

# Technical Bulletin

**QuietBrace™ Passes UL 1-Hour Fire Test,  
Approved For Use In Wall Assembly U356.**

**QUIETBRACE™** Sound-Deadening  
*a Temple-Inland product* Structural Sheathing

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# FIRE RATED WALL ASSEMBLY - U356

► See General Information for Fire Resistance Ratings - ANSI/UL 263

November 15, 2006

(Exposed to Fire on Interior Face Only)

**Design No. U356**

Bearing Wall Rating

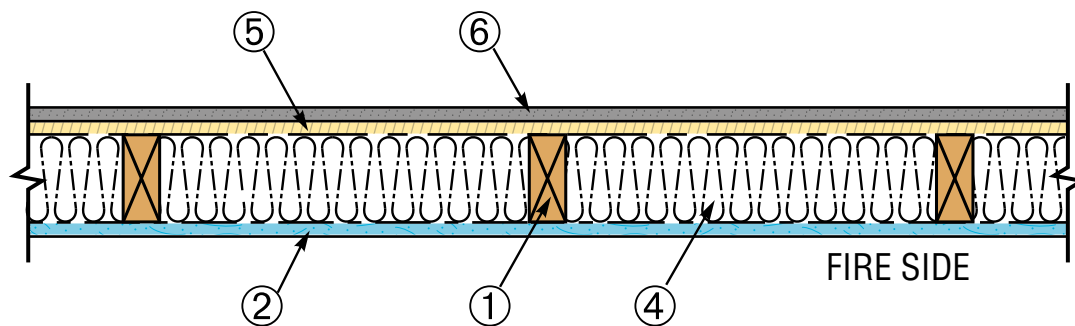
1 Hour

Finish Rating

23 Min or 25 Min (See Item 2C)

Load Restricted for Canadian Applications

See Guide [BXUV7](#)



HORIZONTAL SECTION

<p><b>1. WOOD STUDS</b></p>	<p>Nom 2 by 4 in. spaced 16 in. OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. Studs laterally braced by wood structural panel sheathing (Item 5). When Mineral and Fiber Boards* (Item 5A) are considered as bracing for the studs, the load is restricted to 76% of allowable axial load. Walls effectively fire stopped at top and bottom of wall.</p>
<p><b>2. GYPSUM BOARD*</b></p>	<p>Any Classified <math>\frac{5}{8}</math> in. thick, 4 ft. wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, <math>1\frac{1}{8}</math> in. long with <math>\frac{1}{4}</math> in. diam head.</p> <p>When Item 7, Steel Framing Members*, is used, gypsum panels attached to furring channels with 1 in.-long Type S bugle-head steel screws spaced 12 in. OC.</p> <p>When Item 7A, Steel Framing Members*, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in.-long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with <math>1\frac{1}{8}</math> in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers.</p> <p>See Gypsum Board (CKNX) Category for names of Classified Companies.</p>
<p><b>2A. GYPSUM BOARD*</b></p>	<p>(As an alternate to Item 2, not shown) - Any <math>\frac{5}{8}</math> in.-thick, 4 ft.-wide gypsum panels supplied by the Classified Companies listed below shown Gypsum Board* (CKNX) category. Applied vertically and attached to studs and bearing plates with <math>1\frac{1}{4}</math> in.-long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.</p> <p><b>CANADIAN GYPSUM COMPANY</b>  <b>UNITED STATES GYPSUM CO.</b>  <b>USG MEXICO S A DE C V</b></p>
<p><b>2B. GYPSUM BOARD*</b></p>	<p>(As an alternate to Item 2, not shown) - <math>\frac{5}{8}</math> in.-thick, 4 ft.-wide gypsum panels applied vertically and attached to studs and bearing plates with <math>1\frac{1}{4}</math> in.-long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.</p> <p><b>AMERICAN GYPSUM COMPANY</b> — Types AGX-1, AG-C  <b>BPB AMERICA INC</b> — ProRoc Type C or ProRoc Type X  <b>BPB CANADA</b> — ProRoc Type C or ProRoc Type X  <b>TEMPLE-INLAND FOREST PRODUCTS CORP</b> — Type X, Veneer Plaster Base - Type X, Water-Rated - Type X, Sheathing - Type X, Soffit - Type X</p>

