



USG SECUROCK® BRAND ULTRALIGHT GLASS-MAT SHEATHING

REGULAR AND FIRECODE® X

Ultralightweight 1/2 in. (12.7 mm) Regular and 5/8 in. (15.9 mm) Type X glass-mat sheathing with moisture and mold resistance—up to 15% lighter than other glass-mat sheathings

- Feature a coated fiberglass facer mat to maximize coverage of fluid-applied air/water barrier systems
- Treated gypsum core, combined with fiberglass face and back, offers exceptional water resistance
- Comply with ASTM C1177, *Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing*, for 1/2 in. (12.7 mm) Regular, 5/8 in. (15.9 mm) Type X and glass-mat water-resistant gypsum substrate
- Score a "10" when tested in accordance with ASTM D3273, *Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber*
- Underwriters Laboratories Inc. (UL) Classification of 1/2 in. (12.7 mm) panels as to surface burning characteristics and noncombustibility
- UL Classification of 5/8 in. (15.9 mm) panels as to fire resistance, surface burning characteristics and noncombustibility
- Guaranteed for five years against manufacturing defects and have a 12-month limited-exposure warranty

DESCRIPTION

Available in 1/2 in. (12.7 mm) Regular and 5/8 in. (15.9 mm) Type X thicknesses, USG Securock® Brand UltraLight Glass-Mat Sheathing (Regular and Firecode® X) are lightweight glass-mat sheathing panels with moisture and mold resistance—up to 15% lighter than other glass-mat sheathings. The panels feature a noncombustible, moisture-resistant gypsum core that is encased in a coated fiberglass facer mat to maximize coverage of fluid-applied air/water barrier systems. When tested in accordance with ASTM D3273, *Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber*, the panels score a "10." The 5/8 in. (15.9 mm) Type X panels are UL Classified for fire resistance and can be used in any UL Design in which Type USGX panels are listed.

INTENDED FOR

- Commercial or residential applications where 1/2 in. (12.7 mm) Regular or 5/8 in. (15.9 mm) Type X sheathing panels with moisture and mold resistance are required
- Areas where glass-mat panels are desired in new or repair and remodel construction
- Use in most exterior systems when properly detailed by exterior finish manufacturer
- Under exterior claddings where conventional gypsum sheathing products have traditionally been used, such as brick veneer, properly detailed Exterior Insulation Finish Systems (EIFS), clapboard siding, panel siding and conventional siding
- 1/2 in. (12.7 mm) Regular and 5/8 in. (15.9 mm) Type X panels can be used in non-fire-rated wall, protected exterior soffit and ceiling applications
- 5/8 in. (15.9) Type X panels can be used in load-bearing and nonload-bearing wood- or steel-framed fire-rated wall applications

LIMITATIONS

1. Avoid sustained exposure to temperatures exceeding 125°F (52°C).
2. Must be stored off the ground and under cover in accordance with Gypsum Association's GA-801, *Handling and Storage of Gypsum Panel Products*.
3. These panels offer resistance to normal weather conditions, but are not intended for constant exposure to water. Protect panels from immersion in water and the eroding effects of cascading, pooling and/or ponding water.
4. Avoid conditions during construction that result in excessive moisture load in the building. High moisture can cause condensation in the unfinished exterior walls during periods of cold weather. Forced air heaters, wet masonry, poured concrete and finishing materials introduce large volumes of water vapor into the building as they cure or dry. Use ventilation and mechanical dehumidification to reduce moisture levels to below the dew point temperature of the exterior air. Any damage resulting from insufficient interior moisture management during construction is not the responsibility of USG.

LIMITATIONS, CONT.

5. Panels are not to be used as a base for nailing or other fastening; mechanical attachment of exterior claddings must be made directly to the framing.
6. Panels are not to be directly laminated to masonry surfaces; use furring strips or framing.
7. Panels are not intended as a substrate for adhered tile applications.
8. For protected exterior ceiling and soffit applications, the panels must be protected from direct exposure to weather. Refer to the *USG Gypsum Construction Handbook* for installation recommendations.
9. For parapet applications, hot mopping and torching of the roofing membrane to the panels is not recommended. The use of a synthetic rubberized membrane with an adhesive backer is recommended for this application. Prior to installation, consult with the roofing membrane manufacturer to confirm compliance and installation guidelines.

