



## BXUV.U493 Fire Resistance Ratings - ANSI/UL 263

Page Bottom

### 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.

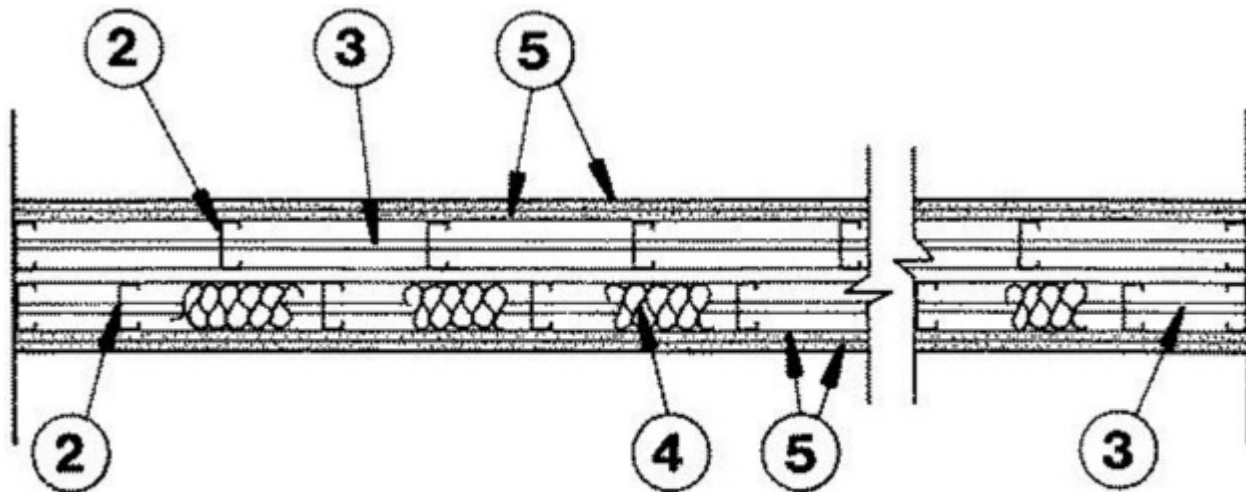
## Fire Resistance Ratings - ANSI/UL 263

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

Design No. U493

February 18, 2010

Nonbearing Wall Rating — 1 or 2 Hr. (See Items 5, 5A, 5B)



### HORIZONTAL SECTION

1. **Floor and Ceiling Runners** — (For use with Item 5 and 5A) Channel shaped, attached to floor and ceiling in two rows, a min 1 in. apart, with steel fasteners spaced 24 in. OC. Runners fabricated from min No. 25 MSG galv steel, 1-1/4 in. deep and 2-1/2 in. wide.

1A. **Floor and Ceiling Runners** — (As an alternate to Item 1, For use with Item 5B and 5C) Channel shaped, attached to floor and ceiling in two rows, a min 1 in. apart. Runners fabricated from min No. 20 MSG galv steel, 1-3/16 in. deep and 2-9/16 in. wide.

1B. **Framing Members\***— **Floor and Ceiling Runners** — (Not shown for use with Item 2B) — As an alternate to Item 1 - Channel shaped, min. 2-1/2 in. wide, attached to floor and ceiling with fasteners 24 in. OC. max.

**ALLSTEEL & GYPSUM PRODUCTS INC** — Type SUPREME Framing System

**CONSOLIDATED FABRICATORS CORP,**

**BUILDING PRODUCTS DIV** — Type SUPREME Framing System

**QUAIL RUN BUILDING MATERIALS INC** — Type SUPREME Framing System

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

**STEEL CONSTRUCTION SYSTEMS INC** — Type SUPREME Framing System

1C. **Framing Members\*— Floor and Ceiling Runners** — (Not shown) — As an alternate to Item 1 for a 2 hour rating only - For use with Item 2C, channel shaped, min 2-1/2 in. wide, attached to floor and ceiling with fasteners 24 in. OC. max.

**CLARKWESTERN BUILDING SYSTEMS INC** — CW ProTRAK

**DIETRICH INDUSTRIES INC** — DIETRICH ProTRAK

**DMFCWBS L L C** — ProTRAK

2. **Steel Studs** — (For use with Item 5 and 5A) Channel shaped, supplied with cutouts, friction -fitted into floor and ceiling runners and spaced a max 24 in. OC. Studs cut 1/2 in. less than assembly height and evenly staggered between the two rows of floor and ceiling runners. Studs fabricated from min No. 25 MSG galv steel, min 2-1/2 in. wide by 1-5/8 in. deep with 3/8 in. folded back return flange legs.

2A. **Steel Studs** — (As an alternate to Item 2, For use with Items 5B & 5C) Channel shaped, supplied with cutouts, friction - fitted into floor and ceiling runners and spaced a max 16 in. OC. Studs cut 1/2 in. less than assembly height and staggered flush against the floor runners. Studs fabricated from min No. 20 MSG galv steel, min 2-1/2 in. x 1-5/8 in. x 3/8 in. folded back return flange legs.

