

Gold Bond® EVOLVE X™ Fire-Shield® Gypsum Board

09 29 00 / NGC

Technical Information
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DESCRIPTION

Gold Bond® EVOLVE X™ Fire-Shield® Gypsum Board consists of a fire-resistant, Type X gypsum core specially formulated to be up to 20% lighter than 5/8" Gold Bond® Fire-Shield® Gypsum Board, with lower environmental impact.

It is encased in heavy, natural-finish, 100% recycled paper on the face and back sides. The face paper is folded around the long edges to reinforce and protect the core, and the ends are square-cut and finished smooth.

EVOLVE X Fire-Shield Gypsum Board features a Type X core to provide additional fire resistance ratings when used in specific UL designs.

GridMarX® are printed on the face paper 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 5/8" (15.9 mm) EVOLVE X Fire-Shield Gypsum Board for walls and ceilings in fire-rated construction where the framing members are spaced up to 24" (610 mm) o.c.

Advantages

- Approved component in specific UL-rated designs.
- Up to 20% lighter than 5/8" (15.9 mm) Fire-Shield Gypsum board, which results in easier handling.
- Cuts easily for quick installation, permitting painting or other decoration and the installation of metal or wood trim almost immediately.
- Excellent working properties, including score and snap, reduced dust and improved strength-to-weight ratio.
- Fire-resistant material with a gypsum core that will not support combustion or transmit temperatures greatly in excess of 212°F (100°C) until completely calcined, a slow process.
- Dimensionally stable under changes in temperature and relative humidity and resists warping, rippling, buckling and sagging.
- 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 board 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.
- Qualifies as a low-VOC emitting material by meeting California Specification 01350.

INSTALLATION RECOMMENDATIONS

General

- Install gypsum board in accordance with methods described in ASTM C840 and GA-216.
- Examine and inspect framing materials to which gypsum board is to be applied. Remedy all defects prior to installation of the gypsum board.
- GridMarX provides quick identification and uniform nail/screw patterns. Use GridMarX to make accurate cuts without drawing lines. GridMarX guide marks run the length of the board at five points in 4" (102 mm) increments. Marks run along the edge in both tapers and at 16" (406 mm), 24" (610 mm) and 32" (813 mm) in the field of the board. The marks cover easily with no bleed-through using standard paint products.
- Apply gypsum board first to ceilings at right angles to framing members, then to walls. Use boards of maximum practical length so that the minimum number of end joints occur. Bring board edges into contact with each other but do not force into place.
- Install batt or blanket ceiling insulation **before** the gypsum board when installing a polyethylene vapor barrier on ceilings behind the gypsum board. Install the insulation **immediately** after the gypsum board when using loose fill insulation. Avoid installation practices that might allow condensation to form behind boards.
- Cut gypsum board to allow for a minimum 1/4" (6.4 mm) gap between gypsum board and floor to prevent potential wicking.
- 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 board in firm contact with the framing member while driving fasteners. Fastening should proceed from center portion of the board toward the edges and ends. Set fasteners with heads slightly below the surface of the board. Take care to avoid breaking the face paper of the gypsum board. 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 board.
- Maintain a room temperature of not less than 50°F (10°C) when using adhesive to attach the gypsum board 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.

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Job Name _____

Contractor _____ Date _____

Submittal Approvals: (Stamps or Signatures)

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TECHNICAL DATA

Physical Properties	
Thickness ¹ , Nominal	5/8" (15.9 mm)
Width ¹ , Nominal	4' (1,219 mm)
Length ^{1,4} , Standard	8' – 12' (2,438 – 3,658 mm)
Weight, Nominal	1.8 lbs./sq. ft. (8.79 k/m ²)
Edges ¹	Tapered or Square
Flexural Strength ¹ , Perpendicular	≥ 147 lbf. (654 N)
Flexural Strength ¹ , Parallel	≥ 46 lbf. (205 N)
Humidified Deflection ¹	≥ 5/8" (15.9 mm)
Nail Pull Resistance ¹	≥ 87 lbf. (387 N)
Hardness ¹ – Core, Edges and Ends	≥ 11 lbf. (49 N)
Bending Radius	15' (4,572 mm)
Thermal Resistance ⁵	R = .56
Product Standard Compliance	ASTM C1396
Fire-Resistance Characteristics	
Core Type	Type X
UL Type Designation	FSLX
Combustibility ²	Non-combustible Core
Surface Burning Characteristics ³	Class A
Flame Spread ³	15
Smoke Development ³	0
Applicable Standards and References	
ASTM C473 <i>Standard Test Methods for Physical Testing of Gypsum Panel Products</i>	
ASTM C518 <i>Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus</i>	
ASTM C840 <i>Standard Specification for Application and Finishing of Gypsum Board</i>	
ASTM C1396 <i>Standard Specification for Gypsum Board</i>	
ASTM E84 <i>Standard Test Method for Surface Burning Characteristics of Building Materials</i>	
ASTM E119 <i>Standard Test Methods for Fire Tests of Building Construction and Materials</i>	
ASTM E136 <i>Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C</i>	
Gypsum Association, GA-214, <i>Levels of Finish for Gypsum Panel Products</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>	
Gold Bond Building Products, LLC Manufacturer Standards, <i>NGC Construction Guide</i>	

1. Specified values per ASTM C1396, 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.

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Finishing

Refer to GA-214, *Levels of Finish for Gypsum Panel Products*, to determine the level of finishing needed to assure a surface properly prepared to accept the desired decoration.

Decoration

Ensure gypsum board surfaces, including finished joints, are clean, dust-free and gloss-free to achieve best painting results. Apply a coat of a quality gypsum board 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 boards prior to texturing.

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

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 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 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.

LIMITATIONS

- Avoid exposure to extreme temperatures. Do not expose gypsum board to temperatures exceeding 125°F (52°C) for extended periods of time.
- Properly ventilate or condition attic spaces to remove moisture buildup above gypsum board ceilings. If required, install a vapor retarder in exterior ceilings behind gypsum board.

- Avoid installing gypsum board directly over insulation blankets with facer flanges placed continuously across the face of the framing members; recess insulation blankets and attach flanges to the sides of framing.
- Isolate gypsum board from contact with building structure in locations where structural movement may impose direct loads on gypsum board assemblies.
- Provide control joints no more than 30' (9,144 mm) where employing long continuous runs of walls, partitions or ceilings without perimeter relief.
- Avoid gypsum board joints within 12" (305 mm) of the corners of window or door frames unless installing control joints at these locations.
- UL Type FSLX requires the use fiberglass insulation for single-layer, steel stud UL fire-rated wall assemblies.
- To prevent objectionable sag in gypsum paneled ceilings, the weight of overlaid unsupported insulation should not exceed the following recommendations:

Ceiling-Supported Insulation	
Thickness, Nominal	5/8" (15.9 mm)
Framing Spacing	24" (610 mm) o.c.
Weight of Ceiling-Supported Insulation	2.2 psf (10.7 kg/m ²)

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

1-800-NATIONAL®
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The EVOLVE™ family of products is manufactured by Gold Bond Building Products, LLC.



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