

# Gold Bond® XP® Fire-Shield® Radius Gypsum Board

09 29 00 / NGC

Technical Information  
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## DESCRIPTION

Gold Bond® XP® Fire-Shield® Radius Gypsum Board is 5/16" thick and consists of a high-density, fire-resistant, gypsum core encased in a heavy abrasion and mold/mildew/moisture resistant PURPLE paper. Used in the construction of multi-layered, fire rated wall assemblies. Specifically engineered for radius applications requiring a fire rating.

Tapered edges allow joints to be reinforced with joint tape, setting-type joint compound or ready-mix joint compound. For optimum mold and mildew resistance, mold-resistant joint compounds are recommended.

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

For use on multi-layered, fire rated wall assemblies. 5/16" XP Fire-Shield Radius Gypsum Board in curved applications requiring a fire rating are based on testing conducted in accordance with ASTM E119 for linear construction.

### Advantages

- For use in approved 1- and 2-hour fire-rated wall assemblies.
- Resists the growth of mold per ASTM D3273 with a score of 10, the best possible score.
- Resists the growth of mold per ASTM G21 with a score of 0, the best possible score.
- Features SPORGARD® technology with extra mold-inhibiting properties.
- 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.
- Easily scored and snaps easily, no special handling requirements.
- Heavy abrasion resistant paper and denser core provide greater resistance to surface abuse when tested in accordance with ASTM C1629.
- Lightweight, cost-efficient material that readily accepts a wide range of decorative finishes.
- Achieves UL GREENGUARD Gold Certification for low chemical emissions into indoor air during product usage. For more information, visit: [ul.com/gg](http://ul.com/gg).
- Qualifies as a low-VOC emitting material by meeting California Specification 01350. For more information, visit: [calrecycle.ca.gov/greenbuilding/specs/section01350](http://calrecycle.ca.gov/greenbuilding/specs/section01350).

## 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.
- 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 on ceilings when installing a vapor retarder 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 of moisture.
- Provide minimum 1/4" (6.4 mm) clearance between boards and adjacent concrete or masonry to minimize wicking of moisture.
- Locate gypsum board joints at openings so that no joint will align 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.
- 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 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.
- When using adhesive to attach gypsum board, apply drywall adhesive to the face of studs in continuous beads. Reference ASTM C840 Section 10.

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Job Name \_\_\_\_\_

Contractor \_\_\_\_\_ Date \_\_\_\_\_

Submittal Approvals: (Stamps or Signatures)



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## TECHNICAL DATA

Physical Properties		XP Fire-Shield Radius
Thickness <sup>1</sup> , Nominal		5/16" (7.9 mm)
Width <sup>1</sup> , Nominal		4' (1,219 mm)
Length <sup>1,4</sup> , Standard		8' – 12' (2,438 – 3,657 mm)
Weight, Nominal		1.3 – 1.4 lbs./sq. ft. (6.35 – 6.84 k/m <sup>2</sup> )
Edges <sup>1</sup>		Tapered
Flexural Strength <sup>1</sup> , Perpendicular		≥ 62 lbf. (276 N)
Flexural Strength <sup>1</sup> , Parallel		≥ 21 lbf. (93 N)
Humidified Deflection <sup>1</sup>		N/A
Nail Pull Resistance <sup>1</sup>		≥ 46 lbf. (205 N)
Hardness <sup>1</sup> – Core, Edges and Ends		≥ 11 lbf. (49 N)
Bending Radius		2' (610 mm)
Thermal Resistance <sup>5</sup>		N/A
Permeance <sup>6</sup>		22 perms
Water Absorption <sup>1</sup> (% of Weight)		< 5%
Mold Resistance <sup>6</sup> , ASTM D3273		Score of 10
Mold Resistance <sup>6</sup> , ASTM G21		Score of 0
Product Standard Compliance		ASTM C1396
Fire-Resistance Characteristics		
Core Type		N/A
UL Type Designation		FSW
Combustibility <sup>2</sup>		Non-combustible Core
Surface Burning Characteristics <sup>3</sup>		Class A
Flame Spread <sup>3</sup>		15
Smoke Development <sup>3</sup>		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 C1396 Standard Specification for Gypsum Board		
ASTM C1629 Standard Classification for Abuse Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels		
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 G21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi		
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		
Gold Bond Building Products, LLC Manufacturer Standards, NGC Construction Guide		

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.
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 G21.



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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 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 boards prior to texturing.

Refer to GA-214 to determine the level of finishing needed to assure 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 using textures to hide these minor visual imperfections. Finish boards to a Level 5 finish, as outlined in GA-214.

## LIMITATIONS

- Avoid exposure to excessive or continuous moisture and 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 spaced not 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.
- All ends and edges of gypsum board should occur over framing members or other solid backing except where joints occur at right angles to framing or furring members.
- Do not use boards as a nailing base as they are nonstructural.
- 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 flat-ceiling applications
- Do not install or treat joints until the building is properly enclosed. Do not install in pre-rock conditions.

## 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](http://goldbondbuilding.com).

### Latest Technical Information and Update

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

**Technical Information** Información Técnica

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