



National Gypsum
DEXcell® BRAND

Glass Mat Roof Board

Substitution Request

Project:

Substitution Request Number:

From:

To:

Date:

A/E Project Number:

Owner:

Specification Title:

Description:

Section:

Page:

Article/Paragraph:

Proposed Substitution: **DEXcell Glass Mat Roof Board**

Manufacturer: **National Gypsum Company**

Address: **2001 Rexford Rd., Charlotte, NC 28211** Phone: **1-800-628-4662**

Trade Name: **DEXcell® BRAND Glass Mat Roof Board**

Model No:

Installer:

Address:

Phone:

History: 1 - 4 Years 5 - 10 Years 10 + Years

Differences between proposed substitution and specified product: **Equal Product per ASTM C 1177 & C 1278**

Reason for not providing specified item:

Similar Installation:

Project:

Architect:

Address:

Owner:

Date Installed:

Proposed substitution affects other parts of Work: **No**

Supporting Data Attached: Drawings Product Data Samples Tests Reports Other

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by:

Signature:

Firm Name:

Address:

Phone:

Attachments:

A/E's Review and Action:

- Substitution approved – Make submittals in accordance with Division 1 Section: Substitutions.
- Substitution approved as noted – Make submittals in accordance with Division 1 Section: Substitutions.
- Substitution rejected – Use specified materials.
- Substitution Request received too late – Use specified materials.

Signed By:

Date:

Additional Comments: Contractor Subcontractor Supplier Manufacturer A/E Other

Upon completion return to:

Name:

Address:

Phone:

Fax:

Email:

National 
Gypsum®

DEXcell® BRAND GLASS MAT ROOF BOARD

MANUFACTURER

National Gypsum Company
2001 Rexford Road
Charlotte, NC 28211
(704) 365-7300

Technical Information:
1-800-NATIONAL
(1-800-628-4662)

Fax: 1-800-FAX NGC1
(1-800-329-6421)

Internet Home Page:
nationalgypsum.com

Internet Product Page:
DEXcellroofboard.info

07 50 00/NGC BuyLine: 1100

DESCRIPTION

DEXcell® BRAND Glass Mat Roof Board is a mold resistant gypsum board designed for use as a coverboard and/or thermal barrier in commercial roofing applications. DEXcell Glass Mat Roof Board is ideally suited for mechanically fastened roof systems.

DEXcell Glass Mat Roof Board is a fire barrier and thermal barrier manufactured with coated fiberglass facers and an enhanced mold resistant gypsum core. It is produced in 1/4", 1/2" and 5/8" thicknesses and 4' wide in 4' and 8' lengths. DEXcell Glass Mat Roof Board scores and cuts easily and is specially coated on the front, back and sides for easy handling.

BASIC USES

DEXcell Glass Mat Roof Boards are ideally suited for a wide variety of roofing systems including but not limited to modified bitumen, built up roofing, mechanically attached single ply membranes, fluid applied, metal, and spray foam.

ADVANTAGES

- Manufactured to ASTM C 1177
- Fire Barrier meets FM Class 1 and UL Class A fire ratings for roofing systems up to unlimited slope per UL 790.
- Resists mold growth on the board per ASTM D 3273.
- Scores and snaps easily.

- Coated fiberglass facers for improved handling and strength.
- High density.

MOLD AND MILDEW RESISTANCE

DEXcell Glass Mat Roof Boards were designed to provide extra protection against mold and mildew. When tested by an independent laboratory per ASTM D 3273 ("Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber"), DEXcell Glass Mat Roof Board achieved a score of 10, the best possible score for this test.

The use of DEXcell Glass Mat Roof Boards in actual installations may not achieve the same results as were achieved in controlled, laboratory conditions. No material can be considered "mold proof," nor is it certain that any material will resist mold indefinitely. When used in conjunction with good design, handling and construction practices, DEXcell Glass Mat Roof Boards can provide increased mold resistance versus standard roofing products. As

with any building material, avoiding water exposure during handling, storage and installation and after installation is complete, is the best way to avoid the formation of mold or mildew.

LIMITATIONS

- DEXcell Glass Mat Roof Boards are engineered to perform within a properly designed roof system. The use of DEXcell Glass Mat Roof Boards as a roofing component is the responsibility of the design professional.
 - For specific instructions, please contact roofing manufacturers on the application of their products to DEXcell Glass Mat Roof Boards.
 - National Gypsum Company cannot control certain situations including weather conditions, dew, application temperature, installation techniques and moisture drive which can have adverse effects on the performance of the roof system.
 - Keep DEXcell Glass Mat Roof Board panels dry at all times. DEXcell Glass Mat Roof Board
- should not be installed during rain, heavy fog and any other conditions that can deposit moisture on the surface of the board.
- Apply only as much DEXcell Glass Mat Roof Board that can be covered by the final roof covering in the same day. Always avoid exposure to moisture from any source.
 - Re-roof or re-cover applications must be thoroughly dry prior to installation of DEXcell Glass Mat Roof Board.
 - Any plastic or poly packaging which may be applied at the plant to protect board during rail or other transit should be removed immediately upon receipt to prevent any buildup of moisture or condensation. Any exposure to moisture may cause problems and should be avoided.
 - DEXcell Glass Mat Roof Boards should never be stored on the ground and always stocked flat. If the product must be stored outside, avoid exposure to moisture by utilizing a breathable waterproof covering.

