



## Securock Data Sheet



### 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 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. Made from 97% recycled material, USG Securock 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 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 roofing. **Sustainability:** Made from 97% recycled materials.

### Installation

Refer to roof system manufacturer's written instructions, local code requirements and Factory Mutual Global (FMG) 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 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 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 or are 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.



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### Approvals:

- UL Classified as to Surface Burning Characteristics and Non-Combustibility in accordance with ASTM E84 (CAN/ULC-S102).
- 1/4", 1/2" and 5/8" Thickness – Class A in accordance with UL790 (CAN/ULC-S107)
- 5/8" thickness – Meets requirements of Type X per ASTM C1278 and may be used in P series designs as a thermal barrier.
- Complies with requirements of FM 4450 and FM 4470
- Meets FM Class 1

### Physical Properties

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



**Limitations**

- USG Securock Gypsum-Fiber Roof Board is engineered to perform within a properly designed roof system. The use of USG Securock 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 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 Gypsum-Fiber Roof Board panels dry before, during and after installation. USG Securock 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 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 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 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. Flood mopping the board to a substrate followed by a flood mopping of the membrane is allowed. 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 Gypsum-Fiber Roof Board. Application temperatures above these recommended temperatures may adversely affect roof system performance.