

Gold Bond® eXP® Interior Extreme® IR Gypsum Panel

09 29 00 / NGC

Technical Information
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DESCRIPTION

Gold Bond® eXP® Interior Extreme® Impact Resistant (IR) Gypsum Panels consist of an impact- and moisture- and mold-resistant gypsum core encased in a coated, specially designed fiberglass mat on the face, back and sides. In addition to moisture and mold resistance, the impact-resistant panel has a denser core and an enhanced glass mat for increased resistance to indentation and impact. Additionally, the fiberglass mesh embedded into the core enhances impact resistance. It is available in a Type X core. The glass mat is folded around the long edges to reinforce and protect the core.

Use it for interior applications requiring increased resistance to incidental moisture and wall penetrations. It is ideal for areas prone to cavity penetration, including gymnasiums, correctional facilities, schools and workshops.

GridMarX® are printed on the glass mat surface to help installers instantly identify stud locations and make accurate cuts without having to pencil in or snap chalk lines.

BASIC USES

Applications

- Use in wall assemblies in areas where surface abrasion, impact or penetration and moisture, mold and mildew resistance are major concerns.
- Use on the interior side of exterior walls, mechanical rooms and core walls where moisture exposure is more likely.
- Use for pre-rock applications before the building is completely enclosed, which may shorten construction cycles.

Advantages

- Provides greater resistance to abuse and impact penetration over standard gypsum board.
- Approved component in specific UL fire-rated designs.
- Resists the growth of mold per ASTM D3273 with a score of 10, the best possible score.
- Coated fiberglass facers for easy handling.
- Offers a 12-month extended exposure warranty for typical weather conditions. Refer to Gold Bond Building Products, LLC limited warranties for further details.
- Save time and money with MaX 12® and MaX 16® optimized fastener patterns for 5/8" Fire-Shield products to achieve 1-hour fire ratings using fewer fasteners. Visit GridMarX.com for more information.
- Features the GridMarX preprinted fastening guide on the panel to allow for faster and more accurate installation.
- Achieves UL GREENGUARD Gold Certification for low chemical emissions into indoor air during product usage. For more information, visit: ul.com/gg.

INSTALLATION RECOMMENDATIONS

General

- Install gypsum panels in accordance with methods described in ASTM C840 and GA-216. Note that cutting and scoring should be from the back side of the panels.
- Examine and inspect framing materials to which gypsum panels are to be applied. Remedy all defects prior to installation of the gypsum panel.
- Apply gypsum panels first to ceilings at right angles to framing members, then to walls. Use panels of maximum practical length so that the minimum number of end joints occur. Panel edges should be brought into contact with each other but not forced into place.
- Install batt or blanket ceiling insulation **before** the gypsum panels on ceilings when installing a polyethylene vapor barrier on ceilings behind the gypsum panels. Install the insulation **immediately** after the gypsum panels when using loose fill insulation. Avoid installation practices that allow condensation to form behind panels.
- Locate gypsum board joints at openings so that no joint will occur within 12" (305 mm) of the edges of the opening unless installing control joints at these locations. Stagger vertical end joints. Joints on opposite sides of a partition should not occur on the same stud.
- Hold gypsum panels in firm contact with the framing member while driving fasteners. Fastening should proceed from center portion of the panels toward the edges and ends. Set fasteners with heads slightly below the surface of the panels. Take care to avoid breaking the glass mat facer of the gypsum panel. Remove improperly driven nails or screws.
- Provide minimum 1/4" (6.4 mm) clearance between boards and adjacent concrete or masonry to minimize wicking of moisture.
- Maintain a room temperature of not less than 40°F (4°C) during application of gypsum panels.
- Maintain a room temperature of not less than 50°F (10°C) when using adhesive to attach the gypsum panels and during joint treatment, texturing and decoration, beginning 48 hours prior to application and continuously thereafter until completely dry. Maintain adequate ventilation in the working area during installation and curing period.
- Listed impact ratings apply to walls constructed with eXP Interior Extreme IR applied with long edges parallel to and centered over minimum 20-gauge framing members spaced a maximum of 16" (406 mm) o.c.
- Install fire-rated assemblies in accordance with the details found in the UL Fire Resistance Directory or the Gypsum Association's GA-600, *Fire Resistance and Sound Control Design Manual*.

(Continued on page 3)

Job Name _____

Contractor _____ Date _____

Submittal Approvals: (Stamps or Signatures)

