

Description

Gold Bond® BRAND EXP® Sheathing consists of a moisture- and mold-resistant gypsum core encased in a coated, specially designed PURPLE® fiberglass mat on the face, back and sides. It is available in either a Regular or Type X core. The glass mat is folded around the long edges to reinforce and protect the core, and it provides superior weather resistance.

Use it for attachment to the outside of wall and soffit framing as a substrate for exterior cladding. It is available with either Regular or Type X core.

For speed of installation, GridMarX® guide marks are printed on the glass mat surface.

Basic Uses

APPLICATIONS

- Use it as a sheathing on wood or steel framing to provide fire resistance and weather protection when used under exterior claddings, such as wood, vinyl and fiber cement siding, masonry veneer, Exterior Insulation and Finish System (EIFS) and stucco.
- Use it as a sheathing in fire-resistance-rated exterior wall assemblies.

ADVANTAGES

- Fire-resistant material with a non-combustible gypsum core helps protect framing elements, even when cladding is combustible.
- Does not require taping of joints when used in fire-rated exterior wall assemblies.
- Resists the growth of mold per ASTM D3273 with a score of 10, the best possible score.
- Provides superior water resistance without impeding vapor transmission.
- Scores and snaps to exact size without sawing.
- Dimensionally stable under changes in temperature and relative humidity and resists warping, rippling, buckling and sagging.
- Ideally suited for soffit applications and radius applications.
- Offers a 12-month extended exposure warranty for typical weather conditions. Refer to National Gypsum Company limited warranties for further details.
- Coated fiberglass facers for easy handling.
- Features the GridMarX® guide marks on the panel to allow for faster and accurate installation.

Installation Recommendations

GENERAL

Install EXP Sheathing in accordance with National Gypsum Company written recommendations, GA-253, *Application of Gypsum Sheathing*; ASTM C1280 *Standard Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing*; and other standards referenced in this document.

FASTENING

Nails: Galvanized, 11-gauge, 7/16 in. (11.1 mm) head, 1-1/2 in. (38.1 mm) long for 1/2 in. (12.7 mm) sheathing and 1-3/4 in. (44.4 mm) long for 5/8 in. (15.9 mm) sheathing.

Screws: ASTM C1002 or ASTM C954, 1-1/4 in. (31.7 mm) long Type W for wood framing and 1 in. (25.4 mm) long Type S-12 for metal framing.

Staples: Galvanized 16-gauge, 7/16 in. (11.1 mm) crown, 1-1/2 in. (38.1 mm) long for 1/2 in. (12.7 mm) sheathing and 1-5/8 in. (41.3 mm) long for 5/8 in. (15.9 mm) sheathing.

Fasteners (nail or screw heads or the crown of staples) should bear tightly against the face of the sheathing panel but should not cut into the facer. Staples should be driven with the crown parallel to the framing. Fasteners should be no less than 3/8 in. (9.5 mm) from the edges and ends of the panel. When shear values are not required, fasteners should be spaced not more than 8 in. (203 mm) o.c. along the vertical ends or edges and intermediate supports.

SHEATHING

EXP Sheathing may be attached parallel to or perpendicular to wood or metal framing. For horizontal applications, install EXP Sheathing with end joints staggered.

Use appropriate panel orientation for specific fire assemblies and shear wall applications, as required by the design.

Install EXP Sheathing with vertical edges butting over the center of framing members. Fit sheathing snugly around all openings.

Install panels with a 3/8 in. (9.5 mm) gap where non-load-bearing construction abuts structural elements.

To prevent wicking, install panels with a 1/4 in. (6.4 mm) gap where they abut masonry or similar materials that might retain moisture.

Locate control joints as required by building design and as recommended by the manufacturer of the specified cladding material.

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Job Name: _____

Contractor: _____

Date: _____

Submittal Approvals: (Stamps or Signatures)

