

Manufacturer

Georgia-Pacific Gypsum LLC
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Technical Service Hotline 1-800-225-6119 or www.densdeck.com

Description

DensDeck® Roof Board is an exceptional fire barrier, thermal barrier, coverboard and recovery board used in various commercial roofing systems. The patented DensDeck design employs glass mat facings front and back that are mechanically bonded to a water-resistant gypsum core, providing excellent fire resistance, moisture resistance and wind uplift properties. The unique construction of DensDeck provides superior flute spanning that stiffens and provides increased foot traffic resistance to the roof deck. Additionally, DensDeck has been shown to withstand delamination, deterioration, warping and job-site damage more effectively than roofing membrane substrates such as paperfaced gypsum board, fiberboard and perlite insulation. DensDeck is highly resistant to the growth of mold when tested, as manufactured, per ASTM D 3273.

Primary Uses

Roof system manufacturers and designers have found DensDeck Roof Board to be compatible with many types of roofing systems, including: built-up, modified bitumen, single ply, metal systems, wood shingle and shake, tile, slate, as well as a recovery board and overlayment protection board for polyisocyanurate and polystyrene insulation. DensDeck can also be used as a form board for poured gypsum concrete deck in roof applications as well as a substrate for spray foam roofing systems. 1/2" (12.7 mm) and 5/8" (15.9 mm) DensDeck may also be used in vertical applications as a backer board or liner for the roof side of parapet walls.

Some membrane manufacturers have hot mop asphalt or torch applications directly to DensDeck without using a primer or base sheet. Consult with the system manufacturer for their recommendations with this application. System manufacturers and designers have found DensDeck to be compatible with bonding adhesives for fully-adhered single-ply membrane applications. The exceptional moisture resistance and low R-value of DensDeck make it the preferred substrate for vapor retarders.

An excellent fire barrier, DensDeck features a noncombustible core and inorganic surface that offers greater fire protection than other conventional commercial roofing products when applied over combustible roof decks and steel decks. DensDeck is FM tested.

Limitations

DensDeck Roof Board is designed to act with a properly designed roof system. The actual use of DensDeck as a roofing component is the responsibility of the roofing system's designing authority. Georgia-Pacific does not offer roofing system design services. Conditions beyond the control of Georgia-Pacific such as weather conditions, dew, application temperatures and techniques may cause adverse effects with adhered roofing systems.

Consult roofing manufacturers for their specific instructions on applying their products to DensDeck.

The need for a separator sheet between the DensDeck and the roofing membrane shall be determined by the roof membrane manufacturer or roofing systems designer.

DensDeck roof board products may have temporary factory-applied packaging (plastic wrap) that must be removed upon receipt to prevent accumulation or entrapment of condensation or moisture which may cause application problems. Provide other suitable breathable weather protection for storage to keep DensDeck products dry.

Panels must be kept dry before, during and after installation. Apply only as much DensDeck as can be covered by a roof membrane system in the same day.

Accumulation of water due to leaks or condensation in or on DensDeck must be avoided during construction and after construction. Avoid over-use of non-vented direct-fired heaters during winter months. Avoid application of DensDeck during rains, heavy fogs and other conditions that may deposit moisture on the surface. When applying solvent-based adhesives or primers, allow sufficient time for the solvent to flash off to avoid damage to roofing components. Maximum flute span is 2-5/8" (66.7 mm) for 1/4" (6.4 mm) DensDeck; 5" (127 mm) for 1/2" (12.7 mm) DensDeck; and 8" (203 mm) for 5/8" (15.9 mm) DensDeck® Fireguard® Type X Roof Board.

For vertical parapet applications, 1/2" (12.7 mm) DensDeck can span 16" oc (406 mm) and 5/8" (15.9 mm) DensDeck can span 24" oc (610 mm).

DensDeck, DensDeck® Prime and DensDeck® DuraGuard roof boards should not be subjected to abnormal or excessive loads or foot traffic such as on plaza decks or under steel wheeled equipment that may fracture or damage the panels. Provide suitable roofing system protection when required.

Technical Data

Flame spread 0, smoke developed 0, when tested in accordance with ASTM E 84 or CAN/ULC-S102. Noncombustible when tested in accordance with ASTM E 136.

DensDeck Fireguard Type X: UL Classified when tested in accordance with ASTM E 119. 5/8" (15.9 mm) DensDeck can replace any generic Type X gypsum board in any roof assembly in the *UL Fire Resistance Directory* under the prefix "P".

1/4" (6.4 mm) DensDeck has been tested by Factory Mutual for 60 psf and 90 psf wind uplift for BUR, EPDM, thermoplastics and modified bitumen roof systems. Higher wind uplift ratings have been achieved by numerous membrane manufacturers using DensDeck in their FMRC-approved construction designs.

DensDeck is FM tested and approved as the only 1/2" (12.7 mm) gypsum product to meet the calorimeter requirements for conventionally insulated decks.

