PANEL REY®
Drywall Solutions

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GLASS REY

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Exterior Sheathing Board

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Description

Panel Rey GlassRey® exterior sheathing board is a gypsum board made of an incombustible, specially treated core that provides resistance to water absorption, protected on both sides by a mold and moisture resistant fiberglass coating with an ASTM3273 grade of 10. It assures good performance up to 12 months against degradation, delamination, and deterioration of use on normal conditions, or if exposed to normal weather conditions, such as UV rays, rain, wind, ice and snow.

Panel Rey GlassRey® presents dimensional stability, which guarantees resistance to deformation, undulation, and deflection on uniform surfaces. Given the glass mat fiber distribution, it is highly resistant to bending in both directions, therefore, it may be installed in a vertical or horizontal position to structural wall elements, according to standard installation recommendations.

Basic applications

Given its outstanding performance, Panel Rey GlassRey® is ideal for either direct-applied exterior finishing systems (DEFS) or exterior insulated finishing systems (EIFS) on walls and ceilings as well as substrate for stucco, bricks, and stone finish. Likewise, it is the ideal substrate for adhesion or mechanic application of expanded polystyrene (EPS) or extruded polystyrene insulation for interior finish that require a moisture, mold or fire-resistant substrate.

Panel Rey GlassRey® is recommended for extreme climate zones. Please check the local codes, professional designs, and consult with the owner or manufacturer of the coating in order to verify outdoor resistance requirements.

Advantages

- Moisture resistant.
- Warranty against deterioration or delamination exposed for 12 months under normal weather conditions.
- Mold resistance according to standard ASTM D3273.
- Fire resistance according to standard ASTM E136.
- Dimensionally stable under temperature and humidity changes.
- It does not require special cutting equipment and easy to install.

Good Installation practices

Install according to the recommendations established in the Gypsum Association GA-253 (Application of Gypsum Sheathing) or standard ASTM C1280 (Standard Specification for Application of Gypsum Sheathing). Install the material with the product logos facing out the wall or ceiling.

For exterior roof applications (soffit or projections) we recommend to apply two layers of base coat to the joint with tape and fiberglass mesh in order to obtain an even surface. Subsequently cover them with a sealer for exterior use and two layers of elastomeric paint or acrylic texture for outdoor use, in accordance with the corresponding manufacturer's recommendations.

Handling and storage

Panel Rey GlassRey® does not generate or favor growth of mold and fungus during transport, storage, handling or installation. It must be stored in an area protected against extreme weather and kept dry. During transport, the product must be covered. Make sure to remove any protection cover upon arrival in order to avoid favorable conditions for the growth of microorganisms.

Do not store the gypsum boards directly on the ground. Use enough shims (for a 8' long panel, 4 to 5 shims per stack are recommended) in order to provide adequate longitudinal support and avoid damage. Be careful not to damage or mistreat the product edges in order to assure a correct installation. The gypsum board must always be stacked in a horizontal manner, never on its edges or ends.

For further information, check standard GA-801 regarding the Handling and Storage of Plaster Panel Products.

Limiting factors

- Panel Rey GlassRey® can resist extreme weather conditions, but it is not designed for water immersion. Water flow on the floor or roof must be moved away from its surface until an appropriate drainage system is installed.
- Do not install a damaged board.
- The spacing between frames shall not exceed 24" (610 mm) between the center points for ½" panels. The designer shall be responsible for establishing the requirements for a correct performance against wind loads.
- Avoid any condition that may produce atmospheric humidity and condensation on outside walls during periods in which outdoor temperature is lower than indoor temperature.
- Panel Rey GlassRey® is not designed as final finish. It must be coated and, preferably, according to the recommendations for a DEFS or EIFS system.
- All elements of the design must be properly installed such as screws every 8", sealers and control joints with a maximum clearance of 32' (feet) in horizontal and vertical directions.
- Openings and penetrations must be properly sealed; otherwise warranty will be null and void.
- For further information, please contact the technical department of Panel Rey.
- Panel Rey® does not guarantee nor assume any responsibility for the performance or output of the exterior finish applied to Panel Rey GlassRey®.
- The suitability and compatibility of any system is responsibility of the manufacturer or design authority.
- Do not install the board directly on brickwork; use frames or slats. It is not designed for roofing or as substrate rest for roof tiles.
- Gypsum boards are not a structural element and must not be used for screwing or nailing objects directly to them.
- Apply good installation practices in order to avoid space between joints, movements of the installed gypsum board and infiltrations, given that this may void the warranty of the product.

Product information

Rated Dimensions				
Thickness	Width	Length	Edge type	Type
1/2" (12.7 mm)	4' (1219 mm)	8´(2438 mm)*	Squareness	-
5/8" (15.9 mm)	4' (1219 mm)	8´(2438 mm)*	Squareness	GRX

* Special lengths are available upon request. Subject to restrictions.

Description of main characteristics

Resistance

Mold:

Panel Rey GlassRey® is evaluated by a certified laboratory to proof its mold resistance according to standard ASTM D3273. In this test, the product was rated with the value 10, which implies an excellent resistance to this type of microorganisms and zero mold growth during the test.

