IMPROVED CERTIFICATIONS SEARCH TOOL. REGISTER NOW! LEARN MORE

Design No. S740
BXUV.S740
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 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.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. S740

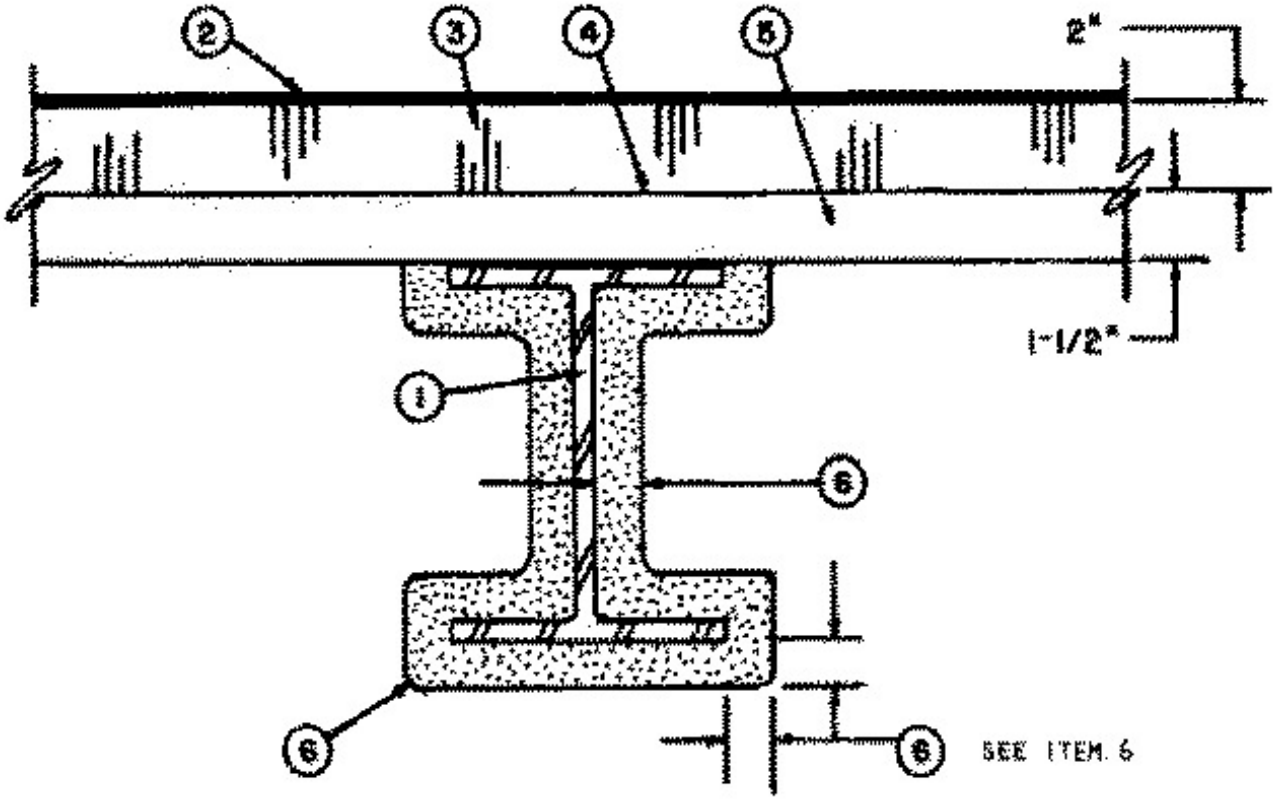
October 20, 2017

Restrained Beam Ratings — 1, 1-1/2, 2 or 3 Hr (See Item 6, 6A)

Unrestrained Beam Ratings — 1, 1-1/2, 2 or 3 Hr (See Item 6, 6A)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** 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 Beam —** W8x28 min size.

2. **Roof Covering* —** Consisting of hot mopped, cold application or single-ply materials, compatible with insulation(s) described herein which provide Class A, B or C coverings. See Roofing Materials and Systems Directory-Roof Covering Materials (TEVT).

3. **Roof Insulation* —** Consisting of building units, foamed plastic or mineral and fiber boards, applied in one or more layers. When multiple layers are used, end and side joints shall be offset a min of 12 in. in both directions in order to lap all joints. See category for names of companies providing Classified products — Building Units (BZXX), Foamed Plastic (CCVW) or Mineral and Fiber Boards (CERZ). Roof insulation shall be compatible with roof covering materials Class A, B or C system. See Roofing Materials and Systems Directory-Roof Covering Materials (TEVT).