Job Name _____

Contractor _____ Date _____

Submittal Approvals: (Stamps or Signatures)

LIMITATIONS (Continued)

- Moisture vapor drive must be eliminated, and the movement of water by gravity through deficiencies in the roofing assembly must be controlled. Anytime a leak occurs, no moisture on the top side should be accepted, and any water introduced by the leak must be dissipated as quickly as possible.
- 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 components. 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. DEXcell Glass Mat Roof Boards which contain disproportionate free moisture content may need to be tested for stability to assure product performance.

INSTALLATION

WIND UPLIFT

DEXcell Glass Mat Roof Boards are included in numerous assemblies evaluated by FM or other independent laboratories for wind uplift performance. For information concerning such assemblies, visit roofnav.com.

Refer to roof system manufacturer's written instructions, local code requirements and Factory Mutual Global (FMG) and/or Underwriters Laboratories (UL) requirements for proper installation techniques.

- Use fasteners specified in accordance with system requirements. Install approved fasteners with plates into the DEXcell Glass Mat Roof Board, flush with the surface. Fasteners should be installed in strict compliance with the roof system manufacturer's installation recommendations and FMG Loss Prevention Data Sheet 1-29. Proper fastener spacing is essential to achieve wind-uplift performance.
- Locate edge joints on, and parallel to, deck ribs. Stagger end joints of adjacent lengths of DEXcell Glass Mat Roof Board. In typical installations, butt board edges and ends loosely.
- See Physical Properties chart for maximum flute span when panels are applied directly over metal decking.

TECHNICAL DATA

PHYSICAL PROPERTIES	1/4" (6.4 mm)	1/2" (12.7 mm)	5/8" (15.9 mm)
Thickness, nominal	1/4" (6.4 mm)	1/2" (12.7 mm)	5/8" (15.9 mm)
Width, standard	4' (1219 mm)	4' (1219 mm)	4' (1219 mm)
Length, standard	4',8" (1219,2438 mm)	4',8" (1219,2438 mm)	4',8" (1219,2438 mm)
Weight, nominal, lbs./sq.ft. (kg/m ²)	1.2 (5.9)	2.0 (10)	2.5 (12)
Surfacing	Coated fiberglass	Coated fiberglass	Coated fiberglass
Flexural Strength ¹ , parallel, lbf. min. (N)	≥40 (178)	≥80 (356)	≥100 (445)
Flute Spanability ²	2-5/8" (67 mm)	5" (127 mm)	8" (203 mm)
Permeance ³ , Perms (ng/Pa·S·m ²)	25 (1429)	24 (1371)	23 (1314)
Water Absorption ⁴ , % max	<10	<10	<10
Compressive Strength ⁵ , psi nominal	900	900	900
Flame Spread, Smoke Developed (ASTM E 84, UL 723, CAN/ULC-S102)	0/0	0/0	0/0
Fire Classification	UL Classified FM Approved	UL Classified FM Approved	UL Classified FM Approved
Bending Radius	4' (1219 mm)	6' (1829 mm)	8' (2438 mm)

1. Tested in accordance with ASTM C 473 method B
 2. Tested in accordance with ASTM E 661
 3. Tested in accordance with ASTM E 96 (dry cup method)
 4. Tested in accordance with ASTM C 1177
 5. Tested in accordance with ASTM C 473

FIRE RESISTANCE RATINGS

- UL 790 — DEXcell Glass Mat Roof Board meets UL Class A fire ratings for roofing systems up to unlimited slope per UL 790 (CAN/ULC-S107), see the *UL Certifications Directory* for more information.
- UL 1256 — DEXcell Glass Mat Roof Board is classified in roof deck constructions in accordance with ANSI/UL 1256, see the *UL Certifications Directory* for more information.
- 5/8" DEXcell Glass Mat Roof Board is UL Classified for use in numerous hourly rated UL assemblies including UL "P" roof assemblies. See the *UL Certifications Directory* for more information. Meets Type X per ASTM C 1177.

- When tested in accordance with ANSI/UL 723 (ASTM E 84, CAN/ULC-S102), DEXcell Glass Mat Roof Board had a Flame Spread 0 and Smoke Developed 0.

FM APPROVED

- Complies with requirements of FM 4450 and FM 4470
- Meets FM Class 1

Fire resistance ratings represent the result of tests on assemblies made up of specific materials in specific configurations. When selecting construction designs to meet certain fire resistance requirements, caution must be used to ensure that each component of the assembly is the one specified in the test. Further,

precaution should be taken that assembly procedures are in accordance with those of the tested assembly. (For copies of specific tests, call 1-800-NATIONAL®. For fire safety information, visit nationalgypsum.com).

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