Tension:

During its installation, the product must conserve an adherence between fiberglass mat and the gypsum core, so that the product may assure the protection of the structure and withstand the movements caused by latter. Panel Rey GlassRey® presents an excellent adherence, which increases the resistance to tension according to standard ASTM C297.

Thermal:

The light construction system is extremely ecological, given that it fosters favorable savings of energy, thanks to its insulating characteristics. Panel Rey GlassRey® has been evaluated in order to determine its heat resistance according to standard ASTM C518.

Compression:

The panel core is highly resistant to compression according to ASTM C473, leading to a stable product and avoiding the generation of cracks and deformations in the facade.

Fire protection:

Panel Rey Glass Rey® has been tested according to standard ASTM E136 in order to determine its efficient fire-resistant performance, given that does not present any flame generation, which makes it an incombustible product.

Panel Rey Glass Rey 5/8" is classified by Underwriters Laboratories, Inc. (UL), pursuant to ASTM E-119 and E-84 standards.

Fire Resistance Classification Type GREX
Surface Burning Characteristics
Flame Spread 0
Smoke Developed 0

See UL Directory of Products Certified for Canada and UL Fire Resistance Directory

Thermal expansion:

Due to its nature, the gypsum board presents slight expansion and contraction when exposed to temperature and humidity. In both cases, the extent depends on the expansion coefficient; Panel Rey Glass Rey® has low expansion coefficients, which helps to avoid the generation of cracks due to climatic changes as well as the reduction on the use of control joints. The expansion coefficients were obtained according to the standards ASTM D1037 and E228.

Permeance:

The durability of a structure depends on its ability to adapt to climatic changes. Panel Rey Glass Rey® presents a good performance regarding vapor transmission according to standard ASTM E96.

Racking Resistance:

This product is evaluated and tested against transversal movements in order to measure its capacity to resist such forces and to determine its performance against high intense winds gusts and seismic movements. Tests in accordance with the ASTM E72 standard procedures.

Thickness	Racking Resistance* (3 safety factor)	Space between studs (O.C.)	Space between fasteners (O.C.)		Screws
			Perimeter	Intermediate	
1/2" (12.7 mm)	127 plf (1.85 kN/m)	16"	4"	8"	#6 X 1 1/4"
5/8" (15.9 mm)	143 plf (2.10 kN/m)	24"	4"	8"	#6 X 1 5/8"

* Calculation based on a 3 safety factor.

Wind Resistance:

This product has been tested for its resistance to remain fixed to the main structure under pressure caused by strong winds, in accordance with the ASTM E330 standard.

Space between fasteners (O.C.)	8"		Screws
Space between studs (O.C.)	16"	24"	
1/2" (12.7 mm)	32 psf	16 psf	#6 X 1 1/4"
5/8" (15.9 mm)	49 psf	25 psf	#6 X 1 5/8"

* Calculation based on a 3 safety factor.

Physical Characteristics				
Characteristics / Properties	UNITS	1/2"	5/8"*	Method
Nominal Thickness	in/1000	500 ± 62.5	625 ± 62.5	ASTM C-1177
Width	in	Nom – 0.125	Nom – 0.125	ASTM C-1177
Length	in	Nom ± 0.25	Nom ± 0.25	ASTM C-1177
End Squareness	in	± 0.125	± 0.125	ASTM C-1177
Weight1	lb/ft^2 kg/Pz 4x8	1.90 27.6	2.45 35.6	-
Flexural Strength (Parallel to fiber)	Lb $_f$	≥ 80	≥ 100	ASTM C-1177
Flexural Strength (Across to fiber)	Lb $_f$	≥ 100 ≥ 107	≥ 140 ≥ 147	ASTM C-1177 ASTM C-1396
Racking Strength – dry [1]	Lb /ft	> 379	> 430	ASTM E-72
Humidified Deflection	in	≤ 1/4"	≤ 1/8"	ASTM C-1177
Nail Pull / Nail Pull Resistance	Lb $_f$	≥ 80	≥ 90	ASTM C-1177
Core Hardness	Lb $_f$	≥ 15	≥ 15	ASTM C-1177
Edge Hardness	Lb $_f$	≥ 15	≥ 15	ASTM C-1177
Moisture Resistance	%	≤ 10	≤ 10	ASTM C-1177
Permeance [1]	perms	40	33	ASTM E-96
R Value [1]	°F•ft2•hr/BTU	0.45	0.45	ASTM C-518
Combustibility [1]	-	Noncombustible		ASTM E-136
Flame Spread / Smoke Developed [1]	-	0 / 0	0 / 0	ASTM E-84
Linear Expansion with change in moisture [1]	in/in/%RH	5.03 x 10 $^{-6}$	5.03 x 10 $^{-6}$	ASTM D-1037
Coefficient of Thermal Expansion [1]	in/in/°F	9.43 x 10 $^{-6}$	9.43 x 10 $^{-6}$	ASTM E-228
Compressive Strength [1]	psi	≤ 700	≤ 700	ASTM C-473
Mold Resistance	-	10	10	ASTM D-3273

Information based on properties and performance of materials and systems obtained under strict controlled test conditions under the appropriate ASTM standars.

Certification Marks:

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PANEL REY®
Drywall Solutions

12 month warranty on outdoor exposure

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