ONLINE CERTIFICATIONS DIRECTORY

BXUV.U412
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.

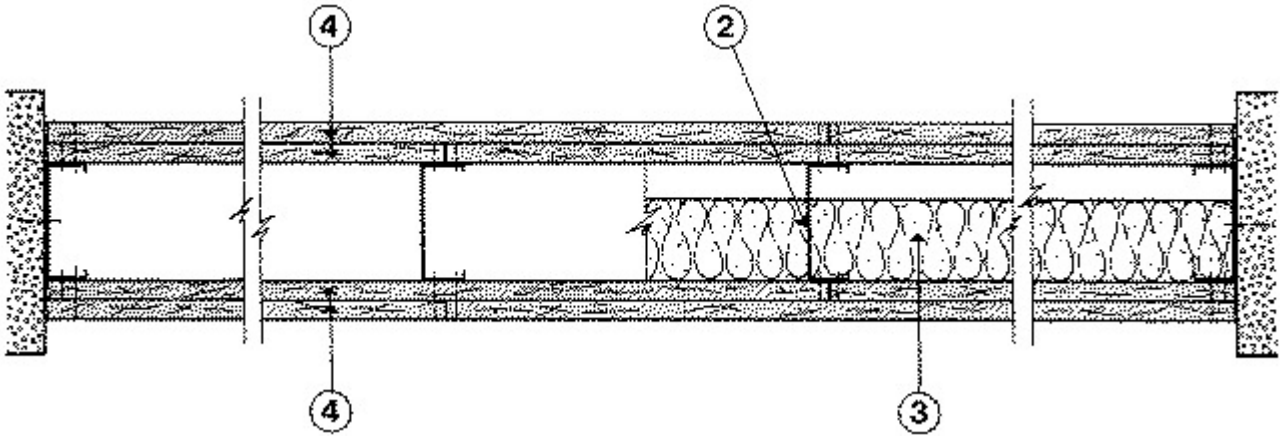
Fire Resistance Ratings - ANSI / UL 263

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

Design No. U412

March 23, 2009

Nonbearing Wall Rating — 2 HR.



1. **Floor and Ceiling Runner —** (Not Shown) — 25 MSG (min) galv steel 1 in. high, return legs 1-5/8 in. wide (min), attached to floor and ceiling with fasteners 24 in. OC max.

1A. **Framing Members* — Floor and Ceiling Runners —** (Not shown) — As an alternate to Item 1 - Channel shaped, min. 1-5/8 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 1-5/8 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 —** 1-5/8 in. wide (min), 1-1/4 in. legs, 1/4 in. return, formed of 25 MSG (min) galv steel max stud

spacing 24 in. OC. 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. 1-5/8 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 1-5/8 in. wide fabricated from min 0.0200 in. thick galv steel. Studs 3/4 in. less in lengths than assembly heights.

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INC — Viper20S™, Viper20D™

3. **Batts and Blankets* —** (Optional) — Mineral wool or glass fiber batts, partially or completely filling stud cavity. Fasten each batt to wallboard base layer with a min 9/16 in. long staple. Use five staples for each 4 ft long piece. Drive one staple in the center of each piece and a staple at each corner, approx 3 in. from edges.

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

3A. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 3) — Spray applied cellulose insulation 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^3. 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^3.

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* —** 1/2 in. thick. Wallboard applied vertically in two layers. (Laminated System) Inner layer attached to studs with 1 in. long Type S steel screws spaced 24 in. O.C. along vertical edges and 24 in. O.C. in the field. Outer layer laminated to inner layer with joint compound, applied with a notched spreader producing continuous beads of compound about 3/8 in. in diameter, spaced not greater than 2 in. O.C. Joints of laminated outer layer offset 12 in. from inner layer joints. Outer layer wallboard attached to inner layer with 1-1/2 in. long Type G steel screws spaced 24 in. O.C. along edges and center line of each sheet.

Optional, (Direct Attached System) Wallboard applied vertically in two layers. Inner layer attached to studs with 1 in. long Type S steel screws spaced 24 in. O.C. in the field and along the vertical edges. Outer layer attached to the studs over the inner layer with 1-5/8 in. long Type S steel screws spaced 12 in. O.C. in the field, along the vertical edges, and to the floor and ceiling runners. Joints of screw-attached outer layer offset from inner layer joints.

Optional, (Direct Attached System) Inner layer wallboard applied vertically, outer layer wallboard applied horizontally. Inner layer attached to studs with 1 in. Type S steel screws spaced 24 in. O.C. along vertical edges and in the field. Outer layer attached to the studs over the inner layer with 1-5/8 in. long Type S steel screws spaced 12 in. OC in the field, along the vertical edges, and to the floor and ceiling runners. Outer layer secured to inner layer wallboard with 1-1/2 in. long Type G steel screws located midway between studs and 1 in. from the horizontal joint.

Outer layer wallboard joints covered with joint tape and min two coats of joint compound, and screw heads covered with min two coats of joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

AMERICAN GYPSUM CO — Types AG-C.

CERTAINTEED GYPSUM INC — Type FRPC, ProRoc Type C.

CERTAINTEED GYPSUM CANADA INC — ProRoc Type C.

CANADIAN GYPSUM COMPANY — Type C, IP-X2, IPC-AR or WRC.

GEORGIA-PACIFIC GYPSUM L L C — Types 5, C, , DAP, DA.

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

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

PABCO BUILDING PRODUCTS L L C, DBA

PABCO GYPSUM — Type PG-C.

PANEL REY S A — Type PRC

TEMPLE-INLAND FOREST PRODUCTS CORP — Type TG-C.

UNITED STATES GYPSUM CO — Type C, IP-X2, IPC-AR or WRC.

USG MEXICO S A DE C V — Type C, IP-X2, IPC-AR or WRC.

4A. **Gypsum Board* —** (As an alternate to Item 4) — 5/8 in. thick. Two layers installed by any method as described in Item 4.

NATIONAL GYPSUM CO — Type FSMR-C.

*Bearing the UL Classification Mark

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UL's Follow-Up Service. Always look for the Mark on the product.

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