UL Product iQ™

BXUV.S734

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. S734

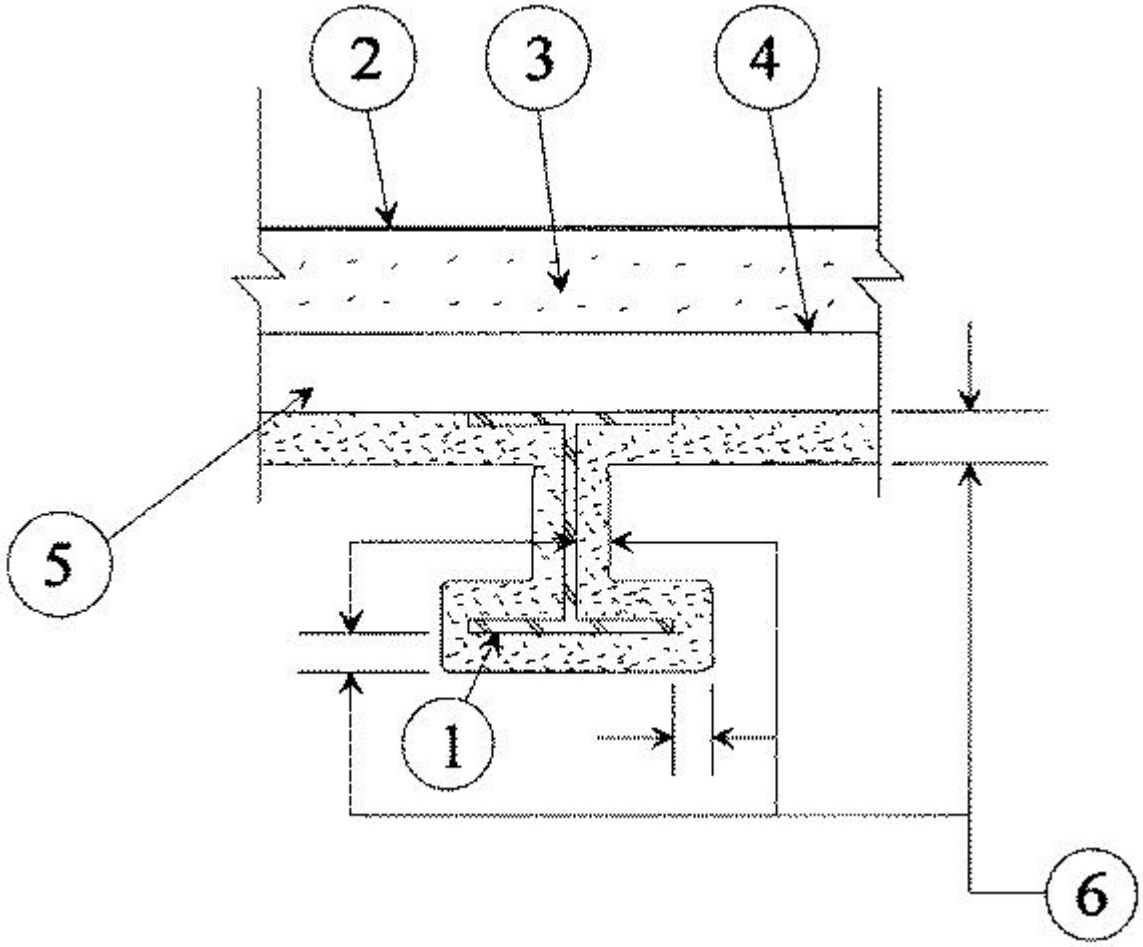
February 05, 2014

Restrained Beam Ratings — 1, 1-1/2, 2 and 3 Hr

Unrestrained Beam Ratings — 1, 1-1/2, 2, 3 and 4 Hr

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 —** W6x16 or W12x19, 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/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 and deck surfaces 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. For method of density determination see Design Information Section.

Min Spray-Applied Fire Resistive Materials Thickness In.

