

USG SECUROCK® BRAND GYPSUM-FIBER ROOF BOARD



DESCRIPTION

USG Securock® Brand Gypsum-Fiber Roof Board is a high-performance roof board for use in low-slope roofing systems. Its unique fiber-reinforced, uniform composition gives the panel strength and water resistance through to the core. USG Securock® Brand Gypsum-Fiber Roof Board provides exceptional bond and low absorption in adhered systems and, with uniform composition, achieves high wind-uplift ratings with no risk of facer delamination. USG Securock® Brand Gypsum-Fiber Roof Board combines superior performance with sustainable design for all types of built-up roofing systems and most fluid applied, spray foam, metal and any polyester reinforced single ply or modified bitumen membrane systems.

ADVANTAGES

Exceptional Strength: Engineered to provide superior wind-uplift performance for a wide variety of roof assemblies. USG Securock® Brand Gypsum-Fiber Roof Board has a uniform composition, providing enhanced bond strength of membrane systems with no risk of facer delamination.

Fire Performance: Provides excellent fire performance and demonstrates exceptional surface burning characteristics (ASTM E84 [CAN/ULC-S102] Flame Spread 5, Smoke Developed 0).

Moisture and Mold: Uniform water-resistant core ensures excellent moisture and mold resistance. Scored a maximum "10" for mold resistance on ASTM D3273.

Versatile: Can be used as a component in most single-ply, fluid-applied, built-up, spray foam, metal and modified bitumen roofing.

INSTALLATION

- Refer to roof system manufacturer's written instructions, local code requirements and Factory Mutual (FM) and/or Underwriters Laboratories (UL) requirements for proper installation techniques.
- Use fasteners specified in accordance with above requirements. Install approved fasteners with plates into the USG Securock® Brand Gypsum-Fiber Roof Board, flush with the surface. Fasteners should be installed in strict compliance with the roof system manufacturer's installation recommendations and FMG Loss Prevention Data Sheet 1-29. **A qualified architect or engineer should review and approve calculations, framing and fastener spacing for all projects.**
- Locate edge joints on, and parallel to, deck ribs. Stagger end joints of adjacent lengths of USG Securock® Brand Gypsum-Fiber Roof Board.
- All board edges should be loosely abutted and never kicked in tight in typical installations.
- Roof boards should never be installed if they exhibit frost.
- For cover board applications, 1/4" USG Securock® Brand Gypsum-Fiber Roof Board should not be installed below 32° F.
- See product data table below for maximum flute span when panels are applied directly over metal decking.
- For vertical parapet applications, only 1/2" or 5/8" panels should be used. Maximum framing spacing is 24" o.c.

LIMITATIONS

- USG Securock® Brand Gypsum-Fiber Roof Board is engineered to perform within a properly designed roof system. The use of USG Securock® Brand Gypsum-Fiber Roof Board as a roofing component is the responsibility of the design professional.
- Consult roofing manufacturers for specific instructions on the application of their products to USG Securock® Brand Gypsum-Fiber Roof Board. For fully adhered fiberglass reinforced membranes consult the membrane manufacturer.
- Weather conditions, dew, application temperature, installation techniques and moisture drive can have adverse effects on the performance of the roof system and are beyond the control of USG.
- Keep USG Securock® Brand Gypsum-Fiber Roof Board panels dry before, during and after installation. USG Securock® Brand Gypsum-Fiber Roof Board should not be installed during rain, heavy fog and any other conditions that deposit moisture on the surface of the board. Apply only as much USG Securock® Brand Gypsum-Fiber Roof Board that can be covered by final roof membrane system in the same day. Avoid exposure to moisture from leaks or condensation.
- Wind uplift (vertical pull) of the roof system as installed can be affected by many factors beyond USG's control, including moisture migrating into the roof assembly from inside or outside the building, proper fastener spacing, the quality of installation especially for fasteners and whether the framing has been properly designed and installed to meet strength and deflection criteria specified in the contract documents. For all these reasons, USG cannot guarantee the wind-uplift resistance (vertical pull) of any roof assembly or system containing USG roof boards.
- Moisture from inside the building can be as big a risk for the roof system as moisture from outside. The contractor installing the roof and the design professional should protect the roof assembly not only from excessive moisture during the construction of the building (new concrete, paint, plaster materials) but also after the building is dried in. The HVAC system must properly manage moisture generated by the occupants of the building to make sure it is vented to the outside and does not migrate into the roof system.
- Panel spacing may be needed based on factors like roof deck's size, membrane color, ultimate deck surface temperature and time of year the roof is installed. The designer of record should use USG's published physical properties below to determine if spacing is needed.
- For reroof or re-cover applications, existing roofing system must be dry throughout prior to application of USG Securock® Brand Gypsum-Fiber Roof Board.
- Plastic or poly packaging applied at the plant to protect board during rail or other transit should be removed upon receipt to prevent condensation or trapping of moisture, which may cause application problems.
- USG Securock® Brand Gypsum-Fiber Roof Board should be stored flat and off the ground with protection from the weather. If stored outdoors, a breathable waterproof covering should be used.
- When applying solvent-based adhesives or primers, allow sufficient time for the solvent to evaporate to avoid damage to roofing components.
- USG allows the bonding of cold mastic-modified bitumen, low rise urethane foam and torching directly to the surface. Consult with the system manufacturer for recommendation on these applications.
- USG recommends maximum asphalt application temperature for Type III or Type IV asphalt of 455° F when using USG Securock® Brand Gypsum-Fiber Roof Board. Application temperatures above these recommended temperatures may adversely affect roof system performance.

