



DEXcell® Glass Mat Roof Board (1 of 3)

Description

DEXcell® Glass Mat Roof Board has coated fiberglass facers with a gypsum core that meets or exceeds ASTM C1177 for moisture resistance and both ASTM G21 and ASTM D3273 for mold resistance.¹ This gypsum panel is a substrate board, thermal barrier, and/or cover board for commercial roofing applications. It scores and cuts easily, and is specially coated on the front, back, and sides to help reduce fiber fly and irritation — making for easy handling.

DEXcell® Glass Mat Roof Board can be used in a wide variety of roofing systems, including mechanically attached and ballasted single-ply membranes, and metal roofing. Additionally, 1/4" DEXcell® Glass Mat Roof Board can be used as a UL Class A thermal barrier as fire protection from below.

Primary Uses

- Substrate board and thermal protection in roofing assemblies providing increased fire resistance pursuant to ANSI/UL 790 and increased protection from sound transmission as compared with systems with no cover board
- Substrate for a vapor retarder and/or continuous substrate for the application of roofing membranes
- Insulation cover board within roofing assemblies to protect and support the roof membrane and help prevent membrane damage due to roof traffic and hail or other impacts pursuant to FM 4470²

Advantages

- Scores and snaps easily

Standards and Codes Approvals/ Certifications

- Meets ASTM C1177
- Meets FM Class 1 per FM 4470 and UL Class A fire ratings for roofing systems up to unlimited slope per UL 790/ULC S107. Refer to FM Approvals at RoofNav.com and UL Product iQ productiq.ulprospector.com for actual assemblies.

- Achieves GREENGUARD Certification. For more information, visit ul.com/gg.
- Approved component in specific UL fire-rated designs. Refer to UL Product iQ productiq.ulprospector.com for actual assemblies.
- Tested in accordance with ULC CAN-S126 and FM 4450 for use as part of a class A, B, or C roof covering assembly, requiring no additional thermal barrier as per IBC 2603.4.1.5
- Tested in accordance with ASTM D3273 for Resistance to Growth of Mold

Recommendations and Limitations

General

- Examine and inspect deck substrate to which roof boards will be applied. Correct defects prior to installation.
- Provide minimum 1/4 in. (6.4 mm) clearance between boards and adjacent concrete or masonry to minimize wicking of moisture
- Install fire-rated assemblies in accordance with the details found in the UL Fire Resistance Directory (see UL Product IQ at productiq.ulprospector.com)
- See Physical Properties chart for maximum flute span when panels are applied directly over metal decking
- Do not use panels as a nailing base (they are nonstructural)

Wind Uplift³

- DEXcell® Glass Mat Roof Boards are included in numerous assemblies evaluated by Factory Mutual Global (FM) and other independent laboratories for wind-uplift performance. For information concerning such assemblies, please visit roofnav.com.
- Install using fasteners or adhesives specified in accordance with system requirements. Install approved fasteners

¹ GAF warranties and guarantees do not warrant or guarantee moisture resistance or provide coverage against mold or other biological growth. Refer to gaf.com for more information on warranty and guarantee coverage and restrictions.

² GAF warranties and guarantees do not provide coverage against hail or other impact. See applicable guarantee or warranty, available at gaf.com, for complete coverage and restrictions. Hail or puncture resistance coverage may be available for purchase for eligible systems. Contact GAF for more information.

³ GAF warranties and guarantees provide coverage for wind speeds up to 55 miles per hour only. See applicable guarantee or warranty, available at gaf.com, for complete coverage and restrictions. Enhanced wind coverage may be available for purchase for eligible systems. Contact GAF for more information.





DEXcell® Glass Mat Roof Board (2 of 3)

Wind Uplift cont.

with plates into the DEXcell® Glass Mat Roof Board. Install fasteners and adhesives in compliance with GAF installation recommendations and FM Property Loss Prevention Data Sheet 1-29. Proper fastener spacing or adhesive application is essential to achieve wind-uplift performance. For full application instructions, please consult the applicable system specification manual (available at gaf.com).

- Locate board edge joints on, and end joints parallel to, metal deck ribs. Stagger end joints of adjacent lengths of DEXcell® Glass Mat Roof Board. In typical installations, butt board edges and ends loosely.

Safety

- Consult the SDS for this product, available at gaf.com, before use
- Installers should wear long pants and a long-sleeved, loose-fitting shirt
- Use protective gloves and special eye protection (goggles or safety glasses with side shield). Do not use a power saw to cut these products.
- Caution: Because this product contains fiberglass, dust and glass fibers may be released during normal handling, which could result in eye or skin irritation or cause difficulty in breathing. Whenever possible, avoid contact with the skin and eyes and avoid breathing dust or fibers that may be released during installation.

Fire Ratings and Classifications

- Meets UL Class A fire ratings for roofing systems up to unlimited slope per UL 790 and ULC CAN-S107; consult UL Product IQ at productiq.ulprospector.com
- Classified in roof deck constructions in accordance with FM 4450, ANSI/UL1256, and ULC CAN-S126 to resist fire from within a building; consult UL Product IQ at productiq.ulprospector.com
- $\frac{5}{8}$ in. (15.9 mm) DEXcell® Glass Mat Roof Board is UL Classified for use in numerous hourly rated UL assemblies, including UL "P" roof assemblies;

consult UL Product IQ at productiq.ulprospector.com

- $\frac{5}{8}$ in. (15.9 mm) DEXcell® Glass Mat Roof Board meets Type X per ASTM C1177
- Complies with requirements of FM 4450 and FM 4470 and meets FM Class 1

