



BXUV.U450 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.

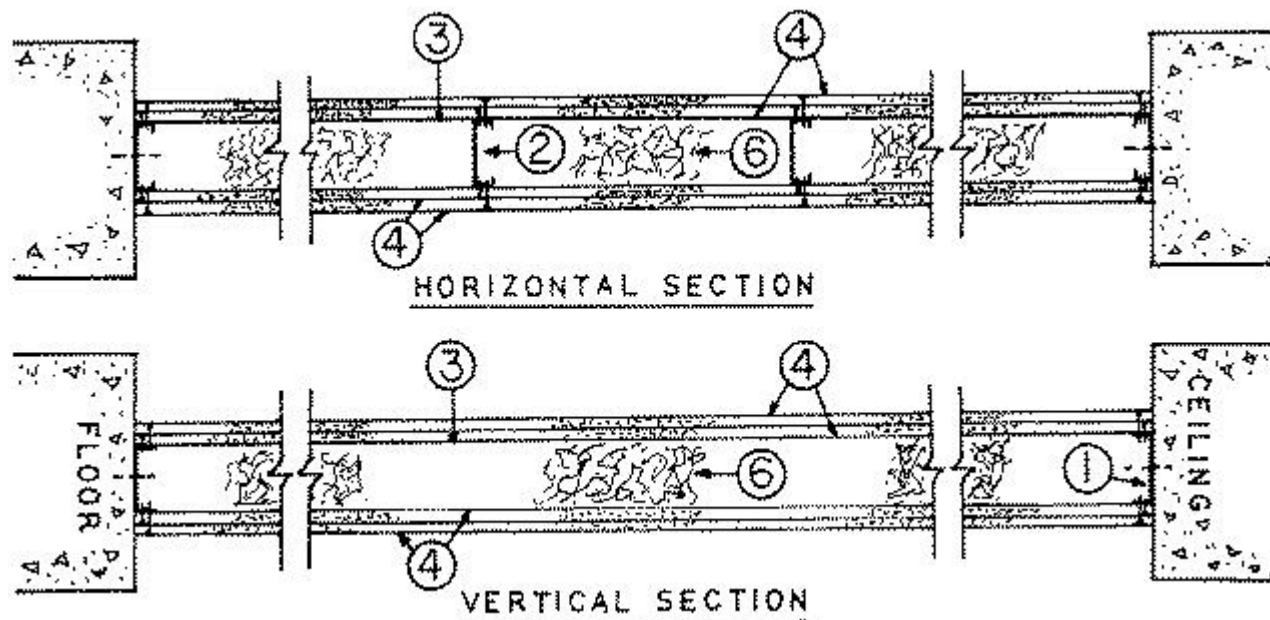
Fire Resistance Ratings - ANSI/UL 263

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

Design No. U450

March 23, 2009

Nonbearing Wall Rating — 1, 3 or 4 HR. (See Items 1, 2, and 4)



1. **Floor and Ceiling Runners** — Channel shaped 1/2 in. deep by 3-5/8 in. wide, No. 25 gauge painted or galvanized steel. Secured with 3/4 in. long concrete fasteners spaced 18 in. OC. For the 1 hour rating, width may be reduced to 2-1/2 in. to accommodate the 2-1/2 in. wide studs.

1A. **Framing Members - Floor and Ceiling Runner*** — Not shown - In lieu of Item 1 — For use with Item 2A, 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 18 in. OC max.

MARINO\WARE A DIV OF WARE INDUSTRIES

INC — Viper20S™ Track, Viper20D™ Track

2. **Metal Studs** — Channel shaped, 3-5/8 in. wide with 1-1/4 in. legs, with 1/4 in. folded back return flange legs, galvanized steel, spaced not more than 16 in. OC. Stud length 3/8 in. less than assembly height. Min. No. 25 MSG for the 1 and 3 hour rating. Min. No. 18 MSG for the 4 hour rating. For the 1 hour rating, width may be reduced to 2-1/2 in.

2A. **Framing Members - Metal Studs*** — Not shown - In lieu of Item 2 — For use with Item 1A, 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 3/8 in. less in lengths than assembly heights.

