



**Design No. XR649**  
**BYBU.XR649**  
**Fire-resistance Ratings - ANSI/UL 1709**

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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 Certified 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 Certified.
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**BYBU - Fire-resistance Ratings - ANSI/UL 1709**

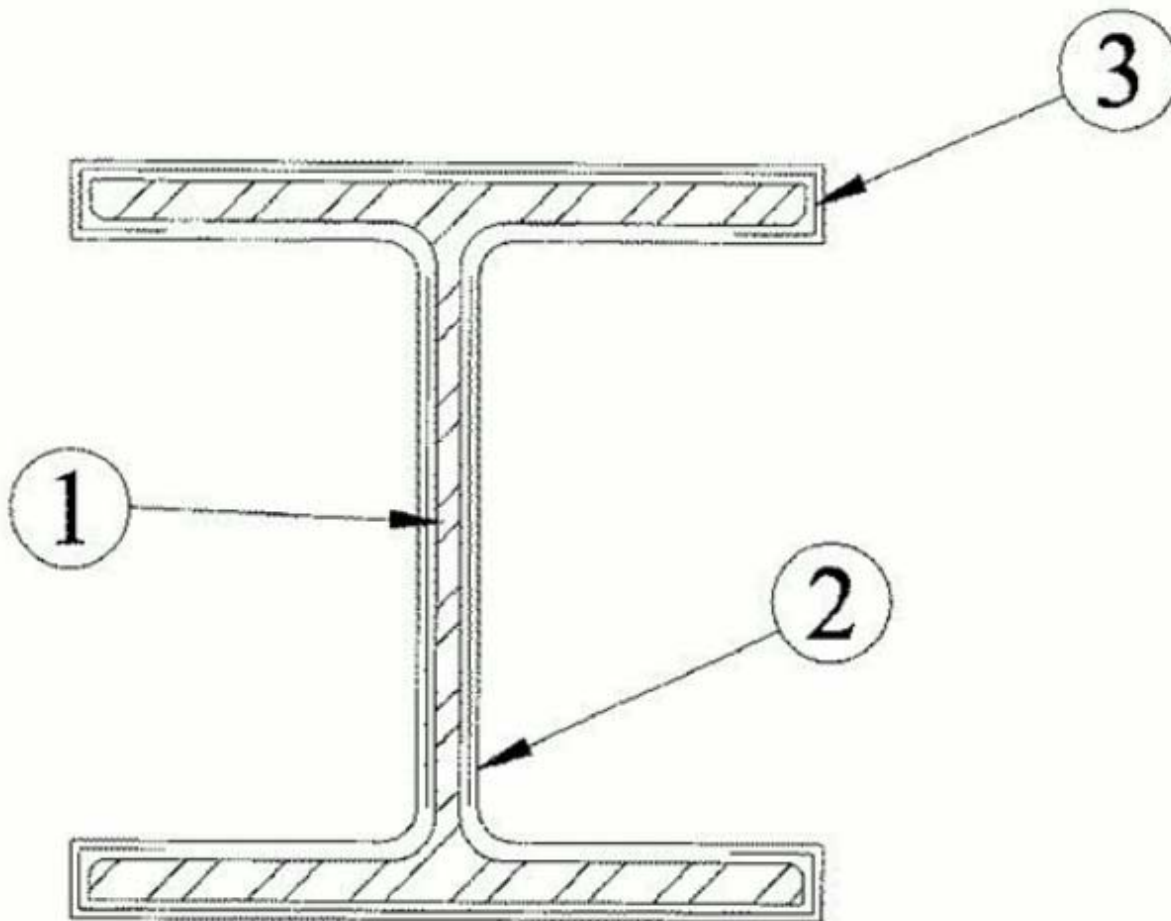
[See General Information for Fire-resistance Ratings - ANSI/UL 1709](#)

**Design No. XR649**

July 28, 2016

**Rating — 3-1/2 Hr**

**\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Steel Column** — Min W10X49 wide flanged steel column. Hot dipped galvanized steel per ASTM A123. The column surfaces shall be prepared in accordance with the manufacturer's recommendations for galvanized steel and then primed with 3.5 mils of a cross-linked epoxy primer.

2. **Mastic and Intumescent Coating\*** — Spray applied in one or more coats to the thickness shown in the table below over the primer coat. Coating lightly rolled after final coat with a paint roller.

Rating Hr	Min Thkns In.
3-1/2	0.664

**CARBOLINE CO** — Types Thermo-Lag 3000-SP, Thermo-Lag 3000-P, Thermo-Lag 3000-SA, Thermo-Lag 3000-A and Thermo-Lag 3000-FC.

3. **Glass Fiber Mesh** — Nom 3/16 in. by 3/16 in. glass fiber mesh identified as FP-Fiberglass Mesh applied over each flange with additional mesh placed in each web covering the entire web area. The mesh shall be placed at approximately 0.12 in. from the column surface.

4. **Top Coat - (Not shown)** — Type Carboguard 1340 intermediate coat applied over mastic and intumescent coating at 0.002 in. thickness and Type Carbothane 133HB topcoat or Carbothane 133MC top-coat applied over intermediate coat at 0.003 in. thickness.

4A. **Top Coat - (Not shown)** — As an alternate to Item 4, Type Carboguard 889 or Type Carbomastic 94 topcoat applied over mastic and intumescent coating (Item 2) at 0.010 in. thickness.

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