



# DensDeck® Roof Board

## PRODUCT DESCRIPTION

DensDeck Roof Board's patented design features a gypsum core with embedded glass mat facers on the top and bottom of the board. DensDeck can be used in a variety of commercial roof systems and provides an excellent thermal barrier as well as exceptional fire, moisture, and wind uplift resistance properties.

DensDeck is primarily used as a cover board over insulation in mechanically fastened roofing applications. Frequently used in wood deck construction to achieve UL code ratings. DensDeck reduces the potential for growth of mold and mildew per ASTM D 3273.

Revision Date: February 2021



## TYPICAL PHYSICAL PROPERTIES

| Properties   | 1/4" (6.4 mm)  | 1/2" (12.7 mm)                                       | 5/8" (15.9 mm)                                       |
|--|--|--|--|
| Thickness, nominal   | 1/4" (6.4 mm)<br>± 1/16" (1.6 mm)                    | 1/2" (12.7 mm)<br>± 1/32" (0.8 mm)                   | 5/8" (15.9 mm)<br>± 1/32" (0.8 mm)                   |
| Width, Standard  | 4' (1219 mm)<br>± 1/8" (3 mm)                        | 4' (1219 mm)<br>± 1/8" (3 mm)                        | 4' (1219 mm)<br>± 1/8" (3 mm)                        |
| Length, Standard   | 8' (2438 mm)<br>± 1/4" (6.4 mm)                      | 8' (2438 mm)<br>± 1/4" (6.4 mm)                      | 8' (2438 mm)<br>± 1/4" (6.4 mm)                      |
| Weight, nominal, lbs./sq. ft. (Kg/m <sup>2</sup> ) <sup>7</sup>        | 1.2 (5.9)  | 2.0 (9.8)  | 2.5 (12.2)   |
| Surfacing  | Fiberglass Mat                                       | Fiberglass Mat                                       | Fiberglass Mat                                       |
| Flexural Strength <sup>1</sup> , parallel, lbf. Min. (N)               | ≥40 (178)  | ≥80 (356)  | ≥100 (444)   |
| Flute Spanability <sup>2</sup>   | 2-5/8" (67 mm)                                       | 5" (127mm)   | 8" (203mm)   |
| Permeance <sup>3</sup> , perms (ng/Pa•S•m <sup>2</sup> )               | >50 (2850)   | >35 (1995)   | >32 (1824)   |
| R Value <sup>4</sup> , ft <sup>2</sup> •°F•hr/BTU (m <sup>2</sup> K/W) | 0.28   | 0.56   | 0.67   |
| Linear Variation with Change in Temp., in/in °F (mm/mm/°C)             | 8.5 x 10 <sup>-6</sup><br>(15.3 x 10 <sup>-6</sup> ) | 8.5 x 10 <sup>-6</sup><br>(15.3 x 10 <sup>-6</sup> ) | 8.5 x 10 <sup>-6</sup><br>(15.3 x 10 <sup>-6</sup> ) |
| Linear Variation with Change in Moisture                               | 6.25 x 10 <sup>-6</sup>                              | 6.25 x 10 <sup>-6</sup>                              | 6.25 x 10 <sup>-6</sup>                              |
| Water Absorption <sup>5</sup> , %                                      | 5  | 5  | 5  |
| Compressive Strength <sup>6</sup> , psi nominal                        | 900  | 900  | 900  |
| Surface Water Absorption, rams, nominal <sup>1</sup>                   | 1.0  | 1.0  | 1.0  |
| Flame Spread, Smoke Developed (ASTM E84)                               | 0/0  | 0/0  | 0/0  |
| Bending Radius   | 5' (1524 mm)   | 8' (2438 mm)   | 12' (3658 mm)  |

<sup>1</sup> Tested in accordance with ASTM C473 method B.

<sup>2</sup> Tested in accordance with ASTM E661.

<sup>3</sup> Tested in accordance with ASTM E96 (dry cup method)

<sup>4</sup> Tested in accordance with ASTM C518 (heat flow meter).

<sup>5</sup> Tested in accordance with ASTM C1177.

<sup>6</sup> Tested in accordance with ASTM C473.

<sup>7</sup> Represents approximate weight for design and shipping purposes. Actual weight may vary based on manufacturing location and other factors.

