible, mold, delamination and moisture-resistant sheathing board that meets the onerous requirements of an external substrate. It is designed for use under Exterior Insulation Finish Systems (EIFS), exterior claddings like brick veneer, marble cladding, siding systems, porcelain tiling and conventional stucco or direct render. The reinforced core minimizes the potential for warping, buckling, sagging, and rippling, and fire-resistant additives create a noncombustible sheathing board. Panels are installed vertically using standard mechanical fasteners, to deliver the rigidity and fire-rating of wall and ceiling systems.

Field of Application

- EIFS (Exterior Insulation Finish Systems).
- Cavity brick or stone veneer finishes.
- Cladding systems such as wood / vinyl / composition siding, plywood panels. wood shingles / shakes, and conventional stucco finishes.
- Interior finishes requiring a substrate panel with superior fire and moisture resistance.

Manufacturing Standard

- Mada ProGuard glass mat sheathing boards are designed and produced to ASTM C1177 / C1177M Type X and EN 15283-1:2008 Type GM-H1, GM-R, GM-F and GM-I Class 1 Standards.
- Mada ProGuard glass mat sheathing boards has been tested in accordance with ASTM E84, ASTM C1658 and ASTM E119.

Tested and Certified as part of complete Mada System to ASTM E119 for Fire Rated Systems

Product Characteristics

- Length: Standard lengths are 2400mm and 3000mm. Special lengths are 1800mm to 4500mm.
- Width: 1200mm.
- Thickness: 12.5mm and 16mm.
- Edge: Square
- Color: Light blue / White on face and on back side.

Warranted Performance

Mada ProGuard glass mat sheathing is warranted against manufacturing defects for a period of 5 years, and damage from weather exposure for 12 months.

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Technical Specification

Parameters	Applicable standard	ProGuard Board Thickness	
		12.5mm	16mm
Weight (kg/m^2)	± 0.2	10.6	13.3
Board Density (kg/m^3)	Minimum	832	819
Flexural Strength (N) (Longitudinal))	ASTM C1177 / C1177M	≥ 445	≥ 623
	EN 15283-1:2008	≥ 537.5	≥ 688
Flexural Strength (N) (Transverse)	ASTM C1177 / C1177M	≥ 356	≥ 445
	EN 15283-1:2008	≥ 210	≥ 268.8
Nail Pull Resistance (N)	ASTM C1177 / C1177M	≥ 356	≥ 402
Water Absorption (%)	ASTM C1177 / C1177M	≤ 5	
	EN 15283-1:2008	H1	
Flame Spread Index	ASTM E84	25 or less	
Smoke Developed Index	ASTM E84	450 or less	
Asbestos (% by weight)	-	No asbestos fibers detected	

Test Data

For Design Shear and Wind Load Capacities, consult with Mada Gypsum Technical Team.

Design Considerations

Façade Performance

Despite being an essential architectural component, most façade designs tend to be utilitarian in nature. Traditionally, façade requirements have included being aesthetically pleasing, providing some weather protection as building visitors enter and exit, or providing an area for signage.

Today's facades still serve their original purpose, but they must be designed like every other part of the structure with includes considering:

- Acoustic performance
- Fire-resistance requirements
- Thermal performance

These three factors have the largest impact on energy consumption, and long-term maintenance and operational costs, posing a difficult challenge for many architects and designers.

Steel Frame External Wall System

This option combines lightweight steel framing, thermal insulation, and gypsum boards to provide a cost-effective solution suitable for all types of buildings and projects. Mada Gypsum offers a fully engineered, certified, and tested building envelope system with up to a 2-hour fire-rating for tenants, visitors, or employee's peace of mind and safety.

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Fastening and Framing

ProGuard Board Thickness	Framing Spacing	Panel Orientation	Fastener Spacing-Metal Framing[c]
12.5mm	600 mm o.c. max[a,b]	Parallel or Perpendicular	200 mm o.c. along framing
16mm	600 mm o.c. max[b]	Parallel or Perpendicular	200 mm o.c. along framing

a. Only for mechanically attached claddings. When specified behind EIFS, maximum framing spacing for single layer 12.5 mm Mada ProGuard glass mat sheathing is 400 mm o.c.
b. For racking strength resistance, apply panel edges parallel with framing spaced a maximum of 400 mm o.c. for both 12.5 mm and 16 mm Mada ProGuard glass mat sheathing.
c. Fire-rated assemblies may require additional fasteners, see specific assembly details.

