



BXUV.U475 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.

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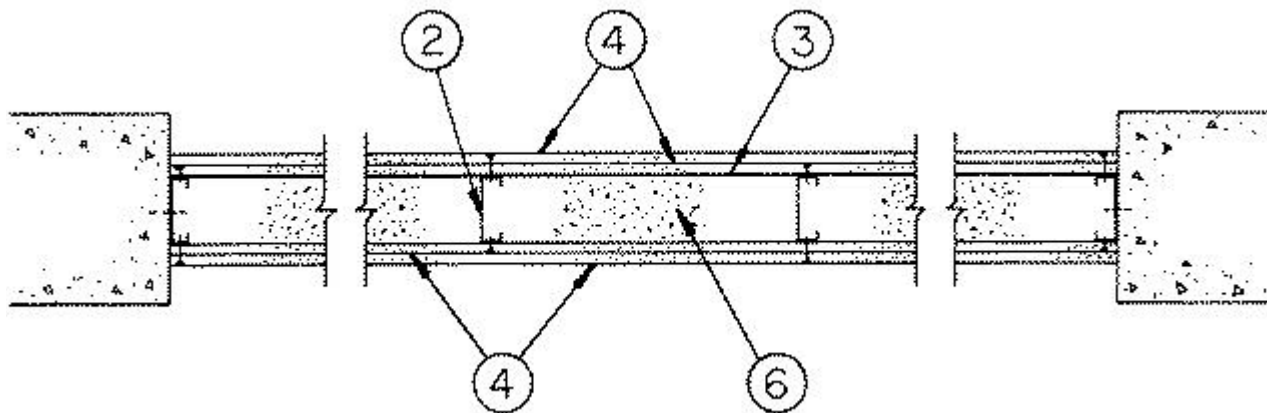
[See General Information for Fire Resistance Ratings - ANSI/UL 263](#)

Design No. U475

March 23, 2009

Nonbearing Wall Rating — 1, 2, 3 or 4 HR.

(See Items 4 and 6)



1. **Floor and Ceiling Runners** — Channel shaped 1/2 in. deep by 3-5/8 in. wide, No. 25 gauge painted or galv steel. Secured with 3/4 in. long concrete fasteners spaced 18 in. OC.

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, 2-1/2, 3-1/4, 3-5/8 or 4 in. wide with 1-1/4 in. legs, 1/4 in. folded back return flange in legs, No. 25 MSG min galv steel, spaced not more than 16 in. OC. Stud length 3/8 in. less than assembly height.

For 1, 2 and 3 h Rating — No. 25 MSG galv steel, min.

For 4 h Rating — No. 18 MSG galv steel, min.

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 2-1/2 to 3-5/8 in. wide fabricated from min 0.0200 in. thick galv steel. Studs 3/8 in. less in lengths than assembly heights. Spaced max 16 in. OC.

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3. Metal Lath — Diamond mesh, expanded steel 3.4 lb per sq yd, 27 by 96 in. sheets tied to iron bands and at laps 6 in. OC with No. 18 SWG wire.

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

For 1, 2 and 3 h Ratings — 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 h Rating — (Not shown) — Three layers of wallboard on each side. Two inner layers to be applied in the same manner as the 3 h 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 per cu ft of sand, coat consisting of 100 lb cement to 50 lb lime to 6 per cu ft of sand.

6. Cementitious Mixture* — See table below for appropriate thickness. Prepared by mixing with water according to instructions on each bag of mixture and spray or trowel-applied in one or more coats to lath and stud surfaces. Min avg and individual density 15/14 pcf. For method of density determination, see Design Information Section, preceding these Designs.

Assembly Rating	Stud Size In.	Min Thk of Mtl Applied to Metal Lath
1	2-1/2	2
2	3-1/4	2-3/4
3	3-5/8	3-1/4
4	4	4

ARABIAN Vermiculite Industries — Type MK-5.

GRACE KOREA INC — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s, Monokote Acoustic 1 .

W R GRACE & CO - CONN — Types MK-4, MK-5, MK-6/HY, MK-6s, Monokote Acoustic 1 , RG.

6A. Alternate Spray-Applied Fire Resistive Materials* — See table below for appropriate thickness. Prepared by mixing with water according to instructions on each bag of mixture and spray or trowel-applied in one or more coats to lath and stud surfaces. Min avg and individual density 22/19 pcf. For method of density determination, see Design Information Section, preceding these Designs.

Assembly Rating	Stud Size In.	Min Thk of Mtl Applied to Metal Lath
1	2-1/2	2
2	3-1/4	2-3/4
3	3-5/8	3-1/4
4	4	4

GRACE KOREA INC — Types Monokote Acoustic 5 , Z-106, Z-106/G, Z-106/HY.

W R GRACE & CO - CONN — Types Monokote Acoustic 5 , Z-106, Z-106/G, Z-106/HY.

6B. **Vermiculite Concrete** — In lieu of Spray Applied Fire Resistive Material - 4 cu ft **vermiculite aggregate*** to 94 lb portland cement. Spray applied.

Assembly Rating	Stud Size In.	Min Thk of Mtl Applied to Metal Lath
1	2-1/2	2
2	3-1/4	2-3/4
3	3-5/8	3-1/4
4	4	4

W R GRACE & CO - CONN

7. **Iron Bands** — (Not shown) — Hot rolled iron bands, 1/8 in. thick by 3/8 in. wide, with ribs 1 in. high by 1 in. wide spaced 16 in. OC. Welded to metal stud shows and runners at each rib.

8. **Metal Lath** — (Not shown) — In lieu of Items 3 and 7, 3/8 in. rib, 3.4 lb per sq yd expanded metal lath. Fastened to studs with ribbed side placed against studs, with No. 18 SWG wire spaced 6 in. OC. Fastened to runners with 1/2 in. long Type S steel screws spaced 12 in. OC. Laps 6 in. min and tied with No. 18 AWG wire spaced 6 in. OC min.

9. **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 or fiberglass mesh, 2 in. wide, embedded in first layer of compound over all joints.

9A. **Finishing System** — (Not shown) — Spray-Applied Fire Resistive Materials* (Item 6) may be spray or trowel applied to the joints and screw heads.

*Bearing the UL Classification Mark

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