

Securock® Glass-Mat Sheathing



Regular and Firecode® Cores

Quality, high-performance sheathing designed for use in most exterior systems

- Treated gypsum core combined with fiberglass face and back offers exceptional water resistance
- Scores and snaps easily for quick installation
- For use in most exterior systems when properly detailed by exterior finish manufacturer
- Meets or exceeds the requirements of ASTM C1177

Description

USG SECUROCK® glass-mat sheathing is a noncombustible, moisture- and mold-resistant panel designed for use 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, shingle siding, shake siding and conventional stucco.

Advantages

- Mold-Resistant** High resistance to mold and mildew.
- Resists Water** Glass-mat sheathing facer on both sides sheds water.
- Quick, Dry Installation** Quick score and snap, no sawing or special tools, and rapid screw or nail attachment.
- Exposure** Can be exposed to weather for up to 12 months after application.
- Warranted Performance** SECUROCK glass-mat sheathing is guaranteed for five years against manufacturing defects and for 12 months of weather exposure.

Limitations

1. SECUROCK glass-mat sheathing shall not be used as a nail base for exterior cladding.
2. Specific requirements regarding framing spacing, fastener spacing and fastener specifics to provide required lateral wind-load resistance are the responsibility of the design professional. (Refer to technical data and specifications on the following pages.)
3. SECUROCK glass-mat sheathing offers resistance to weather, but is not intended for constant exposure to water. Protect this and all similar materials from the eroding effects of cascading water.
4. Not recommended for lamination to masonry surfaces. Use furring strips or framing.
5. Maximum stud spacing is 24" o.c.
6. SECUROCK glass-mat sheathing is not a finished surface.
7. SECUROCK glass-mat sheathing is not intended for tile applications.

Product Data

- Dimensions** 1/2" or 5/8" thick, 48" wide, 8', 9' and 10' long. Up to 12' lengths available in 5/8" thickness in some markets. Other sizes available on special order. Consult your United States Gypsum Company sales office or representative for more information.
- Weight** Approximately 2.0 psf for 1/2" thickness, 2.7 psf for 5/8" thickness.
- Edge Configuration** Square edges.
- Compliance with Standards** Meets or exceeds the physical property requirements of ASTM C1177. 5/8" SECUROCK glass-mat sheathing is UL classified as to fire resistance, surface-burning characteristics and core combustibility. ICC ES Evaluation Report ESR 3044.
- Fire Performance** SECUROCK glass-mat sheathing has a noncombustible core when tested in accordance with ASTM E136. Surface-burning characteristics—Flame spread 0, smoke developed 0, when tested in accordance with ASTM E84. Fire resistance—5/8" panels meet the requirements of Type X as defined in ASTM C1396 and ASTM C1177 when tested in accordance with ASTM E119. UL classified as to fire resistance. See Underwriters Laboratories Fire Resistance Directory for specific designs.
- Tensile Bond** Exceeds 15 psi requirements for both cementitious and acrylic adhesives per ASTM C297.

	1/2" SECUROCK Glass-Mat Sheathing	5/8" SECUROCK Glass-Mat Sheathing
Perm Ratings	25	26
Thermal Resistance Per ASTM C518 ("R") (in./ft. ² °F/Btu)	0.4	0.5
Bending Radius*	Dry 9 ft.	9 ft.

*Recommended fastener spacing is 6" o.c. when panels are bent.



Technical Data

Physical Properties Per ASTM C1177	1/2" SECURock Glass-Mat Sheathing	5/8" SECURock Glass-Mat Sheathing
Flexural Strength		
– Bearing edge perpendicular to board length—lbf	107	147
– Bearing edge parallel to board length—lbf	80	100
Water Absorption—% by wt. 2 hrs	10	10
Nail-Pull Resistance—lbf	80	90
Weight—psf	2.0	2.7
Surface-Burning Characteristics—flame/smoke	0/0	0/0
Coefficient of Thermal Expansion in./in./°F	8.5 x 10 ⁻⁶	8.5 x 10 ⁻⁶