4. **Adhesive —** (Optional) — May be applied to steel roof deck units or between insulation layers at a max application rate of 0.4 gal per 100 sq ft. See **Adhesives** (BYWR) category for names of manufacturers.

5. **Steel Roof Deck —** (Unclassified) — Fluted, No. 22 MSG min galv 1-1/2 in. deep with 3-1/2 in. wide flutes spaced 6 in. OC. Ends overlapped a min 1-1/2 in. and welded to supports, 12 in. OC max. Adjacent units button-punched, welded or fastened with No. 12 by 1/2 in. long self-drilling, self-tapping steel screws.

6. **Spray-Applied Fire Resistive Materials* —** Applied by mixing with water and spraying to the beam surface in one or more coats to the final min thicknesses shown below. Crest areas above the beam shall be filled with the Spray-Applied Fire Resistive Materials. Surfaces must be clean and free of dirt, loose scale and oil. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 19/18 pcf respectively for Types 7GP and 7HD. For method of density determination, see Design Information Section.

Minimum Spray Applied Fire Resistive Material Thickness (In.)			
Restrained Beam Rating	**Unrestrained Beam Rating**	**On W8x28 Beam**	**On 8x28 Beam at 4 ft. or less OC**
1	1	7/16	7/16
1 1/2	1	5/8	5/8
1 1/2	1 1/2	3/4	3/4
2	1	15/16	15/16
2	2	1 1/8	1 1/16
3	2	1 1/2	1 1/2
3	3	1 3/4	1 11/16

The thickness of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the thickness applied

to the beams lower flange edges is reduced by one-half.

Minimum Spray Applied Fire Resistive Material Thickness (In.)			
Restrained Beam Rating	**Unrestrained Beam Rating**	**On W8x28 Beam**	**On 8x28 Beam at 4 ft. or less OC**
1	1	1/2	1/2
1 1/2	1	11/16	11/16
1 1/2	1 1/2	13/16	13/16
2	1	1-1/16	1-1/16
2	2	1-1/4	1-3/16
3	2	1-11/16	1-11/16
3	3	2	1-15/16

SOUTHWEST FIREPROOFING PRODUCTS CO — Types 4, 5, 5EF, 5GP, 5AR, 5GP/AR, 5EF/AR, 5MD/AR, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD

6A. **Alternate Spray-Applied Fire Resistive Materials* —** Applied by mixing with water and spraying to the beam surface in one or more coats to the final min thicknesses shown below. Crest areas above the beam shall be filled with the Spray-Applied Fire Resistive Materials. Surfaces must be clean and free of dirt, loose scale and oil. Min avg and min ind density of 18/16.5 pcf respectively. For method of density determination, see Design Information Section.

Minimum Spray Applied Fire Resistive Material Thickness (In.)			
Restrained Beam Rating	**Unrestrained Beam Rating**	**On W8x28 Beam**	**On 8x28 Beam at 4 ft. or less OC**
1	1	7/16	7/16
1 1/2	1	5/8	5/8
1 1/2	1 1/2	3/4	3/4
2	1	7/8	7/8
2	2	1 1/16	1 1/16
3	2	1 1/2	1 1/2
3	3	1 11/16	1 11/16

The thickness of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the thickness applied to the beams lower flange edges is reduced by one-half.

Minimum Spray Applied Fire Resistive Material Thickness (In.)			
Restrained Beam Rating	**Unrestrained Beam Rating**	**On W8x28 Beam**	**On 8x28 Beam at 4 ft. or less OC**
1	1	1/2	1/2
1 1/2	1	11/16	11/16
1 1/2	1 1/2	13/16	13/16
2	1	1	1
2	2	1-3/16	1-3/16
3	2	1-11/16	1-11/16
3	3	1-15/16	1-15/16

SOUTHWEST FIREPROOFING PRODUCTS CO — Types 4, 5, 5EF, 5GP, 5AR, 5GP/AR, 5EF/AR, 5MD/AR, 5MD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD

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

Last Updated on 2017-10-20

© 2018 UL LLC

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 Certified 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, Assemblies, Constructions, Designs, Systems, and/or Certifications (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 UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2018 UL LLC".