

# Tremco/GP Gypsum Dens-Deck®

## A Fiberglass Mat Faced, Moisture Resistant, Gypsum Roof Board

### FEATURES

Fiberglass mat faced

Treated gypsum core

High compressive strength

Available in 1/4" and 1/2" thickness

### BENEFITS

- Resistant to decay
- Strong, resistant delamination
- Moisture resistant
- Fire resistant
- Impact resistant
- Puncture resistant
- Excellent flute spanability
- Can easily conform to surfaces or provide a rigid over/underlayment.

### DESCRIPTION

Tremco/GP Gypsum Dens-Deck® consists of a water resistant, silicone treated gypsum core, faced with embedded fiberglass mats on the top and bottom of the board. Dens-Deck meets ASTM C 1177/C 1177M, the Standard Specification for Glass Mat Gypsum Substrate for use as Sheeting.

### BASIC USES

Tremco/GP Gypsum Dens-Deck is used as a non structural roof board in a variety of low slope roof system configurations. Dens-Deck is recommended as an over-layment board for isocyanurate insulation in cold process BUR and MB roof systems. Dens-Deck can be used as a substrate for Tremco Single Ply roof systems. Dens-Deck can be installed directly to structural roof decks such as steel and wood to improve application of fire resistance properties of the roofing assembly. Dens-Deck is also recommended as a substrate for vapor retarder systems.

Tremco/GP Gypsum Dens-Deck can be used in a variety of nonstructural roofing applications. Refer to UL Roofing Materials Systems Directory and/or FM Approvals RoofNav for applicable roof system configurations.

### DIMENSIONS

Dens-Deck is available in truckload quantities in the following standard sizes:

1/4" x 4' x 8' (6mm x 1220mm x 2440mm), 60 pcs/pallet

1/2" x 4' x 8' (13mm x 1220mm x 2440mm), 50 pcs/pallet

The following sizes are available in truckload quantities on a custom order basis:

1/4" x 4' x 4' (6mm x 1220mm x 1220mm), 60 pcs/pallet

1/2" x 4' x 4' (13mm x 1220mm x 1220mm), 50 pcs/pallet

### STORAGE

Roof boards must be dry and kept dry. When stored outdoors, stack roof boards on pallets at least 4 inches (100 mm) above the ground level. Upon receipt of roof board on the job site, remove the factory plastic packaging. Cover the top and sides of the roof board with waterproof tarpaulin (not polyethylene) and secure. Do not stack more than two pallets high.

### APPLICATION

Roof replacement usually involves more complexities than new construction roofing. Often encountered are situations such as rusted/deteriorated decks, rotted wood components, rooftop equipment which cannot be shut down, and numerous other conditions.

The following application information is designed to serve as a general guide. Your local Tremco Representative will prepare detailed specifications based on the condition of your roof.

**Structural Decks:** Must be properly designed and structurally sound.

**Drainage:** Ponding conditions are unacceptable and will adversely affect the performance of any roofing system. If positive drainage does not exist, water removal from the roof surface must be facilitated by lowering drains, and/or installing drains, tapered insulation, or Tremco approved lightweight insulating concrete system.

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## APPLICATION CONTINUED

**Surface Preparation:** Prior to installing the insulation and/or roof board, the substrate must be clean, dry and free of dust, dirt, oil, or other contaminants. Concrete and gypsum decks must be properly cured and sufficiently dry prior to installing insulation and/or roof Board.

**Installation Procedures:** All board sizes of Dens-Deck are approved for application in FAS-n-FREE Adhesive and also Tremco Low Rise Foam Insulation Adhesive. Dens-Deck can also be installed in a full mopping of Tremco Premium III Asphalt or ASTM D 312, Type III asphalt. Mechanical fasteners can also be used to secure Dens-Deck to structural roof decks.

**Direct to Decks:** For Tremco UL (Underwriters Laboratories) roof system classifications, when Dens-Deck (minimum 1/4" thick) is installed directly to a wood roof deck, the resulting deck assembly is considered a non-combustible roof deck per UL. The joints of the Dens-Deck must be offset 6 inches (150 mm) with the joints in the structural deck.

