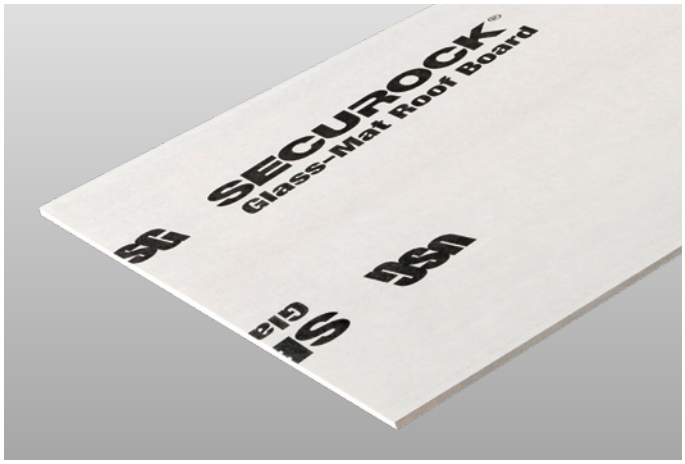
CARLISLE SYNTEC SYSTEMS

# USG SECUROCK® Ultralight Glass-Mat Roof Board




## Overview

USG SECUROCK Brand UltraLight Glass-Mat Roof Board is a high-performance roof board for use in low-slope commercial roofing systems. It enhances the durability of the entire roofing system when used as a cover board in single-ply mechanically attached systems. Its specially treated core and high-performance glass-mat facer provide protection against fire, mold and moisture.

## Features and Benefits

- Lightweight core; up to 18% lighter than competitive glass-mat roof boards*
- Ideal for use as cover board in single-ply mechanically fastened systems
- Moisture- and mold-resistant core and facer
- Provides protection to roof system from hail and foot traffic
- Fire-resistant for use as fire barrier and thermal barrier
- Unmatched mat-to-core tensile bond strength makes facer less likely to delaminate when cutting
- High-quality tight mat makes for easier handling and cutting
- Meets Factory Mutual (FM) Class 1 and Underwriters Laboratories (UL) Class A fire ratings for unlimited slope in fire barrier applications per UL 790
- Produces less itchiness than competitive products
- Fiberglass face and back with treated core provide moisture and mold resistance – scored a maximum “10” for mold resistance on ASTM D3273

*½" and ⅝" thicknesses only

## Installation

1. 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.
2. Use fasteners specified in accordance with above requirements. Install approved fasteners with plates into the USG SECUROCK UltraLight Glass-Mat 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.
3. Locate edge joints on, and parallel to, deck ribs. Stagger end joints of adjacent lengths of the boards.
4. Roof boards should never be installed if they exhibit frost.
5. For cover board applications, ¼" USG SECUROCK UltraLight Glass-Mat Roof Board should not be installed below 32°F.
6. See product data table below for maximum flute span when panels are applied directly over metal decking.
7. For vertical parapet applications, only ½" or ⅝" panels should be used. Maximum framing spacing is 24" o.c.

*Review Carlisle specifications and details for complete installation information.*

## Precautions

- USG SECUROCK UltraLight Glass-Mat Roof Board is engineered to perform within a properly designed roof system. The use of USG SECUROCK UltraLight Glass-Mat 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 UltraLight Glass-Mat 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 UltraLight Glass-Mat Roof Board panels dry before, during, and after installation. USG SECUROCK UltraLight Glass-Mat 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 UltraLight Glass-Mat Roof Board that can be covered by final roof membrane system in the same day. Avoid exposure to moisture from leaks or condensation.

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- 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 re-roof or recover applications, existing roofing system must be dry throughout prior to application of USG SECUROCK UltraLight Glass-Mat 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 UltraLight Glass-Mat 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.
- For systems not listed, please contact your local USG SECUROCK roofing sales representative.

## Code Approvals

**Fire Performance:**

- 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)
- ¼", ½", and ⅝" thickness – Class A unlimited slope in accordance with UL790 (CAN/ULC-S107).
- ⅝" thickness – Meets requirements of Type X per ASTM C1177 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 UltraLight Glass-Mat Roof Board is manufactured to conform to ASTM C1177.

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## Typical Properties and Characteristics

| Property | Test Method | ¼" (6.3 mm) | ½" (12.7 mm) | ⅝" (15.9 mm) |
|---|---|---|---|---|
| Width, standard | | 4' (1,219 mm) | 4' (1,219 mm) | 4' (1,219 mm) |
| Length, standard | | 8' (2,438 mm) | 8' (2,438 mm) | 8' (2,438 mm) |
| Pieces per unit for 4' x 8' sheet | | 42 | 30 | 30 |
| Weight, nominal lb./unit 4' x 8' sheet | | 1688 | 1632 | 2112 |
| Weight, nominal lb./sq. ft. | | 1.2 | 1.7 | 2.2 |
| Flexural strength, parallel, lb. min. | ASTM C473 | 40 | 80 | 100 |
| Compressive strength, psi nominal | | 700 – 1,000 (4.8MPa – 6.9MPa) | 700 – 1,000 (4.8MPa – 6.9MPa) | 700 – 1,000 (4.8MPa – 6.9MPa) |
| Flute spannability | ASTM E661 | 2 ⅝" | 5" | 8" |
| Permeance | ASTM E96 | 18 | 18 | 16 |
| R Value | ASTM C518 | 0.36 | 0.53 | 0.54 |
| Coefficient of thermal expansion, inches/inch • °F | ASTM E831 | $8.5 \times 10^{-6}$ | $8.5 \times 10^{-6}$ | $8.5 \times 10^{-6}$ |
| Linear variation with change in moisture, inches/inch • %RH | ASTM D1037 | $6.3 \times 10^{-6}$ | $6.3 \times 10^{-6}$ | $6.3 \times 10^{-6}$ |
| Water absorption, % max | ASTM C473 | 10 | 10 | 10 |
| Mold resistance | ASTM D3273* | 10 | 10 | 10 |
| Water absorption, % max | ASTM C473 | 4' | 6' | 9' |

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 Brand Gypsum Fiber Roof Board and USG SECUROCK 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.

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