# FIRE RESISTANCE RATING – ANSI/UL 263 *(continued)*

<p><b>2C. GYPSUM BOARD*</b></p>	<p>(As an alternate to Item 2, not shown) — For Use with Item 5A only - 5/8 in.-thick, 4 ft.-wide gypsum panels applied horizontally and attached to studs and bearing plates with 1 1/4 in.-long Type W coarse thread gypsum panel steel screws spaced a max 8 in. O.C., with last screws 1 in. and 4 in. from edges of board. Finish Rating is 25 min.</p> <p><b>TEMPLE-INLAND FOREST PRODUCTS CORP</b> — Type X, Veneer Plaster Base - Type X, Water-Rated - Type X, Sheathing - Type X, Soffit - Type X</p>
<p><b>3. JOINTS AND NAILHEADS</b></p>	<p>(Not Shown) — Wallboard joints covered with tape and joint compound. Nail heads covered with joint compound.</p>
<p><b>4. BATTS AND BLANKETS*</b></p>	<p>Mineral fiber or glass fiber insulation, 3 1/2 in. thick, pressure fit to fill wall cavities between studs and plates. Mineral fiber insulation to be unfaced and to have a min. density of 3 pcf. Glass fiber insulation to be faced with aluminum foil or kraft paper and to have a min. density of 0.9 pcf (min. R-13 thermal insulation rating).</p> <p>See <b>Batts and Blankets</b> (BKNV) Category in the Building Materials Directory and Batts and Blankets (BZJZ) Category in the Fire Resistance Directory for names of Classified Companies.</p>
<p><b>4A. FIBER, SPRAYED*</b></p>	<p>(As an alternate to Batts and Blankets, Item 4) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft<sup>3</sup>. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft<sup>3</sup>.</p> <p><b>U S GREENFIBER L L C</b> — Cocoon2 Stabilized or Cocoon-FRM (Fire Rated Material)</p>
<p><b>5. WOOD STRUCTURAL PANEL SHEATHING</b></p>	<p>Min. 7/16 in.-thick, 4 ft.-wide wood structural panels, min. grade “C-D” or “Sheathing.” Installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 6d cement-coated box nails spaced 6 in. O.C. at perimeter of panels and 12 in. O.C. along interior studs.</p>
<p><b>5A. MINERAL AND FIBER BOARDS</b></p>	<p>(As an alternate to Item 5) — Min. 1/2 in.-thick, 4 ft.-wide sheathing, installed vertically to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 1 1/2 in.-long galvanized roofing nails spaced 6 in. O.C. at perimeter of panels and 12 in. O.C. along interior studs. As an option a weather-resistive barrier may be applied over the Mineral and Fiber Boards.</p> <p><b>TEMPLE-INLAND FOREST PRODUCTS CORP</b> — Type <b>QUIETBRACE™</b></p>
<p><b>6. EXTERIOR FACINGS</b></p>	<p>Installed in accordance with the manufacturer’s installation instructions. One of the following exterior facings is to be applied over the sheathing:</p> <p><b>A. Vinyl Siding</b> — Molded Plastic* — Contoured rigid vinyl siding having a flame spread value of 20 or less. See Molded Plastic (BTAT) category in the Building Materials Directory for names of manufacturers.</p> <p><b>B. Particleboard Siding</b> — Hardboard exterior sidings including patterned panel or lap siding.</p> <p><b>C. Wood Structural Panel or Lap Siding</b> — APA Rated Siding, Exterior, plywood, OSB or composite panels with veneer faces and structural wood core, per PS 1 or APA Standard PRP-108, including textured, rough sawn, medium density overlay, brushed, grooved and lap siding.</p> <p><b>D. Cementitious Stucco</b> — Portland cement or synthetic stucco systems with self-furring metal lath or adhesive base coat. Thickness from 3/8 to 3/4 in., depending on system.</p> <p><b>E. Brick Veneer</b> — Any type on nom 4 in.-wide brick veneer. When brick veneer is used, the rating is applicable with exposure on either face. Brick veneer fastened with corrugated metal wall ties attached over sheathing to wood studs with 8d nail per tie: ties spaced not more than each sixth course of brick and max 32 in. O.C. horizontally. One inch air space provided between brick veneer and sheathing.</p> <p><b>F. Exterior Insulation and Finish System (EIFS)</b> — Nom 1 in. Foamed Plastic* insulation bearing the UL Classification Marking, attached over sheathing and finished with coating system, or Portland cement or synthetic stucco systems, in accordance with manufacturer’s instructions. See Foamed Plastic (BRYX and CCVW) categories for names of Classified companies.</p> <p><b>G. Siding</b> — Aluminum or steel siding attached over sheathing to studs.</p> <p><b>H. Fiber-Cement Siding</b> — Fiber-cement exterior sidings including smooth and patterned panel or lap siding.</p>

# FIRE RESISTANCE RATING – ANSI/UL 263 *(continued)*

<p><b>7. STEEL FRAMING MEMBERS</b></p>	<p>(Optional, Not Shown)* — Furring Channels and Steel Framing Members as described below:</p> <p><b>A. Furring Channels</b> — Formed of No. 25 MSG galv steel. 2<math>\frac{3}{8}</math> in. wide by <math>\frac{7}{8}</math> in. deep, spaced 24 in. O.C. perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. <math>\frac{7}{16}</math> in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.</p> <p><b>B. Steel Framing Members*</b> — Used to attach furring channels (Item 7a) to studs. Clips spaced 48 in. O.C., and secured to studs with No. 8 x 2<math>\frac{1}{2}</math> in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.</p> <p>PAC INTERNATIONAL INC — Type RSIC-1.</p>
<p><b>7A. STEEL FRAMING MEMBERS</b></p>	<p>(Optional, Not Shown)* — Furring channels and Steel Framing Members as described below:</p> <p><b>A. Furring Channels</b> — Formed of No. 25 MSG galv steel, spaced 24 in. O.C. perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Two layers of gypsum board attached to furring channels as described in Item 2.</p> <p><b>B. Steel Framing Members*</b> — Used to attach furring channels (Item 7Aa) to interior side of studs. Clips spaced 48 in. O.C., and secured to studs with two No. 8 x 2<math>\frac{1}{2}</math> in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.</p> <p>KINETICS NOISE CONTROL INC — Type Isomax.</p>

\*Bearing the UL Classification Mark

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