TECHNICAL DATA

PHYSICAL PROPERTIES		
	EXP Sheathing	EXP Sheathing Fire-Shield
Thickness¹, Nominal	1/2" (12.7 mm)	5/8" (15.9 mm)
Width¹, Nominal	4' (1,219 mm)	4' (1,219 mm)
Length^{1,4}, Standard	8' – 10' (2,438 mm – 3,048 mm)	8' – 10' (2,438 mm – 3,048 mm)
Weight, Nominal	1.9 lbs./sq. ft. (9.28 k/m ²)	2.5 lbs./sq. ft. (12.21 k/m ²)
Edges¹	Square	Square
Flexural Strength¹, Perpendicular	≥ 100 lbf. (445 N)	≥ 140 lbf. (623 N)
Flexural Strength¹, Parallel	≥ 80 lbf. (356 N)	≥ 100 lbf. (445 N)
Humidified Deflection¹	≤ 2/8" (6 mm)	≤ 1/8" (3 mm)
Nail Pull Resistance¹	≥ 80 lbf. (356 N)	≥ 90 lbf. (400 N)
Hardness¹ – Core, Edges and Ends	≥ 15 lbf. (67 N)	≥ 15 lbf. (67 N)
Bending Radius	6' (1,829 mm)	8' (2,438 mm)
Thermal Resistance⁵	R = .43	R = .50
Permeance⁶	22 perms	19 perms
Water Absorption¹ (% of Weight)	≤ 10%	≤ 10%
Linear Expansion with Change Moisture	6.25 x 10 ⁻⁶ in./in./%RH	6.25 x 10 ⁻⁶ in./in./%RH
Coefficient of Thermal Expansion	9.26 x 10 ⁻⁶ in./in./°F	9.26 x 10 ⁻⁶ in./in./°F
Racking Strength⁷ (Ultimate - not design value)	>540 lbs.ft. (732 N/m)	>654 lbs.ft. (887 N/m)
Mold Resistance⁸, ASTM D3273	Score of 10	Score of 10
Compressive Strength⁹	≥ 500 psi	≥ 500 psi
Product Standard Compliance	ASTM C1177	ASTM C1177
Fire-Resistance Characteristics		
Core Type	Regular	Type X
UL Type Designation	N/A	FSW-6
Combustibility²	Non-combustible Core	Non-combustible Core
Surface Burning Characteristics³	Class A	Class A
Flame Spread³	0	0
Smoke Development³	0	0
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 C840 Standard Specification for Application and Finishing of Gypsum Board		
ASTM C1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing		
ASTM C1280 Standard Specification for Application of Exterior Gypsum Panel Products 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 E72 Standard Test Methods of Conducting Strength Tests of Panels for Building Construction		
ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials		
ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials		
ASTM E136 Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C		
Gypsum Association, GA-214, <i>Recommended Levels of Finish for Gypsum Board, Glass Mat and Fiber-Reinforced Gypsum Panels</i>		
Gypsum Association, GA-216, <i>Application and Finishing of Gypsum Panel Products</i>		
Gypsum Association, GA-238, <i>Guidelines for Prevention of Mold Growth on Gypsum Board</i>		
Gypsum Association, GA-253, <i>Application of Gypsum Sheathing</i>		
National Gypsum Company, <i>NGC Construction Guide</i>		

1. Specified minimum 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. Special length may be available. Contact your local sales representative for more information.
 5. Tested in accordance with ASTM C518.

6. Tested in accordance with ASTM E96.
 7. Tested in accordance with ASTM E72.
 8. Tested in accordance with ASTM D3273.
 9. Tested in accordance with ASTM C473, annex X3.

(Installation Recommendations continued from page 1)

VINYL, WOOD AND FIBER CEMENT SIDING

Apply horizontal siding and vertical siding panels directly over EXP Sheathing covered with weather-resistive barrier. Butt siding joints over framing members. Fasteners should have a minimum 1 in. (25.4 mm) penetration into each wood framing member and penetration of each metal framing member recommended by fastener manufacturer.

STUCCO

Nail or screw 3.4 lb. self-furring galvanized Diamond Mesh metal lath through weather-resistant barrier and EXP Sheathing into the framing. Install metal lath immediately after installing EXP Sheathing.

BRICK VENEER

Wall ties for masonry veneer should be fastened through EXP Sheathing with fasteners that penetrate a minimum of 1 in. (25.4 mm) into wood framing and recommended penetration of cold-formed metal framing. Maintain an air space of minimum 2 in. (50.8 mm) between EXP Sheathing and brick veneer per recommendations of the Brick Institute of America.

SHEAR WALL APPLICATIONS WITH EXP SHEATHING

For shear walls constructed with 1/2 in. (12.7 mm) and 5/8 in. (15.9 mm) EXP Sheathing, apply sheathing vertically to wood studs 16 in. (406 mm) o.c. with 11-gauge, 1-3/4 in. (44.4 mm) long, galvanized nails 4 in. (102 mm) o.c. at edges and 8 in. (203 mm) o.c. at intermediate studs.