Handling and Use

- DEXcell® Glass Mat Roof Boards are engineered to perform within a properly designed roof system. Their suitability for use in a particular roofing system is the responsibility of the design professional.
- Roof assemblies containing DEXcell® Glass Mat Roof Boards should be designed to control vapor drive and moisture
- Although DEXcell® Glass Mat Roof Boards are engineered with coated fiberglass facers and high-density gypsum cores, the presence of free moisture can have an adverse effect on product performance and may compromise the installation of additional roofing system components
- Moisture accumulation may also significantly decrease wind uplift and vertical pull resistance in the system or assembly. DEXcell® Glass Mat Roof Boards that contain disproportionate free moisture content may require replacement.
- Do not expose to inclement weather conditions, dew, improper installation techniques, or moisture drive conditions that may have adverse effects on the performance of the roof system
- Apply only as much as can be covered by a watertight roof covering the same day
- Do not apply to wet roofing substrates
- Avoid water exposure during shipping, handling, storage, installation, and after installation of roof boards
- Remove non-breathable shipping wrap material upon receiving and storing
- Store off the ground and under cover. Store flat. Use sufficient supports extending under the entire length of roof boards to prevent sagging.



DEXcell® Glass Mat Roof Board (3 of 3)

Handling and Use Cont.

- Keep dry to minimize the potential for mold growth. Take adequate care while transporting, storing, applying, and maintaining roof boards.
- Do not apply roof boards with visible signs of moisture damage or mold growth

For full application instructions, please consult the applicable specification manual for the system being installed, available at gaf.com. For additional information on application, contact GAF Technical Support at 1-877-GAF-ROOF or technicalquestions@gaf.com.

Physical Properties Data Chart ¹			
Physical Properties	1/4" DEXcell® Glass Mat	1/2" DEXcell® Glass Mat	5/8" DEXcell® Glass Mat
Thickness¹, Nominal	1/4" (6.4 mm)	1/2" (12.7 mm)	5/8" (15.9 mm)
Width¹, Nominal	4' (1,219 mm)	4' (1,219 mm)	4' (1,219 mm)
Length¹, Standard	8' (2,438 mm)	8' (2,438 mm)	8' (2,438 mm)
Weight, Nominal	1.2 lbs. / sq. ft. (5.9 k/m ²)	2.0 lbs. / sq. ft. (10 k/m ²)	2.5 lbs. / sq. ft. (12 k/m ²)
Edges	Square	Square	Square
Flexural Strength¹, Parallel	≥ 40 lbf. (178 N)	≥ 80 lbf. (356 N)	≥ 100 lbf. (445 N)
Bending Radius	4' (1,219 mm)	6' (1,829 mm)	8' (2,438 mm)
Thermal Resistance⁴	R = .23	R = .43	R = .5
Permeance⁵	25 perms	24 perms	23 perms
Water Absorption¹ (% of weight)	≤ 10%	≤ 10%	≤ 10%
Surfacing	Coated Fiberglass	Coated Fiberglass	Coated Fiberglass
Flute Spanability⁶	2-5/8" (66.7 mm)	5" (127 mm)	8" (203 mm)
Compressive Strength⁷	900 psi	900 psi	900 psi
Mold Resistance⁸	Score of 10	Score of 10	Score of 10
Product Standard Compliance	ASTM C1177	ASTM C1177	ASTM C1177
Fire-Resistance Characteristics			
Core Type	Regular	Regular	Type X
UL Type Designation	FSW-6	FSW-6	FSW-6
Combustibility²	Non-combustible	Non-combustible	Non-combustible
Surface Burning Characteristics³	Class A	Class A	Class A
Flame Spread³	0	0	0
Smoke Development³	0	0	0
Fire Classification	UL Classified, FM Approved	UL Classified, FM Approved	UL Classified, FM Approved
Applicable Standards and References			
ASTM C473 Standard Test Methods for Physical Testing of Gypsum Panel Products			
ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus			
ASTM C1177 Standard Test Method for Glass Mat Gypsum Substrate for Use as Sheathing			
ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber			
ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials			
ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials			
ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials			
ASTM E136 Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C			
ASTM E661 Standard Test Method for Performance of Wood and Wood-Based Floor and Roof Sheathing Under Concentrated Static and Impact Loads			
Gypsum Association, GA-238, Guidelines for Prevention of Mold Growth on Gypsum Board			
Gold Bond Building Products, LLC Manufacturer Standards, NGC Construction Guide			
¹ Specified values per ASTM C1177, tested in accordance with ASTM C473			
² Tested in accordance with ASTM E136			
³ Tested in accordance with ASTM E84			
⁴ Tested in accordance with ASTM C518.			
⁵ Tested in accordance with ASTM E96			
⁶ Tested in accordance with ASTM E661			
⁷ Tested in accordance with ASTM C473, annex X3			
⁸ Tested in accordance with ASTM D3273 and rated in accordance with ASTM D3274			
Packaging			
4' x 8' DEXcell® Glass Mat	1/4"	1/2"	5/8"
Pieces per pallet	44	30	30
Sq. ft. per pallet	1,408	960	960
Weight per pallet	1,760	2,016	2,678
Sq. ft. per truck	38,020	23,040	17,280
Weight per truck, lbs.	47,520	48,384	48,211

*Values stated are approximate and subject to normal manufacturing variation. These values are not guaranteed and are provided solely as a guide.

NOTE: Any protective plastic factory packaging that is used to wrap DEXcell® Glass Mat Roof Boards for shipment is intended to provide temporary protection from exposure to moisture only, and is not intended to provide protection during storage after delivery.

National Gypsum Company is the exclusive service provider for products manufactured by Gold Bond Building Products, LLC.

This DEXcell® Glass Mat Roof Board product is manufactured by Gold Bond Building Products, LLC.