

**Manufacturer**

Georgia-Pacific Gypsum	Georgia-Pacific Canada
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**Description**

**DensDeck® DuraGuard Roof Board** is an enhanced roof board incorporating a low perm, integrated coating with all the features of DensDeck® Roof Board. Additionally, the durable DuraGuard roof board coating provides an ideal substrate for a wide variety of adhered roofing systems, including self-adhered and hot-mopped membranes. The coated surface assures more uniform spreading of adhesives with an even better coverage rate than DensDeck® Prime Roof Board and can eliminate the need for field priming with a number of systems\*. Ideal for metal roof systems and fluid-applied membranes.

The DensDeck DuraGuard Roof Board design employs fiberglass mats front and back over a gypsum treated core, providing excellent fire resistance, moisture resistance and wind uplift properties. The unique construction of DensDeck DuraGuard Roof Board provides superior flute spanning and will help stiffen and stabilize the roof deck. DensDeck DuraGuard Roof Board also has been shown to withstand delamination, deterioration and jobsite damage more effectively than roofing membrane substrates such as paper-faced gypsum board, fiberboard and perlite insulation. DensDeck DuraGuard Roof Board has scored a 10, the highest level of performance for mold resistance per the ASTM D3273 test method.

**Primary Uses**

DensDeck DuraGuard Roof Board has been found to be an ideal substrate for self-adhered, hot mopped, cold mastic and torched asphaltic systems as well as all fully adhered, single-ply systems. 1/2" (12.7 mm) and 5/8" (15.9 mm) DensDeck DuraGuard Roof Board may also be used in vertical applications as a substrate board for the roof side of parapet walls. DensDeck DuraGuard Roof Board may allow the bonding of cold mastic and torching of modified bitumen membranes directly to its surface. *Consult with the system manufacturer for recommendations on this application.* DensDeck DuraGuard Roof Board is the preferred substrate for adhered vapor retarders.

**Standards and Code Approvals**

DensDeck DuraGuard Roof Boards are manufactured to meet ASTM C1177 and have the following approvals:

- Florida Product Approved
- Miami-Dade County, Product Control Approved

**Recommendations and Limitations**

DensDeck DuraGuard Roof Boards are manufactured to act with a properly designed roof system following good roofing practices. The actual use of DensDeck DuraGuard Roof Board as a roofing component in any system or assembly is the responsibility of the roofing system's design authority. Consult with the appropriate system manufacturer and/or design authority for system and assembly specifications and instructions on applying other products to DensDeck DuraGuard Roof Board. Georgia-Pacific does not warrant and is not responsible for any systems or assemblies utilizing DensDeck DuraGuard Roof Board or any component in such systems or assemblies other than DensDeck DuraGuard Roof Board.

The need for a separator sheet between the DensDeck DuraGuard Roof Board and the roofing membrane must be determined by the roof membrane manufacturer or roofing system designer.

Confirm any priming requirements with the membrane manufacturer. When applying solvent-based adhesives or primers, allow sufficient time for the solvent to flash off to avoid damage to roofing components.

DensDeck DuraGuard Roof Boards should not be subjected to abnormal or excessive loads or foot traffic, such as, but not limited to, use on plaza decks or under steel-

wheeled equipment that may fracture or damage the panels. Provide suitable roofing system protection when required.

For hot mopping asphalt or coal tar directly to DensDeck DuraGuard Roof Board, follow the manufacturer's recommended system application temperature guidelines and good roofing practices.

Flood mopping DensDeck DuraGuard Roof Board to a substrate followed by a flood mopped application of a membrane is not recommended. Mechanical attachment, ribbon adhesives or ribbon or spot mopping of asphalt may be acceptable methods of attachment, prior to flood mopping a membrane. Consult with system manufacturer or design authority for attachment requirements.

When torching to DensDeck DuraGuard Roof Board, maintain the majority of the torch flame on the Mod Bit roll rather than on the surface of the board. Field priming should not be required.

Conditions beyond the control of Georgia-Pacific, such as weather conditions, dew, leaks, application temperatures and techniques may cause adverse effects with roofing systems.

