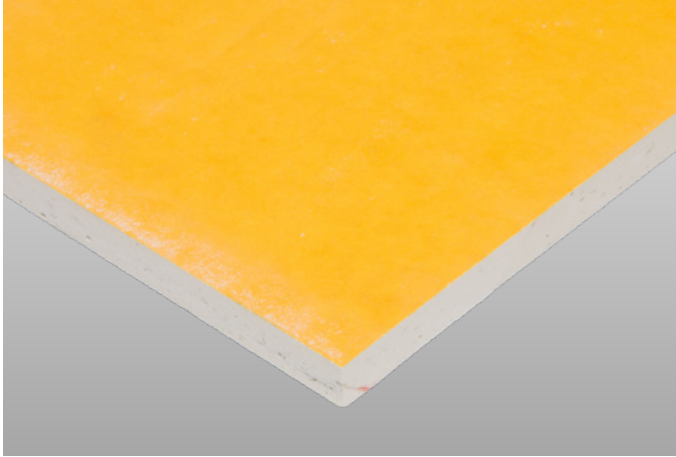


USG SECUROCK® Weather Defense™ Roof Board



Overview

USG SECUROCK Brand Weather Defense Roof Board is a high-performance roof board for use in commercial roofing systems. It enhances the durability of the entire roofing system when used as a cover board. Its specially treated core and high-performance coated glass-mat facer provide protection against fire, mold, and moisture.

Features and Benefits

- » Coated facer creates exceptional bond and low adhesive absorption
- » High compressive and tensile strength
- » Moisture- and mold-resistant core and coated facer
- » Protects the roof system from very severe hail and foot traffic
- » Fire-resistant for use as fire barrier and thermal barrier
- » Easier handling and cutting

Installation

1. Refer to roof membrane system manufacturer's written instructions, local code requirements, and FM Approvals and/or UL Solutions requirements for proper installation techniques.
2. Use fasteners specified in accordance with above requirements. Install approved fasteners with plates into the USG SECUROCK Weather Defense 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. Locate edge joints on, and parallel to, deck ribs. Stagger end joints of adjacent lengths of USG SECUROCK Weather Defense Roof Board.

3. Roof boards should never be installed if they exhibit frost.
4. See product data table below for maximum flute span when panels are applied directly over metal decking.
5. For vertical parapet applications, maximum framing spacing is 24 in. o.c. Fastener spacing a maximum of 6 in. o.c.

Review Carlisle specifications and details for complete installation information.

Limitations

- » USG SECUROCK Weather Defense Roof Board is engineered to perform within a properly designed roof system. The use of USG SECUROCK Weather Defense Roof Board as a roofing component is the responsibility of the design professional.
- » Consult roofing membrane manufacturers for specific instructions on the application of their products to USG SECUROCK Weather Defense Roof Board.
- » 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 Weather Defense Roof Board panels dry before, during and after installation. USG SECUROCK Weather Defense Roof Board should not be installed during rain, heavy fog, and any other conditions that deposit moisture on the surface of the board. Install only as much USG SECUROCK Weather Defense 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 inside. The HVAC system must properly manage moisture generated by the occupants of the building.

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- » 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 to determine if spacing is needed.
- » For re-roof or recover applications, existing roofing system must be dry throughout prior to application of USG SECUROCK Weather Defense 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 Weather Defense 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, torched and hot asphalt adhered bitumen, and low-rise urethane foam to the surface. Consult with the system manufacturer for recommendations on this application.
- » When torching, limit the amount of heat applied to the cover board by maintaining the majority of the torch flame directly on the roof membrane roll.
- » For systems not listed, please contact your local USG SECUROCK roofing sales representative.

Code Approvals

Durability:

- » Meets Factory Mutual (FM) VSH classification.

Fire Performance:

- » Meets FM Approvals Class 1 and UL Solutions Class A fire ratings for unlimited slope applications in accordance with UL 790.
- » UL Classified (Type SGMRX) as to Surface Burning Characteristics in accordance with ASTM E84 (CAN/ULC-S102).
 - Flame Spread 0 and Smoke Developed 0
 - Noncombustible Core per ASTM E136-12 (CAN/ULC-S114)
- » Class A unlimited slope in accordance with UL790 (CAN/ULC-S107).
- » Meets requirements of Type X per ASTM C1177 and may be used in P series designs as a thermal barrier.

System Performance:

- » Complies with requirements of FM 4450 and FM 4470
- » Meets FM Class 1 standards for fire and wind uplift

Standard Compliance:

- » USG SECUROCK Weather Defense Roof Board is manufactured to conform to ASTM C1177.

Typical Properties and Characteristics

Property	Test Method	% (15.9 mm)
Width, standard		4' (1,219 mm)
Length, standard		4' (1,219 mm) and 8' (2,438 mm)
Pieces per unit for 4' x 8' sheet		30
Weight, nominal lb./unit 4' x 8' sheet		3,000
Weight, nominal lb./sq. ft.		3.1
Flexural strength, parallel, lb. min.	ASTM C473	100
Compressive strength, psi nominal		900 – 1,000 (6.2MPa – 6.9MPa)
Flute spannability	ASTM E661	10"
Permeance, perms	ASTM E96	20
R Value	ASTM C518	0.54
Coefficient of thermal expansion, inches/inch • °F	ASTM E831	8.5 x 10 ⁻⁶
Linear variation with change in moisture, inches/inch • %RH	ASTM D1037	6.3 x 10 ⁻⁶
Water absorption, % max	ASTM C473	10
Mold resistance	ASTM D3273*	10

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification or specification range for any particular property of this product.

***ASTM D3273 Mold Resistance Testing:** In independent lab tests conducted on USG SECUROCK Weather Defense 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.