Corner Bracing: Where continuous diagonal bracing is required, many building codes allow the use of 48 in. (1,219 mm) wide 5/8 in. (15.9 mm) gypsum sheathing panels applied vertically to be used in place of 1 in. (25.4 mm) x 4 in. (102 mm) wood let-in or metal strap bracing.

Shear Walls: Where wind or seismic forces require shear walls to resist these lateral forces, most building codes provide allowable shear values for walls having gypsum sheathing applied vertically to wood framing. Specific values with construction requirements and limitations are contained in the model building code (ICC: International Building Code [IBC] and International Residential Code for One- and Two-Family Dwellings [IRC]). Shear values for all gypsum panels, including gypsum sheathing, are defined in GA-229-08, *Shear Values for Screw Application of Gypsum Board on Walls*.

MOLD AND MILDEW RESISTANCE

EXP Sheathing was designed to provide extra protection against mold and mildew. When tested by an independent laboratory, per ASTM D3273, EXP Sheathing achieved a score of 10, the best possible score for this test.

The use of EXP Sheathing 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, EXP Sheathing can provide increased mold resistance versus standard sheathing 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.

FIRE RESISTANCE RATINGS

Fire Resistance ratings represent the results of tests on assemblies made up of specific materials in a specific configuration. 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, precautions should be taken that assembly procedures are in accordance with those of the tested assembly. (For copies of specific tests, call 1-800-NATIONAL.)

5/8" EXP Fire-Shield Sheathing is tested in accordance with ASTM Standard E119 and is classified as Type X for use in UL Listings.

JOINT TREATMENT

EXP Sheathing is compatible with a variety of exterior systems. For applications requiring joint treatment, joint finishes must be compatible with the exterior system specified. Consult your weather/water resistant barrier manufacturer, cladding manufacturer or local building code authority to determine the appropriate joint treatment. The EXP Sheathing 12-month exposure limited warranty does not require, for its applicability, the use of joint treatment or a weather barrier.

DECORATION

Soffit and Ceiling applications only

Embed 2 in. wide paper or fiberglass mesh tape in ProForm® BRAND Quick Set™ Setting Compound, or equivalent, over all joints. Once dry, apply a skim coat of Quick Set Compound, or equivalent, over the panels to achieve a uniform, smooth finish over the entire area. Prime with exterior grade primer and finish with two coats of exterior grade paint.

SAFETY

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). Wear a dust mask when sanding; you may need additional breathing protection in extremely dusty conditions. Do not use a power saw to cut this product.

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. Consult the SDS for this product, available at purplechoice.info before use.

Limitations

- EXP Sheathing is not a finished surface, nor is it a substrate for the direct application of joint compound, stucco, paint or textures in exterior wall applications. Placement of vapor retarders within the wall assembly is the responsibility of the design professional.
- Do not use EXP Sheathing as a nailing base. Mechanical fasteners should pass through the sheathing and engage the framing member behind the panel.
- Install materials used in conjunction with EXP Sheathing per the respective manufacturer's recommendations.
- EXP Sheathing is resistant to weather, but it is not intended for immersion in water and should not be subjected to ponding or to cascading water conditions.

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- Do not apply EXP Sheathing below grade. Comply with building code grade clearance requirements.
- Do not laminate EXP Sheathing directly to masonry surfaces; fasten panels to furring strips or framing.
- EXP Sheathing is not intended for tile applications. For tile applications, Gold Bond® BRAND EXP® Tile Backer or PermaBase® BRAND Cement Board is recommended.
- Gypsum sheathing is not a replacement for specific structurally engineered sheathing in shear wall designs.
- Adhesive-only application of EXP Sheathing to framing is not recommended.
- Framing supports must not exceed 24 in. (610 mm) o.c.
- Design details, including fasteners, sealants and control joints, must be properly installed per system specifications. Openings and penetrations must be properly flashed and sealed according to code, building design and weather-resistive barrier manufacturer's instructions. Failure to do so will void the warranty; refer to EXP Sheathing warranty for terms, conditions and limitations.

For More Information

ARCHITECTURAL SPECIFICATIONS

National Gypsum Company's CSI Master Format® 3-part guide specifications are downloadable as editable Microsoft® Word documents at: nationalgypsum.com.

LATEST INFORMATION AND UPDATES

For the latest technical information and updates, call NGC Construction Services: **1-800-NATIONAL (628-4662)** or visit our website: nationalgypsum.com.



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