**Moisture Management**

**DensDeck DuraGuard Roof Boards, like other components used in roofing systems, must be protected from exposure to moisture before, during and after installation.**

Remove the plastic packaging from all DensDeck DuraGuard Roof Board immediately upon receipt of delivery. Failure to remove the plastic packaging may result in entrapment of condensation or moisture. DensDeck DuraGuard Roof Board stored outside must be stored level and off the ground and protected by a breathable waterproof covering. Provide means for air circulation around and under stored bundles of DensDeck DuraGuard Roof Board. DensDeck DuraGuard Roof Board must be covered the same day as installed.

Avoid application of DensDeck DuraGuard Roof Boards during rain, heavy fog and any other conditions that may deposit moisture on the surface, and avoid the overuse of non-vented, direct-fired heaters during winter months. When roofing systems are installed on new poured concrete or light weight concrete decks or when re-roofing over an existing concrete deck, a vapor barrier should be installed above the concrete to limit the migration of water from the concrete into the roof assembly. Always consult the roofing system manufacturer or design authority for specific instructions for applying other products to DensDeck DuraGuard Roof Boards.

Moisture vapor movement by convection must be eliminated, and the flow of water by gravity through imperfections in the roof system must be controlled. After a leak has occurred, no condensation on the upper surface of the system should be tolerated, and the water introduced by the leak must be dissipated to the building interior in a minimum amount of time.

Although DensDeck DuraGuard Roof Boards are engineered with fiberglass facings and high density gypsum cores, the presence of free moisture can have a detrimental effect on the performance of the product and the installation of roofing membranes. For example, hot asphalt applications can blister; torched modified bitumen may not properly bond; and adhesives for single ply membranes may not dry properly. Moisture accumulation may also significantly decrease wind uplift and vertical pull resistance in the system or assembly. DensDeck DuraGuard Roof Boards containing excessive free moisture content may need to be evaluated for structural stability to assure wind uplift performance.

**Fire Resistance Classifications**

DensDeck DuraGuard Roof Boards are excellent fire barriers over combustible and noncombustible roof decks, including steel decks.

*UL 790 Classification.* DensDeck DuraGuard Roof Boards have been classified by Underwriters Laboratories (UL) for use as a fire barrier over combustible and

\* Confirm priming requirements with membrane manufacturer.

*continued* →

**Submittal Approvals**

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Date \_\_\_\_\_

**Stamps / Signatures**

noncombustible decks in accordance with the ANSI/UL 790 test standard. The UL classification includes a comprehensive Class A, B or C rating. For additional information concerning the UL 790 classification, consult the UL Certification Directory.

**UL 1256 Classification.** DensDeck<sup>®</sup> DuraGuard Roof Boards have also been classified by UL in roof deck constructions for internal (under deck) fire exposure in accordance with the ANSI/UL 1256 Steiner Tunnel test. For additional information concerning the UL 1256 classification, consult the UL Certification Directory.

**FM Class 1 Approvals.** DensDeck DuraGuard Roof Boards are included in numerous roofing assemblies with a Factory Mutual (FM) Class 1 fire rating. 1/4" (6.4 mm) DensDeck DuraGuard Roof Boards have passed testing under the FM Calorimeter Standard 4450 and have been approved by FM as such for insulated steel deck roofs when installed according to the conditions identified by FM. For more information concerning FM Approvals and FM Class 1 assemblies with DensDeck DuraGuard Roof Boards, consult FM or RoofNav<sup>®</sup>.

**Type X.** 5/8" (15.9 mm) DensDeck<sup>®</sup> DuraGuard Fireguard<sup>®</sup> Roof Boards are manufactured to meet the "Type X" requirements of ASTM C1177 for increased fire resistance beyond regular gypsum board.