FIRE PERFORMANCE

- UL Classified (Type FRX-G) as to Surface Burning Characteristics in accordance with ASTM E84 (CAN/ULC-S102).
 - Flame Spread 5 and Smoke Developed 0
- 1/4", 3/8", 1/2" and 5/8" thickness—Class A in accordance with UL790 (CAN/ULC-S107). See the *UL Building Materials Directory* for more information.
- 5/8" thickness—Meets requirements of Type X per ASTM C1278 and may be used in P series designs as a thermal barrier.

SYSTEM PERFORMANCE

- FM Approved
 - Complies with requirements of FM 4450 and FM 4470
 - Meets FM Class 1

STANDARDS COMPLIANCE

USG Securock® Brand Gypsum-Fiber Roof Board is manufactured to conform to ASTM C1278, "Standard Specification for Fiber-Reinforced Gypsum Panel."

PHYSICAL PROPERTIES

	1/4" (6.3 mm)	3/8" (9.5 mm)	1/2" (12.7 mm)	5/8" (15.9 mm)
Width, standard	4' (1,219 mm)	4' (1,219 mm)	4' (1,219 mm)	4' (1,219 mm)
Length, standard	4' (1,219 mm) and 8' (2,438 mm)	4' (1,219 mm) and 8' (2,438 mm)	4' (1,219 mm) and 8' (2,438 mm)	4' (1,219 mm) and 8' (2,438 mm)
Pieces per unit for 4' x 8' sheets	50	40	30	24
Weight, nominal lb./unit, 4' x 8' sheet	2,575	2,575	2,725	2,525
Weight, nominal lb./sq. ft.	1.57	1.96	2.76	3.20
Flexural strength, parallel, lb. min., per ASTM C473	40	70	110	161
Compressive strength, psi nominal	1,800 (12.4MPa)	1,800 (12.4MPa)	1,800 (12.4MPa)	1,800 (12.4MPa)
Flute spanability per ASTM E661	2-5/8"	5"	8"	10"
Permeance, perms, per ASTM E96	30	26	26	24
R Value per ASTM C518	0.2	0.3	0.5	0.6
Coefficient of thermal expansion, inches/inch • °F, per ASTM E831	8.0 x 10 ⁻⁶	8.0 x 10 ⁻⁶	8.0 x 10 ⁻⁶	8.0 x 10 ⁻⁶
Linear variation with change in moisture, inches/inch • % RH, per ASTM D1037	8.0 x 10 ⁻⁶	8.0 x 10 ⁻⁶	8.0 x 10 ⁻⁶	8.0 x 10 ⁻⁶
Water absorption, % max, per ASTM C473	10	10	10	10
Surface water absorption, nominal grams, per ASTM C473	1.6	1.6	1.6	1.6
Mold resistance per ASTM D3273*	10	10	10	10
Bending radius	25'	25'	25'	30'

***ASTM D3273 Mold Resistance Testing:** In independent lab tests conducted on USG Securock® Brand Gypsum-Fiber Roof Board and USG Securock® Brand UltraLight Glass-Mat Roof Board at the time of manufacture per ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, both panels scored a 10. The 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.

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 physician. Do not swallow. If swallowed, call physician. For more information call Product Safety: 800 507-8899 or see the SDS at usg.com
KEEP OUT OF REACH OF CHILDREN.

TRADEMARKS

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NOTE

Products described here may not be available in all geographic markets. Consult your USG Company sales office or representative for information.

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. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read SDS and literature before specification and installation.

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