MARINO\WARE A DIV OF WARE INDUSTRIES

INC — Viper20S™, Viper20D™

3. **Metal Mesh** — (Used with Item 5) — Diamond mesh, expanded steel, 3.4 lbs/sq yd, 27 by 96 in. sheets tied to iron bands (Item 7) and at laps with No. 18 SWG wire spaced 6 in. OC. As an alternate to the diamond mesh and iron bands, 3/8 in. rib, 3.4 lbs/sq yd expanded metal lath. Fastened to studs (ribbed side against studs) with No. 18 SWG wire spaced 6 in. OC. Fastened to runners with 1/2 in. long self-drilling, self-tapping steel screws spaced 6 in. OC. Laps 6 in. min and tied with No. 18 AWG wire spaced 6 in. OC min. The metal lath may be provided with a paper backing. When provided with the paper backing, the paper backed side of the lath shall face the metal studs.

4. **Gypsum Board*** — Any Classified 5/8 in. thick wallboard with beveled, square or tapered edges.

For 1 Hr rating — One layer of wallboard on each side applied vertically with joints centered over studs. Fastened to studs with 1 in. long, Type S, self-tapping, self-drilling, wallboard screws spaced 8 in. OC at the joints located 3/8 in. from the edges and 12 in. OC in the field. Joints to be staggered from the inner layer.

For 3 Hr rating — Two layers of wallboard on each side. The inner layer to be applied vertically with joints centered over studs. Fastened to studs with 1 in. long, Type S, self-tapping, self-drilling, wallboard screws spaced 8 in. OC at the joints located 3/8 in. from the edges and 12 in. OC in the field. The outer layer also applied vertically to be fastened to the studs (through the inner layer) using 1-5/8 in. long, Type S, self-drilling, self-tapping, wallboard screws spaced 8 in. OC at the joints located 3/8 in. from the edges and 12 in. OC in the field. Fasteners to be spaced 8 in. OC at the runners. Joints to be staggered from the inner layer.

For 4 Hr rating — (Not Shown)— Three layers of wallboard on each side. Two inner layers to be applied in the same manner as the 3 hr rating. The outer layer may be applied vertically or horizontally and fastened to each stud through the two previous layers with 2-1/4 in. long, Type S, self-drilling, self-tapping steel screws spaced 3/8 in. from the edges, 8 in. OC in the field. Joints in each wallboard layer to be staggered from the joints in the adjacent layer and on opposite sides of studs.

See Gypsum Board (CKNX) Category for names of manufacturers.

5. **Portland Cement Plaster** — (Not Shown) — May be used in lieu of the layers of wallboard (Item 4) on metal lath side, 3/4 in. thick, applied in scratch coat consisting of 100 lb cement to 50 lb lime to 5-1/2 cu ft of sand and brown coat consisting of 100 lb cement to 50 lb lime to 6 cu ft of sand.

6. **Spray-Applied Fire Resistive Materials*** — Sprayed in stud cavities to completely fill interior of walls. Min avg and min ind densities of 13 and 11 pcf, respectively for Types D-C/F and II. Min avg and min ind densities of 22 and 19 pcf, respectively, for Type HP. For method of density determination, refer to Design Information Section.

ISOLATEK INTERNATIONAL — Types D-C/F, II or HP. Type EBS or Type X adhesive/sealer is optional.

7. **Joint Tape and Compound** — (Used with Item 4; Not Shown) — Vinyl or casein, 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.

8. **Building Paper** — (Not Shown-Optional) — May be used on the exterior face of the wall assembly, between the metal studs and the metal mesh or lath, as a backing for the application of the plaster (Item 5). The building paper may be a single-ply asphalt saturated sheathing, woven polyolefin sheathing or similar vapor barrier materials.

*Bearing the UL Classification Mark

Last Updated on 2009-03-23

[Questions?](#)

[Notice of Disclaimer](#)

[Page Top](#)

Copyright © 2009 Underwriters Laboratories Inc.®

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Listed and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Designs and/or Listings (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from Underwriters Laboratories

Inc." must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "Copyright © 2009 Underwriters Laboratories Inc.®"

An independent organization working for a safer world with integrity, precision and knowledge.