**UL Fire Resistance Ratings.** 5/8" (15.9 mm) DensDeck DuraGuard Fireguard Roof Boards are designated as **Type DD** by UL and included in assembly designs investigated by UL for hourly fire resistance ratings. 5/8" (15.9 mm) DensDeck DuraGuard Fireguard Roof Boards may also replace any unclassified 5/8" (15.9 mm) gypsum board in an assembly in the UL Fire Resistance Directory under the prefix "P".

**Flame Spread and Smoke Developed.** When tested in accordance with ASTM E84, DensDeck DuraGuard Roof Boards had Flame Spread 15, Smoke Developed 0.

**Wind Uplift**

DensDeck DuraGuard Roof Boards are included in numerous assemblies evaluated by FM or other independent laboratories for wind uplift performance. For information concerning such assemblies, please visit [www.roofnav.com](http://www.roofnav.com).

**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.

**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	4' (1219 mm) and 8' (2438 mm) ± 1/4" (6.4 mm)	4' (1219 mm) and 8' (2438 mm) ± 1/4" (6.4 mm)	4' (1219 mm) and 8' (2438 mm) ± 1/4" (6.4 mm)
Weight, nominal, lbs./sq. ft. (Kg/m <sup>2</sup> )	1.6 (7.8)	2.0 (9.8)	2.5 (12.2)
Surfacing	Fiberglass mat Durable, low perm coating	Fiberglass mat Durable, low perm coating	Fiberglass mat Durable, low perm coating
Flexural Strength <sup>1</sup> , parallel, lbf. min. (N)	≥ 40 (178)	≥ 80 (356)	≥ 100 (444)
Flute Spanability <sup>2</sup>	2-5/8" (66.67 mm)	5" (127 mm)	8" (203 mm)
Permeance <sup>3</sup> , perms (ng/Pa·S·m <sup>2</sup> )	< 2 (114)	< 2 (114)	< 2 (114)
R Value <sup>4</sup> , ft <sup>2</sup> ·°F·hr/BTU (m <sup>2</sup> ·K/W)	.28	.56	.67
Linear Variation with Change in Temp., in/in °F (mm/mm/°C)	8.5 x 10 <sup>-6</sup> (15.3 x 10 <sup>-6</sup> )	8.5 x 10 <sup>-6</sup> (15.3 x 10 <sup>-6</sup> )	8.5 x 10 <sup>-6</sup> (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> , % max	< 10	< 10	< 10
Compressive Strength <sup>6</sup> , psi nominal	1500	900	900
Surface Water Absorption, grams, nominal	< 1.0	< 1.0	< 1.0
Flame Spread, Smoke Developed (ASTM E84)	0/0	0/0	0/0
Bending Radius	8' (2438 mm)	12' (3658 mm)	16' (4877 mm)

1. Tested in accordance with ASTM C473 method B.  
 2. Tested in accordance with ASTM E661.  
 3. Tested in accordance with ASTM E96 (dry cup method).

4. Tested in accordance with ASTM C518 (heat flow meter).  
 5. Tested in accordance with ASTM C1177.  
 6. Tested in accordance with ASTM C473.



U.S.A. Georgia-Pacific Gypsum LLC  
 Georgia-Pacific Gypsum II LLC  
 Canada Georgia-Pacific Canada LP

**SALES INFORMATION AND ORDER PLACEMENT**

U.S.A. West: **1-800-824-7503**  
 Midwest: **1-800-876-4746**  
 South Central: **1-800-231-6060**  
 Southeast: **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](http://www.gpgypsum.com)

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**WARRANTIES, REMEDIES AND TERMS OF SALE** For current warranty information for this product, please go to [www.gpgypsum.com](http://www.gpgypsum.com) and select the product for warranty information. All sales of this product by Georgia-Pacific are subject to our Terms of Sale available at [www.gpgypsum.com](http://www.gpgypsum.com).

**UPDATES AND CURRENT INFORMATION** The information in this document may change without notice. Visit our website at [www.gpgypsum.com](http://www.gpgypsum.com) for updates and current information.

**CAUTION** For product fire, safety and use information, go to [www.buildgp.com/safetyinfo](http://www.buildgp.com/safetyinfo) or call 1-800-225-6119.

**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.