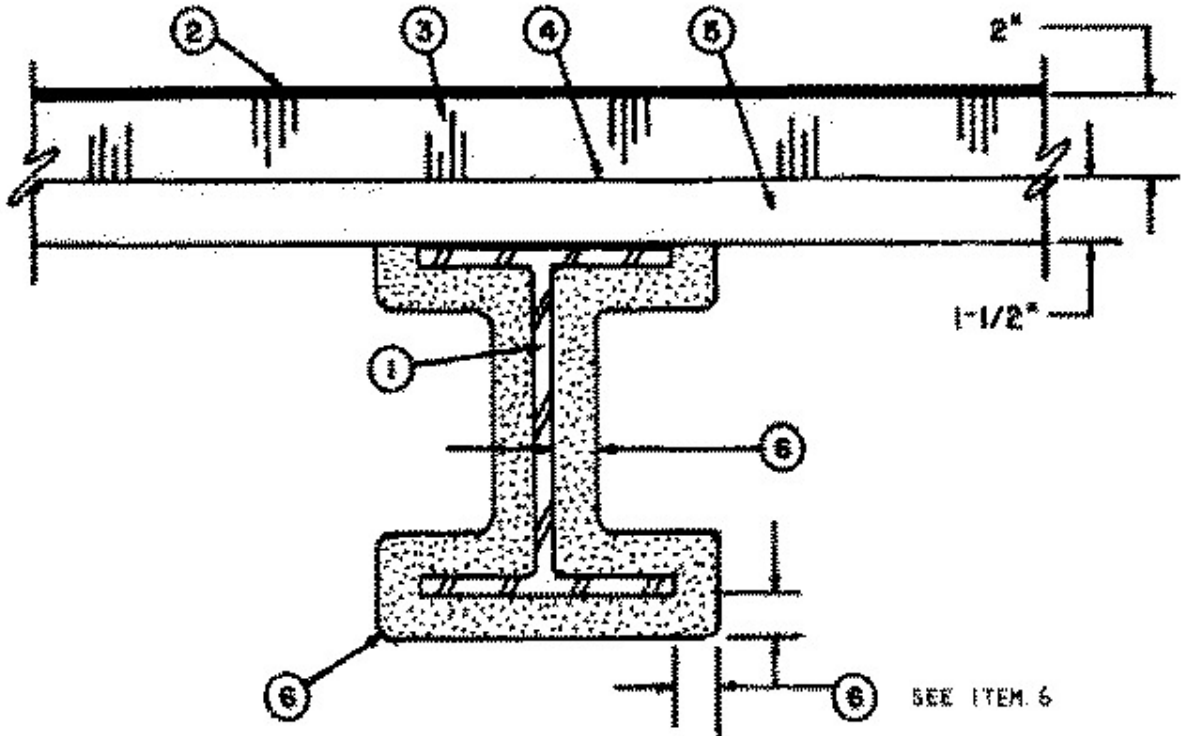


## UL Design No. S740

January 04, 2007

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)



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.

<b>Minimum Spray Applied Fire Resistive Material Thickness (In.)</b>			
<b>Restrained Beam Rating</b>	<b>Unrestrained Beam Rating</b>	<b>On W8x28 Beam</b>	<b>On 8x28 Beam at 4 ft. or less OC</b>
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.

<b>Minimum Spray Applied Fire Resistive Material Thickness (In.)</b>			
<b>Restrained Beam Rating</b>	<b>Unrestrained Beam Rating</b>	<b>On W8x28 Beam</b>	<b>On 8x28 Beam at 4 ft. or less OC</b>
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, 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.

<b>Minimum Spray Applied Fire Resistive Material Thickness (In.)</b>			
<b>Restrained Beam Rating</b>	<b>Unrestrained Beam Rating</b>	<b>On W8x28 Beam</b>	<b>On 8x28 Beam at 4 ft. or less OC</b>
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.

<b>Minimum Spray Applied Fire Resistive Material Thickness (In.)</b>			
<b>Restrained Beam Rating</b>	<b>Unrestrained Beam Rating</b>	<b>On W8x28 Beam</b>	<b>On 8x28 Beam at 4 ft. or less OC</b>
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, 5MD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD

\*Bearing the UL Classification Mark