eXP
INTERIOR EXTREME® IR

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TECHNICAL DATA

| Physical Properties | | eXP Interior Extreme IR |
|---|--|--|
| Thickness ¹ , Nominal | | 5/8" (15.9 mm) |
| Width ¹ , Nominal | | 4' (1,219 mm) |
| Length ^{1,4} , Standard | | 8' – 12' (2,438 mm – 3,658 mm) |
| Weight, Nominal | | 2.8 lbs./sq. ft. (13.67 k/m ²) |
| Edges ¹ | | Tapered |
| Flexural Strength ¹ , Perpendicular | | ≥ 140 lbf. (623 N) |
| Flexural Strength ¹ , Parallel | | ≥ 100 lbf. (445 N) |
| Humidified Deflection ¹ | | ≤ 1/8" (3.2 mm) |
| Nail Pull Resistance ¹ | | ≥ 90 lbf. (400 N) |
| Hardness ¹ – Core, Edges and Ends | | ≥ 15 lbf. (67 N) |
| Bending Radius | | 8' (2,438 mm) |
| Thermal Resistance ⁵ | | R = .50 |
| Permeance ⁶ | | 19 perms |
| Water Absorption ¹ (% of Weight) | | ≤ 5% |
| Surface Water Absorption ¹ | | ≤ 1.6 grams |
| Linear Expansion with Change Moisture | | 6.25 x 10 ⁻⁶ in./in./%RH |
| Coefficient of Thermal Expansion | | 9.26 x 10 ⁻⁶ in./in./°F |
| Mold Resistance ⁷ , ASTM 3273 | | Score of 10 |
| Mold Resistance ⁸ , ASTM 6329 | | Pass |
| Surface Abrasion ⁹ | | Level 3 |
| Indentation ⁹ | | Level 1 |
| Soft-Body Impact ⁹ | | Level 3 |
| Hard-Body Impact ⁹ | | Level 2 |
| Product Standard Compliance | | ASTM C1658 |
| Fire-Resistance Characteristics | | |
| Core Type | | Type X |
| UL Type Designation | | FSW-6 |
| Combustibility ² | | Non-combustible Core |
| Surface Burning Characteristics ³ | | Class A |
| Flame Spread ³ | | 0 |
| Smoke Development ³ | | 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 C1629 Standard Specification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels | | |
| ASTM C1658 Standard Specification for Glass Mat Gypsum Panels | | |
| ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber | | |
| ASTM D6329 Standard Guide for Developing Methodology for Evaluating the Ability of Indoor Materials to Support Microbial Growth Using Static Environmental Chambers | | |
| 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 | | |
| Gypsum Association, GA-214, Levels of Finish for Gypsum Panel Products | | |
| Gypsum Association, GA-216, Application and Finishing of Gypsum Panel Products | | |
| Gypsum Association, GA-238, Guidelines for Prevention of Mold Growth on Gypsum Board | | |
| Gypsum Association, GA-253, Application of Gypsum Sheathing | | |
| Gold Bond Building Products, LLC Manufacturer Standards, NGC Construction Guide | | |

1. Specified values per ASTM C1658, tested in accordance with ASTM C473.
2. Tested in accordance with ASTM E136.
3. Tested in accordance with ASTM E84.
4. Please consult your local sales representative for all non-standard lengths and widths. Minimum order requirements may apply.

5. Tested in accordance with ASTM C518.
6. Tested in accordance with ASTM E96.
7. Tested in accordance with ASTM D3273 and rated in accordance with ASTM D3274.
8. Tested in accordance with ASTM D6329.
9. Tested in accordance with ASTM methods in ASTM C1629 – D4977 (Surface Abrasion), D5420 (Indentation), E695 (Soft-Body Impact), Annex A1 (Hard-Body Impact).

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(Continued from page 1)

- Drive fasteners just below the surface, avoiding damage to the core and/or glass mat facer.
- Avoid installing water-sensitive materials on eXP Interior Extreme Panels in pre-rock applications until the building is enclosed.

Finishing

Perform finishing of eXP Interior Extreme Panels in accordance with GA-214. Joints between eXP Interior Extreme Panels may be finished with paper tape and either ready mix joint compound or setting joint compound. To achieve a "paperless" wall assembly, finish the joints with fiberglass mesh tape and setting compound. In most areas to receive final decoration, skim coating of the entire surface is recommended.

Decoration

Ensure gypsum panel surfaces, including finished joints, are clean, dust-free and gloss-free to achieve best painting results. Apply a coat of a quality drywall primer to equalize the porosities between surface paper and joint compound, improving fastener and joint concealment.

Selection of a paint to provide desired finish characteristics is the responsibility of the architect or contractor.

Prepare and prime gypsum panels prior to decoration.

Refer to GA-214 to determine the level of finishing needed to assure a surface properly prepared to accept the desired decoration.

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 goldbondbuilding.com before use.

Critical Lighting Areas

Wall and ceiling areas abutting window mullions or skylights, long hallways, and atriums with large surface areas washed with artificial or natural lighting are a few examples of critical lighting areas. Strong side lighting from windows or surface-mounted light fixtures may reveal even minor surface imperfections. Light striking the surface obliquely, at a slight angle, exaggerates surface irregularities. If you cannot avoid critical lighting, minimize the effects by skim coating the gypsum panel board surfaces, by decorating the surface with medium to heavy textures, or by the use of draperies and blinds, which soften shadows. In general, paints with sheen levels other than flat, enamel paints and dark-toned paint finishes highlight surface defects; consider the use of textures to hide these minor visual imperfections. Finish panels to a Level 5 finish as outlined in GA-214.

LIMITATIONS

- Do not use for exterior applications. eXP Interior Extreme IR Gypsum Panels are intended for interior use only.
- Do not use panels as a nailing base as they are nonstructural.
- Do not finish joints until building is properly enclosed. It is permissible in pre-rock assemblies to apply level one taping only on vertical applications using setting type joint compound. Do not allow the taped areas to have direct contact with cascading water.
- Avoid exposure to excessive or continuous moisture and extreme temperatures. Gypsum panels are not recommended where they will be exposed to temperatures exceeding 125°F(52°C) for extended periods of time.
- Avoid using in areas subject to constant and/or excessive moisture and high humidity, such as gang showers, saunas, steam rooms or swimming pool enclosures.
- Avoid using as a backer board directly behind tile in tub and shower areas.
- Do not install in horizontal applications until the building is properly enclosed.
- To maximize impact resistance and eliminate potential screw spin-out, a minimum 20-gauge (.0312" design thickness) steel stud is required.
- Space supporting framing a maximum of 16" (406 mm) o.c.

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FOR MORE INFORMATION

Architectural Specifications

Gold Bond Building Products CSI MasterFormat® 3-part guide specifications are downloadable as editable Microsoft® Word documents at: goldbondbuilding.com.

Latest Technical Information and Update

Visit goldbondbuilding.com or call National Gypsum Company Construction Services: 1-800-NATIONAL (628-4662).

Technical Information Información Técnica

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The eXP family of products is manufactured by Gold Bond Building Products, LLC.



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