EXTERIOR INSTALLATION

Panels shall be installed in accordance with Gypsum Association's GA-253, *Application of Gypsum Sheathing*, ASTM C1280, *Standard Specification for Application of Gypsum Sheathing* and the requirements of USG literature *USG Securock® Brand UltraLight Glass-Mat Sheathing Installation Guide* (WB2451).

Details for construction of a specific assembly to achieve a required fire-resistance-rating shall be installed in accordance with the published design.

Details and requirements pertaining to framing and application limitations shall be controlled by the weather-resistive barrier requirements, cladding, structural or fire-resistance-rated system, and must be approved by the architect, engineer or design professional of record.

Where resistance to racking shear and/or transverse wind load is required, system design capacities shall be obtained from published USG literature, engineering evaluations and/or test reports of a specific assembly where mandated by local code requirements.

Use best practices for sound control design and installation to ensure optimal installed acoustical performance. For more information, refer to the *USG Gypsum Construction Handbook* and Gypsum Association's GA-600, *Fire Resistance and Sound Control Design Manual*.

TEST DATA 1/2 IN. (12.7 MM)

Property		ASTM Test Method	Requirement	Regular
Noncombustibility		E136	Noncombustible	Meets
Surface burning characteristics	Flame spread	E84	Flame Spread Index, not greater than 25	0
	Smoke developed	E84	—	0
	Class A	E84	Flame spread not greater than 25 and smoke developed not greater than 450	Meets
Core hardness	Field	C473 (B)	Not less than 15 lbf (67 N) ¹	Meets
	End	C473 (B)	Not less than 15 lbf (67 N) ¹	Meets
	Edge	C473 (B)	Not less than 15 lbf (67 N) ¹	Meets
Flexural strength	Parallel	C473 (B)	Not less than 80 lbf (356 N) ¹	Meets
	Perpendicular	C473 (B)	Not less than 100 lbf (445 N) ¹	Meets
Humidified deflection		C473	Not greater than 1/4 in. (6mm) ¹	Meets
Nail pull resistance		C473 (B)	Not less than 80 lbf (356 N) ¹	Meets
Bending radius (dry)²		—	—	9 ft. (2.7 m.)
R-Value		C518	—	0.40°F•sq. ft. •hr/BTU (0.07 K•m ² /W)
Water vapor permeance		E96	—	34.4 perms (1693 ng/Pa.s.m ²)
Linear expansion with moisture changes³		—	—	6.25 x 10 ⁻⁶ in./in. %RH (11.25 x 10 ⁻⁶ mm/mm %RH)
Coefficient of thermal expansion		D4535	—	8.5 x 10 ⁻⁶ in./in./°F (15.3 mm/mm/°C)

Notes:

1. Per ASTM C1177 for 1/2 in. (12.7 mm) glass-mat gypsum substrate.
2. Due to the variability in environmental conditions of each installation, the framing and fastener spacing of curved walls should be reduced as the radius approaches the minimum allowed. At the minimum radius, it is recommended that fastener and frame spacing be 6 in. (150 mm) OC.
3. Per GA-235, *Gypsum Board Typical Mechanical and Physical Properties*.

TEST DATA, CONT.

**1/2 IN. (12.7 MM)
DESIGN SHEAR CAPACITIES⁴**

Panel Orientation to Framing	Frame Spacing (OC)	Fastener Type	Fastener Spacing (OC)		Design Shear
			Perimeter	Field	
Parallel	16 in. (406 mm)	#6 Bugle Head Screw	4 in. (100 mm)	8 in. (200 mm)	161.7 plf (240.6 kg/m)
Parallel	16 in. (406 mm)	Hot Dipped Galv. Roofing	4 in. (100 mm)	8 in. (200 mm)	122.0 plf (181.5 kg/m)

Note:

4. Based on testing per ASTM E72, *Standard Test Methods of Conducting Strength Tests of Panels for Building Construction*; refer to Pei Evaluation Service[®] Product Evaluation Report PER-08029-C for additional detail. Capacities represent the ultimate capacity divided by a 3.0 Safety Factor.

