



## BXUV.U465 Fire Resistance Ratings - ANSI/UL 263

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### Design/ System/ Construction/ Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered as Classified, Listed, or Recognized.

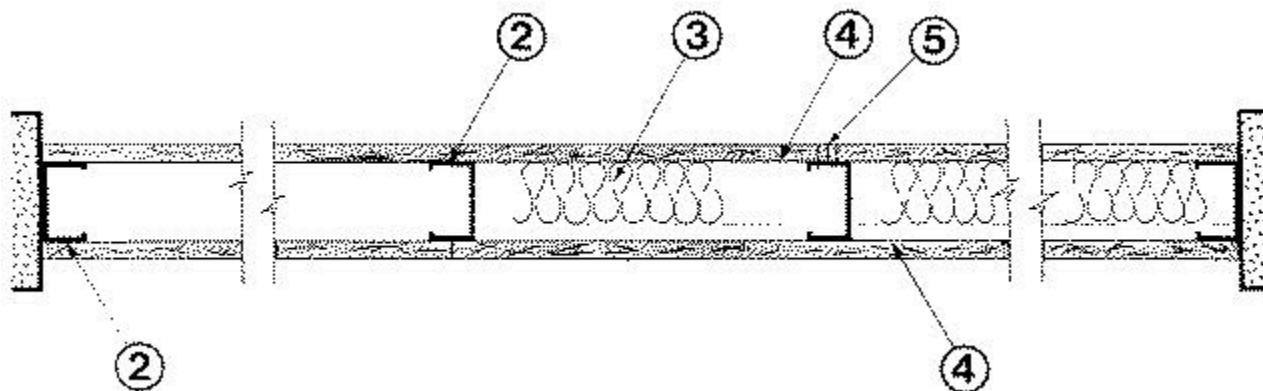
### Fire Resistance Ratings - ANSI/UL 263

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Design No. U465

March 23, 2009

Nonbearing Wall Rating — 1 HR.



1. **Floor and Ceiling Runners** — (not shown) — Channel shaped runners, 3-5/8 in. wide (min), 1-1/4 in. legs, formed from min No. 25 MSG galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

1A. **Framing Members\* — Floor and Ceiling Runners\*** — (Not shown) — As an alternate to Item 1 - Channel shaped, min. 3-5/8 in. wide, attached to floor and ceiling with fasteners 24 in. OC. max.

**SCAFCO STEEL STUD MANUFACTURING CO** — Type SUPREME Framing System

1B. **Framing Members - Floor and Ceiling Runner\*** — Not shown - In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 1-1/4 in. deep by 3-5/8 in. wide fabricated from min 0.0200 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

**MARINO\ WARE A DIV OF WARE INDUSTRIES**

**INC** — Viper20S™ Track, Viper20D™ Track

2. **Steel Studs** — Channel shaped, 3-5/8 in. wide (min), 1-1/4 in. legs, 3/8 in. folded back returns, formed from min No. 25 MSG galv steel spaced 24 in. OC max. Studs to be cut 3/4 in. less than assembly height.

**2A. Framing Members\* — Steel Studs** — As an alternate to Item 2 - Channel shaped studs, min. 3-5/8 in. wide, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

**SCAFCO STEEL STUD MANUFACTURING CO** — Type SUPREME Framing System

**2B. Framing Members - Metal Studs\*** — Not shown - In lieu of Item 2 — For use with Item 1B, proprietary channel shaped steel studs, 1-1/4 in. deep by 3-5/8 in. wide fabricated from min 0.0200 in. thick galv steel. Studs 3/4 in. less in lengths than assembly heights.

**MARINO\ WARE A DIV OF WARE INDUSTRIES**

**INC** — Viper20S™, Viper20D™

**3. Batts and Blankets\*** — (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity.

See Batts and Blankets (BZJZ) category for names of Classified companies.

**3A. Fiber, Sprayed\*** — As an alternate to Batts and Blankets (Item 3) — 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>.

**U S GREENFIBER L L C** — Cocoon2 Stabilized or Cocoon-FRM (Fire Rated Material)

**3B. Fiber, Sprayed\*** — As an alternate to Batts and Blankets (Item 3) and Item 3A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

**NU-WOOL CO INC** — Cellulose Insulation

**4. Gypsum Board\*** — 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly. When attached to item 6 (resilient channels) or 6A (furring channels), wallboard is screw attached to furring channels with 1 in. long, Type S steel screws spaced 12 in. OC.