## BENEFITS AND SUPPLEMENTAL STATEMENTS

- UL code ratings available for (class A, B, C) unlimited slopes and wood decks
- FM Approved
- Improves resistance to foot traffic and hail damage
- Excellent wind uplift ratings
- Resistant to deterioration, warping, and jobsite damage
- 5/8" DensDeck can replace any generic Type "X" gypsum board in any roof assembly in the UL Fire Resistance Directory under the prefix "P"

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## PACKAGING

Factory applied packaging is only intended for protection during transit.

|                   |           |          |
|-------------------|-----------|----------|
| 1/4" 4'x8' Panels | 42 pieces | 1613 lbs |
| 1/2" 4'x8' Panels | 30 pieces | 1920 lbs |
| 5/8" 4'x8' Panels | 30 pieces | 2400 lbs |

## STORAGE

When stored outside or at the job site, the roof board must be stored at least 4" above ground level and completely covered with a weatherproof covering such as a tarpaulin. **Warning - Do Not Leave Exposed:** Product must be kept dry at all times. Install only as much roof board as can be covered the same day by the roofing system.

## CODE APPROVALS/COMPLIANCE

- Manufactured to conform to ASTM C-1177
- Tested in accordance with ASTM E-84 or CAN/ULC-S102
- Non-combustible when tested in accordance with ASTM E-136
- UL code approval for current class A, B, C approvals UL Class A

## INSTALLATION INSTRUCTIONS

DensDeck may be secured with Helix Max Adhesive, fastened in accordance with an approved fastening pattern, or mopped with Type III or IV asphalt.

Edge joints should be located on and parallel to deck ribs. End joints of adjacent lengths should be staggered.

1. This material shall be installed with ends and edges butted tightly.
2. When installed over combustible wood decks or insulations, all joints should be staggered.
3. In accordance with approved shop drawings, FM Approved fasteners shall be installed with plates through the roof board, flush with the surface.

*Review Mule-Hide specifications and details for complete installation information.*

## PRECAUTIONS

- ¼" DensDeck is not recommended for vertical parapet applications or for asphalt attachment.
- In ballasted roofing systems, DensDeck is not an acceptable membrane underlayment.

## LEED INFORMATION

| Manufacturing Location <sup>1</sup> | Total Recycled Content <sup>2</sup> | Pre-Consumer Recycled Content <sup>2</sup> | Post-Consumer Recycled Content <sup>2</sup> |
|-------------------------------------|-------------------------------------|--|---|
| Acme, TX                            | 0%                                  | 0%   | 0%  |
| Antioch, CA                         | 0%                                  | 0%   | 0%  |
| Ft. Dodge, IA                       | 0%                                  | 0%   | 0%  |
| Las Vegas, NV                       | 0%                                  | 0%   | 0%  |
| Lovell, WY                          | 0%                                  | 0%   | 0%  |
| Newington, NH                       | 30%                                 | 30%  | 0%  |
| Savannah, GA                        | 0%                                  | 0%   | 0%  |
| Tacoma, WA                          | 14%                                 | 14%  | 0%  |
| Wheatfield, IN                      | 94%                                 | 94%  | 0%  |

<sup>1</sup> Manufacturing locations subject to change. Please visit [www.gpgypsum.com](http://www.gpgypsum.com) and click on Sustainability.

<sup>2</sup> Recycled content subject to change + / - 1.0%.

<sup>3</sup> Based on ICC Evaluation Service Verification of Attributes Report for Dens® brand products issued August 1, 2009. [www.saveprogram.icc-es.org](http://www.saveprogram.icc-es.org)

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## **PROTECTION & SAFETY**

Mule-Hide maintains Safety Data Sheets on all of its non-exempt products. Safety Data Sheets contain health and safety information for your development of appropriate product handling procedures to protect your employees and customers. Mule-Hide's Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Mule-Hide products in your facilities.

## **ADDITIONAL INFORMATION**

The information given on this PDS is subject to change without notice. Always check the Mule-Hide website at [www.mulehide.com](http://www.mulehide.com) for the latest information, changes and updates or contact Mule-Hide Products Company at 800-786-1492.

DensDeck is a registered trademark of Georgia-Pacific Gypsum LLC.

## **DISCLAIMER**

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