Allowable Uniform Wind Load (psf) for 1/2"-Thick Panels

Frame Spacing	12"			16"			24"		
Fastener Spacing	4	6	8	4	6	8	4	6	8
Allowable Pressure	75	46	34	51	34	26	26	19	16

Allowable Uniform Wind Load (psf) for 5/8"-Thick Panels

Frame Spacing	12"			16"			24"		
Fastener Spacing	4	6	8	4	6	8	4	6	8
Allowable Pressure	107	67	50	75	50	38	34	27	24

Notes: Applicable for both steel and wood framing. The values in this table are based on testing per ASTM E330 and represent the capacity of the sheathing to resist flexural failure or fastener pull-through with a 3.0 factor of safety. Capacities are based on a minimum fastener head diameter of 0.325" (#6 bugle head screw). 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. Manufacturer's recommendations are given below. These capacities assume continuous support of each stud flange over the full length of the sheathing panel. Allowable Pressures are based on a maximum deflection limitation of L/360. Consult USG representative for higher deflection limitations. Allowable pressure values are for short-term wind loads. Framing design is independent of these values. The design capacities of assemblies constructed with pneumatically driven fasteners are beyond the scope of this submittal sheet.

Application to Wood Stud Walls for Racking Resistance

For resisting wind and seismic loads: 1/2"-thick (12.7 mm) SECURock glass-mat sheathing will provide an allowable racking resistance of 122 plf (1.8 kN/m) when sheathing is attached to wood framing spaced 16" (406 mm) o.c. max. Application shall be by the use of nails: 11 gauge, 7/16" (11 mm) diameter head, 1-1/2" (38 mm) long, hot-dipped galvanized roofing nails, or #6 – 1-1/4" (32 mm) long corrosion-resistant bugle head screws. 5/8"-thick (15.9 mm) SECURock glass-mat sheathing will provide an allowable racking resistance of 138 plf (2.0 kN/m) when sheathing is attached to wood framing spaced 24" (610 mm) o.c. max. Application shall be by the use of nails: 11 gauge, 7/16" (11 mm) diameter head, 1-3/4" (44 mm) long, hot-dipped galvanized roofing nails, or #6 – 1-5/8" (41 mm) long corrosion-resistant bugle head screws. The SECURock glass-mat sheathing panels shall be applied solidly to the wall framing with the long edges of the panels parallel to the framing with all edges backed by framing members. Design capacities are based on a maximum fastener spacing of 4" (101 mm) o.c. around the perimeter of the sheathing panels and 8" (203 mm) o.c. along the intermediate framing members. The maximum height-length ratio shall not exceed 1.5:1 to be considered a shear wall segment. Studs and plates shall be anchored to resist forces. Shear walls using SECURock glass-mat sheathing shall not be used to resist forces imposed by masonry or concrete walls. The design capacities of assemblies constructed with pneumatically driven fasteners are beyond the scope of this submittal sheet.

Note: Local code requirements may limit the racking resistance values to a prescribed load; be sure to check with the authority having jurisdiction for the correct limitations when designing the racking resistance.

Installation

SECURock glass-mat sheathing may be used 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, shingle siding, shake siding and conventional stucco. If extreme weather conditions are possible, the design professional should consider recommending that panel joints be treated or a weather-resistant barrier be installed.

Specifications

Part 1: General

1.1 Scope

Specify to meet project requirements.

1.2 Delivery and Storage of Materials

All materials shall be stored in an enclosed shelter providing protection from damage and exposure to the elements. Damaged or deteriorated materials shall be removed from the premises. Prior to installation, panels should be stacked flat (unless the contractor in charge of site safety directs otherwise to avoid point overloading of the structure or a tripping hazard) and reasonably protected from the elements.

Warning: Store all SECURock glass-mat panels flat. Panels are heavy and can fall over, causing serious injury or death. Do not move unless authorized. Panels 12' in length will ship in banded units. To ensure safety and performance of the product, use of a forklift truck with minimum 35" span between the forks when moving the banded units is recommended. Keep the nylon bands on each lift until individual boards are moved.