Miami-Dade County, Florida NOA 07-0124.02

Submittal Approvals

Job Name _____

Contractor _____

Date _____

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) + 1/16" (1.6 mm)	1/2" (12.7 mm) ± 1/32" (.8 mm)	5/8" (15.9 mm) ± 1/32" (.8 mm)
Width, standard	4' (1219 mm) ± 1/8" (3 mm)	4' (1219 mm) ± 1/8" (3 mm)	4' (1219 mm) ± 1/8" (3 mm)
Length, standard	8' (2438 mm) ± 1/4" (6.4 mm)	8' (2438 mm) ± 1/4" (6.4 mm)	8' (2438 mm) ± 1/4" (6.4 mm)
Weight, lbs./sq. ft., nominal	1.1 - 1.2	1.95	2.5
Surfacing	Fiberglass mat	Fiberglass mat	Fiberglass mat
Flexural Strength ¹ , parallel, lbs. min.	40	80	100
Flute Spanability ²	2-5/8" (66.67 mm)	5" (127 mm)	8" (203.2 mm)
Permeance ³ , perms	50	35	32
"R" Value ⁴	.28	.56	.67
Linear Variation with Change in Temp., in/in °F	80.5x10 ⁻⁶	8.5x10 ⁻⁶	8.5x10 ⁻⁶
Linear Variation with Change in Moisture, in/in %RH	6.25x10 ⁻⁶	6.25x10 ⁻⁶	6.25x10 ⁻⁶
Water Absorption ⁵ , % max	10.0	10.0	10.0
Compressive Strength, psi nominal	500 - 900	500 - 900	500 - 900
Surface Water Absorption, grams, nominal	≤2.5	≤2.5	≤2.5
Flame Spread, Smoke Developed (ASTM E 84)	0/0	0/0	0/0
Fire Classification	FM CLASS 1 (as overlayment) UL 1256, ULC S-126 UL Class A (UL 790) ULC S-107	FM CLASS 1 (FM 4450) UL 1256, ULC S-126 UL Class A (UL 790) ULC S-107	FM CLASS 1 (FM 4450) UL 1256, ULC S-126 UL Classified "P" assemblies ULC Classified "R" assemblies ULC S-101 Class A (UL 790), ULC S-107
Mold Resistance per ASTM D 3273 ⁶	10 (Highest Score)	10 (Highest Score)	10 (Highest Score)
ASTM Standard	C 1177	C 1177	C 1177
Uplift Standards and Testing	ANSI/UL 1897 ASCE 7 FM 4470	ANSI/UL 1897 ASCE 7 FM 4470	ANSI/UL 1897 ASCE 7 FM 4470
Bending Radius	5' (1524 mm)	8' (2438 mm)	12' (3658 mm)

1. Tested in accordance with ASTM C 473.

2. Tested in accordance with ASTM E 661 (400 lb. conc. load only for 1/2" (12.7 mm) and 5/8" (15.9 mm)).

3. Tested in accordance with ASTM E-96 (dry cup method).

4. Tested in accordance with ASTM C 518 (heat flow meter).

5. ASTM C 1177 minimums.

6. The mold resistance of DensDeck[®] Roof Boards has been tested, as manufactured, in accordance with ASTM D 3273. The ASTM D 3273 test is a 4-week controlled laboratory test. The mold resistance of any building product when used in actual job site conditions may not produce the same results as were achieved in the controlled, laboratory setting. No material can be considered mold proof. When properly used with good design, handling and construction practices, DensDeck Roof Boards provide increased mold resistance.



U.S.A. – Georgia-Pacific Gypsum LLC
 Canada – Georgia-Pacific Canada, ULC

SALES INFORMATION AND ORDER PLACEMENT

U.S.A. Midwest: **1-800-876-4746** West: **1-800-824-7503**
 South: **1-800-327-2344** Northeast: **1-800-947-4497**

CANADA Canada Toll Free: **1-800-387-6823**
 Quebec Toll Free: **1-800-361-0486**

TECHNICAL INFORMATION

U.S.A. and Canada: **1-800-225-6119**
www.gpgypsum.com

TRADEMARKS Unless otherwise noted, all trademarks are owned by or licensed to Georgia-Pacific Gypsum LLC.

REMEDIES AND TERMS OF SALE

All sales of this product by Georgia-Pacific are subject to our Terms of Sale available at www.gpgypsum.com.

UPDATES AND CURRENT INFORMATION

The information in this document may change without notice. Visit our website at www.gpgypsum.com for updates and current information.

CAUTION For product fire, safety and use information, go to www.gp.com/safetyinfo or call 1-800-225-6119.

HANDLING AND USE – CAUTION This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear

long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

FIRE SAFETY CAUTION Passing a fire test in a controlled laboratory setting and/or certifying or labeling a product as having a one-hour, two-hour, or any other fire resistance or protection rating and, therefore, as acceptable for use in certain fire rated assemblies/systems, does not mean that either a particular assembly/system incorporating the product, or any given piece of the product itself, will necessarily provide one-hour fire resistance, two-hour fire resistance, or any other specified fire resistance or protection in an actual fire. In the event of an actual fire, you should immediately take any and all actions necessary for your safety and the safety of others without regard for any fire rating of any product or assembly/system.