**1/2 IN. (12.7 MM)
WIND LOAD DESIGN CAPACITIES⁵**

Frame Spacing	Fastener Spacing	Allowable Pressure
12 in. (305 mm)	4 in. (100 mm)	82 psf (3.9 kPa)
	6 in. (150 mm)	35 psf (1.7 kPa)
	8 in. (200 mm)	26 psf (1.2 kPa)
16 in. (406 mm)	4 in. (100 mm)	40 psf (1.9 kPa)
	6 in. (150 mm)	41 psf (2.0 kPa)
	8 in. (200 mm)	26 psf (1.2 kPa)
24 in. (610 mm)	4 in. (100 mm)	33 psf (1.6 kPa)
	6 in. (150 mm)	17 psf (0.82 kPa)
	8 in. (200 mm)	18 psf (0.86 kPa)

Note:

5. Based on testing per ASTM E330, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*; refer to Pei Evaluation Service[®] Product Evaluation Report PER-08029-C for additional detail. Applicable for both wood and steel framing. Allowable capacities are based on a maximum deflection of L/360. Allowable capacities represent the ultimate capacity of the panel to resist fastener pull-through and/or flexural failure using a 3.0 Safety Factor. The withdrawal resistance of fasteners from framing is different on several factors, including but not limited to, fastener type, fastener length and framing properties. The specification of fasteners is the responsibility of the designer of record.

5/8 IN. (15.9 MM)

Property		ASTM Test Method	Requirement	UL Type USGX
Noncombustibility		E136	Noncombustible	Meets
Surface burning characteristics	Flame spread	E84	Flame Spread Index, not greater than 25	0
	Smoke developed	E84	—	0
	Class A	E84	Flame spread not greater than 25 and smoke developed not greater than 450	Meets
Core hardness	Field	C473 (B)	Not less than 15 lbf (67 N) ⁶	Meets
	End	C473 (B)	Not less than 15 lbf (67 N) ⁶	Meets
	Edge	C473 (B)	Not less than 15 lbf (67 N) ⁶	Meets
Flexural strength	Parallel	C473 (B)	Not less than 100 lbf (445 N) ⁶	Meets
	Perpendicular	C473 (B)	Not less than 140 lbf (623 N) ⁶	Meets
Humidified deflection		C473	Not greater than 1/8 in. (3 mm) ⁶	Meets
Nail pull resistance		C473 (B)	Not less than 90 lbf (400 N) ⁶	Meets
Bending radius (dry)⁷		—	—	9 ft. (2.7 m.)
R-Value		C518	—	0.50°F•sq. ft.•hr/BTU (0.09 K•m ² /W)
Water vapor permeance		E96	—	28.6 perms (1609 ng/Pa.s.m ²)
Linear expansion with moisture changes⁸		—	—	6.25 x 10 ⁻⁶ in./in. %RH (11.25 x 10 ⁻⁶ mm/mm %RH)
Coefficient of thermal expansion		D4535	—	8.5 x 10 ⁻⁶ in./in./°F (15.3 mm/mm/°C)

Notes:

- Per ASTM C1177 for 5/8 in. (15.9 mm) glass-mat gypsum substrate.
- Due to the variability in environmental conditions of each installation, the framing and fastener spacing of curved walls should be reduced as the radius approaches the minimum allowed. At the minimum radius, it is recommended that fastener and frame spacing be 6 in. (150 mm) OC.
- Per GA-235, *Gypsum Board Typical Mechanical and Physical Properties*.

TEST DATA, CONT.

**5/8 IN. (15.9 MM)
DESIGN SHEAR CAPACITIES⁹**

Panel Orientation to Framing	Frame Spacing (OC)	Fastener Type	Fastener Spacing (OC)		Design Shear
			Perimeter	Field	
Parallel	24 in. (610 mm)	#6 Bugle Head Screw	4 in. (100 mm)	8 in. (200 mm)	180.2 plf (268.1 kg/m)
Parallel	24 in. (610 mm)	Hot Dipped Galv. Roofing Nail	4 in. (100 mm)	8 in. (200 mm)	148.3 plf (220.7 kg/m)

Note:

9. Based on testing per ASTM E72, *Standard Test Methods of Conducting Strength Tests of Panels for Building Construction*; refer to Pei Evaluation Service® Product Evaluation Report PER-08029-C for additional detail. Capacities represent the ultimate capacity divided by a 3.0 Safety Factor.