Fastener	Description	Application	Proguard Board		
			12.5mm	16mm	Layers
	Bugle head fine thread, corrosion-resistant drill point drywall screw	ProGuard Sheathing to heavy-gauge metal framing (18 gauge or thicker)	25mm	35mm	Single
			35mm	42mm	Double
	Bugle head fine thread, corrosion-resistant sharp point drywall screw	ProGuard Sheathing to light-gauge metal framing furring (20-25 gauge)	25mm	35mm	Single
			35mm	42mm	Double

Recommendations

Installed Mada ProGuard glass mat sheathing board must be covered by the exterior cladding system within a 12-month period.

Mada ProGuard glass mat sheathing board is water-resistant, but it's not suitable for prolonged exposure to rainfall.

Framing and application details and requirements shall be determined from the weather-resistant barriers, cladding, structural assemblies, and fire-resistance requirements for the project, and must be approved by the project architect, engineer, or designer.

Avoid conditions during construction that could result in an excessive moisture load inside the building. Items such as forced-air heaters, masonry, or concrete pouring and finishing produce large volumes of water vapor, which can condensate in unfinished exterior wall cavities. Use ventilation or dehumidification to reduce moisture levels below the dew point of the outside air. Any damage resulting from improper moisture management is not the responsibility of Mada Gypsum.

Panels are heavy and could fall over causing injury or death. Always store panels flat, unless directed otherwise by the site manager to eliminate tripping hazard or avoid point overloading of the floor structure.

Handling and Storage

- Mada ProGuard glass mat sheathing boards must be stored on a firm, dry, and structurally sound flooring assembly, using pallets or board packs to avoid direct contact with the floor and moisture sources.
- Never stack pallets higher than 4 pallets in height.
- Do not store other materials on top of Mada Proguard pallets.
- Protect mada ProGuard boards from direct rain, wind, sunlight, or other inclement weather conditions.

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Limitations

- Mada ProGuard glass mat sheathing board shall not be used as a nail base for exterior cladding system.
- The specific requirements for frame spacing, fastener spacing, and fastener details to provide lateral wind-load resistance are the responsibility of the project architect, engineer, or designer (Refer to technical data and specifications on the following pages).
- Mada ProGuard glass mat sheathing is weather-resistant but is not designed for constant water exposure. If extreme weather exposure is a possibility, the design professional should consider treating the panel joints, or installing a weather-resistant barrier.
- Do not laminate panels to masonry surfaces or substrates, use furring or framing material for attachment purposes.
- Maximum stud spacing is 600mm on center.
- Mada ProGuard glass mat sheathing is not a finished surface.

Precautions for safe handling

- Minimize dust generation for sawing or sanding purposes in poorly ventilated areas.
- When working with individual sheets, always work from a single pallet, do not pull from stacks.
- Avoid eye contact – refer to Safety Data Sheet for hazard identifications and personal protective equipment.
- Mada Proguard will not support body weight between rafters, joists, and framing members.
- Manual handling – Mada Proguard sheets can be awkward without using an appropriate lifting technique. The weight of each sheet can vary based on different size and thickness factors.
- Mechanical handling – Pallet dimensions will vary, depending on the size of the plasterboards. To avoid overloading the lift truck, always check the palletized load weight provided within the weight tables.

Conditions for safe storage, including any incompatibilities

Storage - Store on pallets supplied in dry conditions to separate product from ground surface. Always place pallets on firm level ground and ensure that stacks are both level and vertical.

The maximum stack heights on level concrete on level concrete floors and vertical stacks are as follows:

Board width (mm)	Board length (mm)	Pallet stack height pack
1200	2400, 3000	4

Material Packing Details

Thickness	12.5mm	16mm
Boards per Pallet	72	50

Note: Pallet weight may vary depending on packing (protection board, spacers ...).