2B. **Framing Members\*— Steel Studs** — As an alternate to Item 2 - Channel shaped studs, min. 2-1/2 in. wide, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

**ALLSTEEL & GYPSUM PRODUCTS INC** — Type SUPREME Framing System

**CONSOLIDATED FABRICATORS CORP,**

**BUILDING PRODUCTS DIV** — Type SUPREME Framing System

**QUAIL RUN BUILDING MATERIALS INC** — Type SUPREME Framing System

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

**STEEL CONSTRUCTION SYSTEMS INC** — Type SUPREME Framing System

2C. **Framing Members\*— Steel Studs** — As an alternate to Item 2 for a 2 hour rating only - For use with Item 1C, channel shaped studs, min 2-1/2 in. wide, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

**CLARKWESTERN BUILDING SYSTEMS INC** — CW ProSTUD

**DIETRICH INDUSTRIES INC** — DIETRICH ProSTUD

**DMFCWBS L L C** — ProSTUD

3. **Lateral Bracing** — The bracing shall meet the 1996 Edition of the American Iron and Steel Institute (AISI) "Specification for the Design of Cold-Formed Steel Structural Members.

3A. **Lateral Bracing** — (Not shown) — Right angle- shaped, supplied with notches spaced 12, 16, or 24 in. OC., friction-fitted to the cutouts in steel studs, supplied in 7/8 in. by 7/8 in. by 50 in. lengths. Lateral bracing bars fabricated from min. 20 MSG galvanized steel. The bracing shall meet the 1996 Edition of the American Iron and Steel Institute (AISI) "Specification for the Design of Cold-Formed Steel Structural Members.

**DIETRICH INDUSTRIES INC** — TradeReady Spazzer 9200 bar

4. **Batts and Blankets** — Optional - Glass fiber batts may be friction-fitted to completely fill the stud cavities on one or both rows of studs. See **Batts and Blankets** Category (BZJZ) for names of manufacturers.

5. **Gypsum Board\*** — Nom 5/8 in. thick, 4 ft. wide, gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Single layer installed on each side of the steel studs for the 1-hr system, two layers installed on each side of the studs for the 2-hr system. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (2-hr system) staggered one stud cavity. Horizontal edge joints and horizontal butt joints need not be backed by framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (2-hr system) staggered a minimum of 6 in. For the single layer system: 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 applied vertically. For the double layer system: base layer panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 16 in., face layer panels attached to steel studs and floor runner with 1-5/8 in. long Type S steel screws spaced 12 in. When used in widths other than 48 in., gypsum panels to be installed horizontally.

When Steel Framing Members\* (Item 7) are used: For the 1-hr system, gypsum panels attached vertically to furring channels with 1 in. long Type S-12 screws spaced 12 in. OC. Vertical joints offset min 12 in. from layer on other side of wall. For the 2-hr system, inner layer of gypsum panels attached vertically to furring channels with 1 in. Type S-12 screws spaced 16 in. OC, outer layer with 1-5/8 in. Type S-12 screws spaced 12 in. OC. Inner layer to be applied vertically. Outer layer to be applied vertically with joints offset a minimum 12 in. from inner layer joints.

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

**UNITED STATES GYPSUM CO** — Type SCX, SHX, IP-X1, WRX, AR, IP-AR, C, WRC, IP-X2, IPC-AR, FRX-G, USGX (Joint tape and compound, Item 6, optional for use with Type USGX)

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

5A. **Gypsum Board\*** — (As an alternate to Item 5) — Single layer installed on each side of the steel studs for the 1-hr system, two layers installed on each side of the studs for the 2-hr system. Nom 3/4 in. thick, 4 ft wide, installed as described in Item 5 with screw length increased to 1-1/4 in. for base layer (or for 1 hr. configuration) 2-1/4 in. for face layer.

**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.

5B. **Gypsum Board\*** — (As an alternate to Item 5 may be used as the base layer on one or both sides of wall, For direct attachment only) - Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over min 20 MSG galvanized steel studs and staggered min 1 stud cavity on opposite sides of studs. See Item 2A. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 8) or Lead Discs or Tabs (see Item 9).

**RAY-BAR ENGINEERING CORP** — Type RB-LBG

5C. **Gypsum Board\*** — Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

**NEW ENGLAND LEAD BURNING CO INC, DBA**

**NELCO** — Nelco

6. **Joint Tape and Compound** — (Not Shown) — Outer layer joints covered with joint compound and paper or mesh tape. Screw heads covered with joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges.

7. **Steel Framing Members (Not Shown)\*** — (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 5. May not be used with items 5B and 5C.

b. **Steel Framing Members\*** — Used to attach furring channels (Item 7a) to studs (Item 2). Clips spaced max. 48 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

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

8. **Lead Batten Strips** — (Not Shown, For Use With Item 5B) - Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.

9. **Lead Discs or Tabs** — (Not Shown, For Use With Item 5B) - Used in lieu of or in addition to the lead batten strips (Item 8) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

10. **Lead Batten Strips** — (Not Shown, For Use With Item 5C) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5C) and optional at remaining stud locations.

11. **Lead Tabs** — (Not Shown, For Use With Item 5C) 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5C) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

12. **Wall and Partition Facings and Accessories\*** — (Optional, Not shown) — For use with Items 5 or 5A — 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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[Page Top](#)

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