**AMERICAN GYPSUM CO** — Types AG-C, AGX-1

**BEI JING NEW BUILDING MATERIALS PUBLIC**

**LTD CO** — Type DBX-1.

**CANADIAN GYPSUM COMPANY** — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

**CERTAINTED GYPSUM INC** — Types 1, EGRG, ProRoc Type X, ProRoc Type C.

**CERTAINTED GYPSUM CANADA INC** — ProRoc Type C, ProRoc Type X or ProRoc Type Abuse-Resistant.

**GEORGIA-PACIFIC GYPSUM L L C** — Types 5, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPFS6.

**LAFARGE NORTH AMERICA INC** — Types LGFC2, LGFC2A, LGFC6, LGFC6A, LGFC-C, LGFC-C/A.

**NATIONAL GYPSUM CO** — Types FSK, FSK-C, FSK-G, FSW-C, FSW-G, FSW, FSW-3, FSW-5, FSW-6.

**PABCO BUILDING PRODUCTS L L C, DBA**

**PABCO GYPSUM** — Type PG-C, PG-11 or PG-9.

**PANEL REY S A** — Type PRX.

**SIAM GYPSUM INDUSTRY (SARABURI) CO LTD** — Type EX-1

**TEMPLE-INLAND FOREST PRODUCTS CORP** — Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, TG-C, GreenGlass Type X.

**UNITED STATES GYPSUM CO** — Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX, USGX (Joint tape and compound, Item 5, optional for use with Type USGX).

**USG MEXICO S A DE C V** — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

**4A. Gypsum Board\*** — (As alternate to Item 4) - Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by steel framing. Panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 8 in. OC when applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. When used in widths other than 48 in., gypsum panels to be installed horizontally.

**CANADIAN GYPSUM COMPANY** — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

**CERTAINTED GYPSUM INC** — ProRoc Type X, ProRoc Type C.

**CERTAINTED GYPSUM CANADA INC** — ProRoc Type X, ProRoc Type C.

**GEORGIA-PACIFIC GYPSUM L L C** — Types DAP, DAPC, DGG, DS.

**LAFARGE NORTH AMERICA INC** — Type LGFC6A, LGFC-C/A

**UNITED STATES GYPSUM CO** — Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX, , USGX (Joint tape and compound, Item 5, optional for use with Type USGX).

**USG MEXICO S A DE C V** — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

**4B. Gypsum Board\*** — (As an alternate to Items 4 or 4A) — Nom 3/4 in. thick, 4 ft wide, installed as described in Item 4A with screw length increased to 1-1/4 in.

**CANADIAN GYPSUM COMPANY** — Types AR, IP-AR.

**UNITED STATES GYPSUM CO** — Types AR, IP-AR.

**USG MEXICO S A DE C V** — Types AR, IP-AR.

**4C. Gypsum Board\*** — As an alternate to Items 4, 4A, and 4B - Nom. 5/8 in. thick gypsum panels, with square edges, applied horizontally. Gypsum panels fastened to framing with 1 in. long bugle head steel screws spaced a max 8 in. OC, with last 2 screws 3/4 in. and 4 in. from each edge of board. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs on interior walls need not be staggered or backed by steel framing.

**TEMPLE-INLAND FOREST PRODUCTS CORP** — GreenGlass Type X.

**4D. Gypsum Board\*** — As an alternate to Items 4, 4A, 4B, and 4C - Nom. 5/8 in. thick gypsum panels applied horizontally. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints

on opposite sides of studs need not be staggered. Gypsum panels fastened to framing with 1 in. long Type S steel screws 1-1/2 in. from board edges, 3 in. from board edge and every 8 in. OC in the field. Screws spaced a max 12 in. along the top and bottom edges of the wall.

**NATIONAL GYPSUM CO** — Types FSK, FSK-C, FSK-G, FSW-C, FSW-G, FSW.

**5. Joint Tape and Compound** — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nominal 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges.

**6. Resilient Channel** — (Optional-Not Shown) — 25 MSG galv steel resilient channels spaced vertically max 24 in. OC, flange portion attached to each intersecting stud with 1/2 in. long type S-12 panhead steel screws.

**6A. Steel Framing Members (Not Shown)\*** — As an alternate to Item 3, furring channels and resilient sound isolation clip as described below:

**a. Furring Channels** — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC 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. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel.

**b. Steel Framing Members\*** — Used to attach furring channels (Item a) to studs (Item 1). Clips spaced 48 in. OC., and secured to studs with 1-5/8 in. wafer or hex head Type S steel screw through the center grommet. Furring channels are friction fitted into clips.

**PAC INTERNATIONAL INC** — Type RSIC-1.

**6B. Steel Framing Members\*** — Optional - Not Shown - Used as an alternate method to attach resilient channels (Item 6). Clips attached at each intersection of the resilient channel and the steel studs (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the stud with min. 1 in. long Type S-12 panhead steel screws through the center hole of the clip and the resilient channel flange.

**KEENE BUILDING PRODUCTS CO INC** — Type RC Assurance.

**7. Wall and Partition Facings and Accessories\*** — (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-510 panel is installed between the steel framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

**QUIET SOLUTION INC** — Type QuietRock QR-510.

\* Bearing the UL Classification Mark

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