Rating	Unrestrained Beam		Restrained Beam	
Hr	W6x16	W12x19	W6x16	Deck

1	9/16	5/8	9/16	9/16
1-1/2	13/16	15/16	5/8	7/8
2	1-1/16	1-3/16	7/8	1-5/8
3	1-1/2	1-11/16	1-1/4	1-7/8
4	3-5/16	—	3-5/16	1-7/8

ARABIAN VERMICULITE INDUSTRIES — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-10 HB, MK-10 HB Extended Set, MK-6/HB, MK-6s, MK-6 GF, MK-6 GF Extended Set, MK-1000/HB, MK-1000/HB Extended Set, Sonophone 1.

GCP KOREA INC — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6/HY Extended Set, MK-10 HB, MK-10 HB Extended Set, MK-6/HB, MK-6S, MK-6 GF, MK-6 GF Extended Set, MK-1000/HB, MK-1000/HB Extended Set, Monokote Acoustic 1.

GCP APPLIED TECHNOLOGIES INC — Types MK-6/HY, MK-6/HY Extended Set, MK-10 HB, MK-10 HB Extended Set, MK-6/HB, MK-6S, MK-6 GF, MK-6 GF Extended Set, MK-1000/HB, MK-1000/HB Extended Set, Monokote Acoustic 1 , RG.

6A. **Alternate Spray-Applied Fire Resistive Materials* —** Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below to beam and deck surfaces which must be clean and free of dirt, loose scale and oil. Crest areas above the beam shall be filled with the Spray-Applied Fire Resistive Materials. Min avg and min ind density of 22/19 pcf, respectively. For method of density determination, refer to Design Information Section.

Min Spray-Applied Fire Resistive Materials Thickness In.

Rating	Unrestrained Beam		Restrained Beam	
Hr	W6x16	W12x19	W6x16	Deck
1	9/16	5/8	9/16	9/16
1-1/2	13/16	15/16	5/8	7/8
2	1-1/16	1-3/16	7/8	1-5/8
3	1-1/2	1-11/16	1-1/4	1-7/8
4	3	—	3	1-7/8

ARABIAN VERMICULITE INDUSTRIES — Types Sonophone 5, Z-106, Z-106/G, Z-106/HY.

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

GCP APPLIED TECHNOLOGIES INC — Types Monokote Acoustic 5 , Z-106, Z-106/G, Z-106/HY.

6B. **Alternate Spray-Applied Fire Resistive Materials* —** Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below to beam and lathed deck surfaces which must be clean and free of dirt, loose scale and oil. Crest areas above the beam shall be filled with Spray-Applied Fire Resistive Materials prior to application of the metal lath. Min avg and min ind density of 40/36 pcf respectively for Types Z-146, Z-146PC and Z-146T cementitious mixture. Min avg and min ind density of 50/45 pcf respectively for Types Z-156, Z-156T and Z-156PC. For method of density determination, refer to Design Information Section.

Min Spray-Applied Fire Resistive Materials Thickness In.

Rating Hr	Unrestrained Beam Rating Hr W6x16	Restrained Beam Rating Hr W6x16	Deck
1	9/16	9/16	9/16
1-1/2	13/16	5/8	7/8
2	1-1/16	7/8	1-5/8
3	1-1/2	1-1/4	1-7/8
4	3-5/16	3-5/16	1-7/8

ARABIAN VERMICULITE INDUSTRIES — Type Z-146 investigated for exterior use, Sonophone 35.

GCP APPLIED TECHNOLOGIES INC — Type Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC, investigated for exterior use, Monokote Acoustic 35.

GCP KOREA INC — Type Z-146, investigated for exterior use, Monokote Acoustic 35.

7. **Metal Lath (Not shown) —** Metal lath shall be used when applying Type Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC material to the underside of the steel deck. The metal lath shall be 3/8 in. expanded diamond mesh, weighing 1.7 lb per sq yd. secured to underside of steel deck with No. 12 by 3/8 in. pan head self-drilling, self-tapping steel screws and steel washers with an outside diam of 1/2 in. Screws spaced 12 in. OC in both directions with lath edges overlapped approximately 3 in.

* 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 2014-02-05