Dens-Deck can also be installed directly to steel, cement, wood fiber, gypsum, and concrete roof decks as a substrate for vapor retarders or other roof membrane systems. Consult with your Tremco Representative for Tremco approved system combinations.

**Overlayment:** Dens-Deck can be specified as an overlayment for approved insulation boards, such as polyisocyanurate, wood fiber, and fiberglass insulation. Dens-Deck can be used as a substrate for Tremco cold process POWERply® MB and BURmastic® systems. Dens-Deck is also used as a substrate for adhered or mechanically attached Tremco Single Ply roof systems.

POWERply torch and heat welded systems can also be applied to Dens-Deck, provided the Dens-Deck is primed with an asphalt primer and the torch flame or hot air is not pointed directly at the Dens-Deck during application.

Hot applied BUR systems can be applied directly to Dens-Deck provided the bitumen mopping temperature does not exceed 425°F (218°C). Asphalt ply sheets with com-ply with ASTM D 2178 are approved for application direct to Dens-Deck. Fully coated asphalt base sheets and modified bitumen base sheets are not recommended for application direct to Dens-Deck in hot applied configurations.

**Adhesive Application:** Apply insulation adhesive per product recommendations. Set Dens-Deck into the adhesive immediately and step into place. Obtain and read the Specifications Data Sheets for insulation adhesive products for further information.

**Bitumen Application:** Hot applied asphalt can be used to adhere Dens-Deck to concrete decks, mechanically attach base sheets, and insulation layer(s) previously secured. Concrete decks must be primed with Tremprime WB or Tremprime QD Low Odor and allowed to thoroughly dry. Adhere Dens-Deck to substrate in a full coverage of hot applied asphalt at a coverage rate of 30 lbs. per 100 sq. ft. (1.5 kg/m<sup>2</sup>) ± 20%. Place insulation immediately into the hot bitumen and step into place to achieve a solid bond.

**Fastener Attachment:** Tremco Fasteners and Steel Plates are recommended where mechanical attachment is specified. Do not mix fasteners and discs of different brands unless the combination has been specifically tested and approved by Tremco.

Fasteners must be driven perpendicular to the deck. Fasteners should be driven tight enough so that the disc will not turn. Do not overdrive the fasteners, as the roof boards may fracture and become susceptible to loss of attachment.

- When Dens-Deck is installed in a mechanically attached configuration, use fastener plates which have a flat upper and lower surface to minimize potential for damaging the fiberglass facer.
- Do not apply Dens-Deck in hot bitumen in combination with a ply or membrane fully mopped in hot bitumen over the top of the same Dens-Deck board/layer.
- Do not apply fully coated asphalt or modified bitumen in combination with base sheets directly to Dens-Deck in hot applied bitumen.

## LIMITATIONS



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## LIMITATIONS CONTINUED

- When fully mopping ply sheets direct to Dens-Deck, do not exceed mopping temperatures of 425°F.
- Do not point a torch or hot air (above 425°F) directly to the Dens-Deck surface during roof membrane applications. Instead, heat sources must be applied evenly to the membrane materials.

## PHYSICAL PROPERTIES

PROPERTY	TYPICAL VALUE		TEST METHOD
	1/4" (6.4MM)	1/2" (12.7MM)	
Flexural Strength Parallel	40 lbf (178N)	80 lbf (356N)	ASTM C 473
Perpendicular	45 lbf (200N)	800 lbf (45N)	ASTM C 473
Permeance	47.7 perms	23 perms	ASTM E 96
R Value	0.28	0.56	ASTM C 518
Flute Spanability	2 5/8" (67mm)	5" (127mm)	ASTM E 661
Compression	500psi (3445 kPA)		ASTM C 473
Weight	110 lbs./SQ (5.37 kg/m <sup>2</sup> )	195 lbs/SQ (9.5 kg/m <sup>2</sup> )	

## MAINTENANCE

Your local Tremco Roofing Sales Representative can provide you with effective maintenance procedures which may vary, depending upon specific conditions. Periodic inspections, early repairs and preventative maintenance are all part of a sound roof program.

## PRECAUTIONS

Users must read container labels and Safety Data Sheets for health and safety precautions prior to use.

## TECHNICAL SUPPORT

Your local Tremco Roofing Sales Representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications.



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