Part 2: Products

- A. SECURock glass-mat sheathing—(1/2") (5/8") thick x 48" wide x 8'-10' long (up to 12' for 5/8" thickness) with square edges.
- B. Nails—(1-1/2") (1-3/4"), 11-gauge hot-dipped galvanized roofing nails, 7/16" diameter head (minimum).
- C. Screws—(1-1/4") (1-5/8") #6 bugle head corrosion-resistant fasteners. Where sheet-type weather-resistant barriers or self-adhering membranes are placed over the sheathing, corrosion resistance shall be equal to or greater than a hot-dipped galvanized coating of 1.5 ounces of zinc per square foot of surface area. Where liquid or fluid-applied air and water barriers are used, or where no sheet-type weather-resistant barrier is used over the sheathing, screws shall have a corrosion resistance of more than 800 hours per ASTM B117. Stainless steel fasteners shall be used in coastal or aggressive environments. Consult the building code for other requirements.

Part 3: Execution

3.1 Walls— Sheathing

- A. Apply weather-resistant or water barriers and flashing as required by and in accordance with the applicable local code requirements and the recommendations of the exterior cladding manufacturer, whichever is more stringent.
- B. Maximum fastener spacing for vertical surfaces (walls) is 8" o.c.
- C. Maximum frame spacing is 24" o.c.
- D. Sheathing must be thoroughly dry prior to installing adhesively applied and self-adhered ice/water barriers and joint tape. Failure to do so will result in an insufficient bond to the sheathing.
- E. Apply side labeled "USG SECURock" toward exterior. Fit ends and edges closely, but not forced together.
- F. Fasteners shall be driven flush with the panel surface, without countersinking or deep enough to break the glass-mat, and into the framing.
- G. Unless otherwise specified or required, SECURock glass-mat sheathing may be applied either perpendicular or parallel to wood or steel framing.

3.2 Soffits—Sheathing Application

The maximum frame spacing for soffits is 16" o.c. when installed parallel to the joists and 24" o.c. when installed perpendicular to the joists. Maximum fastener spacing for horizontal surface (soffits) is 8" o.c.

3.3 Control Joints

Control joints shall be installed at building expansion joints. Location and design of these control joints shall be detailed by the design professional. As a general rule, a 30-foot-maximum space between surface control joints is recommended.

3.4 Shear- or Fire-Rated Construction

Shear- or fire-rated construction may have additional execution requirements as specified in local codes or the UL Fire Resistance Directory.

**3.5
Weather-Resistant
Barriers**

No weather-resistant barrier is required for exposure warranty, but may be required by local codes or cladding system specifications.

**3.6
Exterior Cladding
Application**

Consult exterior cladding manufacturer for installation instructions.

**3.7
EIFS**

EIFS, like all other cladding systems, is vulnerable to moisture that enters the cavity through wall penetrations, such as windows, doors, deck attachments and utility pipe chases and at wall/roof intersections. For most residential and some commercial EIFS, manufacturers now specify a weather-resistive barrier for additional protection from moisture that penetrates the wall. In addition, manufacturers of windows, doors, flashing and sealants offer instruction on proper installation and maintenance of their products.

- EIMA (EIFS Industry Members Association), www.eima.com. This website has extensive information about proper installation of EIFS, sealants, flashing, proper attachment of EIFS to substrates, and inspection, maintenance and repair of EIFS claddings.
- ASTM E2112-07, Standard Practice for Installation of Exterior Windows, Doors and Skylights
- ASTM C1481-00 (2006), Standard Guide for Use of Joint Sealants with EIFS
- ASTM C1397-05, Standard Practice for Application of EIFS Class PI
- AWCI (Association of Wall and Ceiling Industry) offers EIFS Education and Certification Programs for EIFS applicators and also for building officials, inspectors and design professionals. Contractors whose personnel have successfully completed the AWCI EIFS training can be found on AWCI's "EIFSmart Construction National Registry." See www.awci.org.

**Submittal
Approvals:**

Job Name	
Contractor	Date

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

Trademarks
The following trademarks used herein are owned by USG Corporation or its subsidiaries: FIRECODE, Securock, USG, USG in stylized letters.

Note
Products described here may not be available in all geographic markets.

Notice
We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these

goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

Safety First!
Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protection equipment. Read MSDS and literature before specification and installation.