**5/8 IN. (15.9 MM)
WIND LOAD DESIGN CAPACITIES¹⁰**

Frame Spacing	Fastener Spacing	Allowable Pressure
12 in. (305 mm)	4 in. (100 mm)	96 psf (4.6 kPa)
	6 in. (150 mm)	70 psf (3.4 kPa)
	8 in. (200 mm)	50 psf (2.4 kPa)
16 in. (406 mm)	4 in. (100 mm)	75 psf (3.6 kPa)
	6 in. (150 mm)	50 psf (2.4 kPa)
	8 in. (200 mm)	46 psf (2.2 kPa)
24 in. (610 mm)	4 in. (100 mm)	36 psf (1.7 kPa)
	6 in. (150 mm)	27 psf (1.3 kPa)
	8 in. (200 mm)	25 psf (1.2 kPa)

Note:

10. Based on testing per ASTM E330, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*; refer to Pei Evaluation Service® Product Evaluation Report PER-08029-C for additional detail. Applicable for both wood and steel framing. Allowable capacities are based on a maximum deflection of L/360. Allowable capacities represent the ultimate capacity of the panel to resist fastener pull-through and/or flexural failure using a 3.0 Safety Factor. The withdrawal resistance of fasteners from framing is different on several factors, including but not limited to, fastener type, fastener length and framing properties. The specification of fasteners is the responsibility of the designer of record.

MOISTURE AND MOLD RESISTANCE

Based on testing per ASTM C473, *Test Methods for Physical Testing of Gypsum Panel Products*, the average water absorption for USG Securock® Brand UltraLight Glass-Mat Sheathing (Regular and Firecode® X) is not greater than 10% by weight after two-hour immersion.

In independent lab tests conducted per ASTM D3273 at the time of manufacture, the panels score a "10", meeting ASTM C1177 specifications. This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

PRODUCT DATA

	Regular	UL Type USGX
Thickness	1/2 in. (12.7 mm)	5/8 in. (15.9 mm)
Lengths¹¹	8-12 ft. (2438-3658 mm)	8-12 ft. (2438-3658 mm)
Width	4 ft. (1219 mm)	4 ft. (1219 mm)
Weight¹², nominal	1.7 lb./sq. ft. (8.3 kg/m ²)	2.2 lb./sq. ft. (10.7 kg/m ²)
Edges	Square	Square

Notes:

11. Other sizes available by special order. Check with your local USG representative for availability.

12. Represents approximate weight for design and shipping purposes. For specific product weight in your area, contact your local USG representative or call the Customer Service Center at 800 950-3839.

COMPLIANCE

- Comply with ASTM C1177 for 1/2 in. (12.7 mm) Regular, 5/8 in. (15.9 mm) Type X and glass-mat water-resistant gypsum substrate
- Classified as a Class A Interior Finish Material per the International Building Code® (IBC®)
- UL Classification of 1/2 in. (12.7 mm) panels as to surface burning characteristics and noncombustibility
- UL Classification of 5/8 in. (15.9 mm) panels as to fire resistance, surface burning characteristics and noncombustibility
- Pei Evaluation Service® compliant for physical properties, shear and wind load capacities per Product Evaluation Report PER-08029-C
- Meets or exceeds the requirements for an Air Barrier Material when tested in accordance with ASTM E2178, *Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials*, and defined in the 2021 International Energy Conservation Code®
- Third-party performance evaluations with most commonly specified fasteners and finishing systems for the requirements of extreme weather applications
- Approved by State of Florida Product Approval (FL 11429) as to compliance with the 2017 Florida Building Code for use outside High Velocity Hurricane Zones (HVHZ); refer to Florida Department of Business & Professional Regulation for more information
- Approved by Miami-Dade County Notices of Acceptance (NOA) for use as a substrate in specific EIFS clad wall and protected direct applied soffit assemblies constructed within areas designated High Velocity Hurricane Zones (HVHZ); refer to Miami-Dade County Product Control for more information

SUBMITTAL APPROVALS

Job Name	
Contractor	Date

PRODUCT INFORMATION

See usg.com for the most up-to-date product information.

CAUTION

Dust may cause irritation to eyes, skin, nose, throat, and upper respiratory tract. Cut and trim with a utility knife or hand saw to minimize dust levels. Power tools must be equipped with a dust collection system. Wear eye, skin, and respiratory protection if necessary. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call a physician. Do not swallow. If swallowed, call a physician. For more information call Product Safety: 800 507-8899 or see the SDS at usg.com
KEEP OUT OF REACH OF CHILDREN.

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SAFETY FIRST!

Follow good safety and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read Safety Data Sheets and related literature on products before specification and/or installation.

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