



# BXUV.X738 - Fire-resistance Ratings - ANSI/UL 263

## 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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## 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](#)

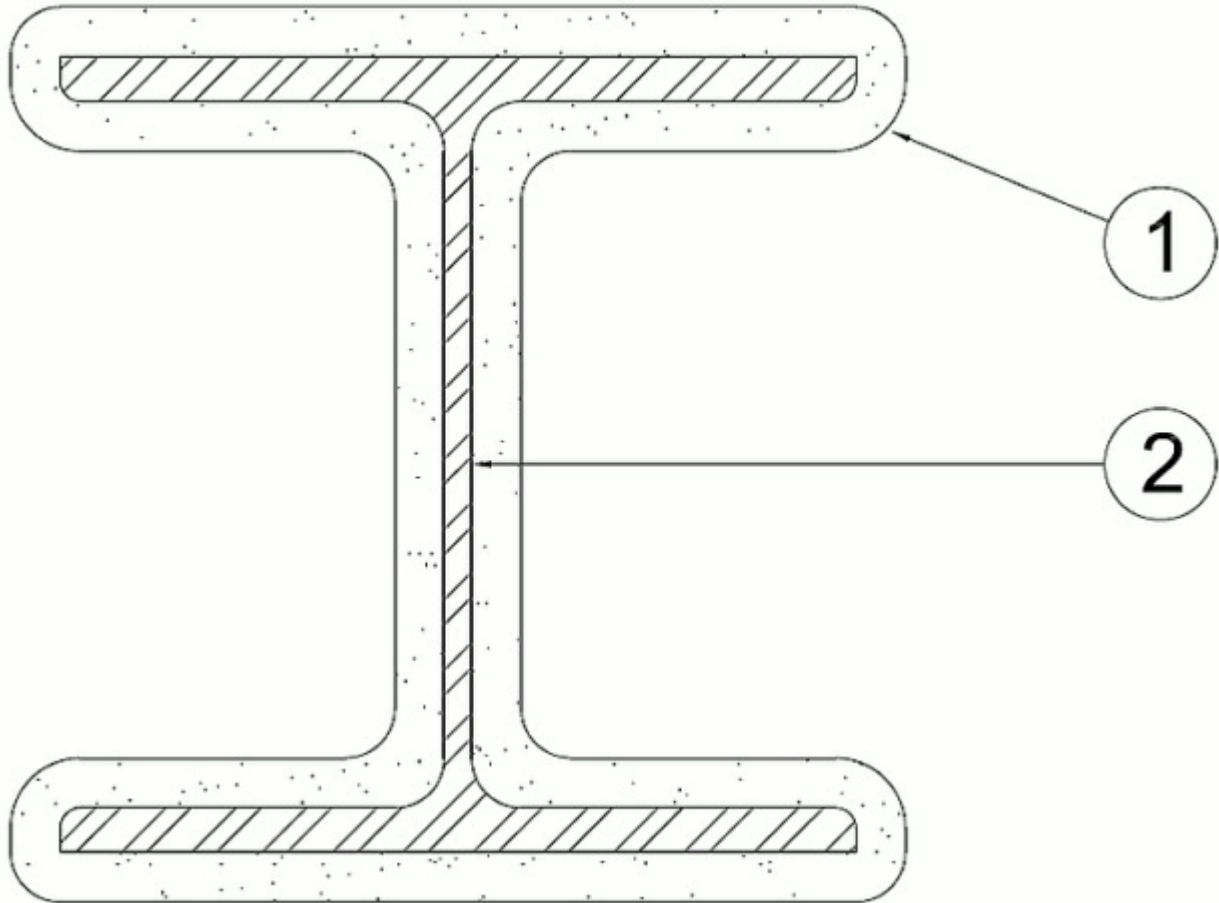
[See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variances](#)

### Design No. X738

October 26, 2017

### Ratings — 1, 1-1/2, 2, 3 and 4 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. Spray-Applied Resistive Material\*** — See table below for appropriate thickness. Applied in several coats to steel surfaces which must be clean and free of dirt, loose scale and oil. Min avg and min ind density of 19/18 pcf respectively for Types 7GP, 7HD, 105. Min avg and min ind density of 22/19 pcf respectively for Types KM-601, Z-106. For method of density determination refer to General Information Section.  
 The thickness of spray-applied resistive material (Item 1) required for rating periods of 1 h, 1-1/2 h, 2 h, 3 h, 4 h may be determined by the equation:

$$h = \frac{R}{1.05 (W/D) + 0.61}$$

Where:

h = Spray-Applied Resistive Material in the range of 0.25-3.875 in.

R = Fire resistance rating in hours (1 - 4 h).

D = Heated perimeter of steel column in inches.

W = Weight of steel column in lbs per foot.

W/D = 0.33 to 6.62.

As an alternate to the equation, the minimum thickness of spray-applied resistive material mixture required for various fire resistance ratings of contour sprayed or boxed columns may be determined from the table below:

Min Col Size	W/D	Min Thk In.				
		1 Hr	1-1/2 Hr	2 Hr	3 Hr	4 Hr
W6x9	0.33	1-1/8	1-9/16	2-1/16	3-1/8	—
W6x16	0.57	13/16	1-1/4	1-9/16	2-1/2	3

W8x28	0.67	3/4	1-3/16	1-9/16	2-1/8	2-1/2
W10x49	0.83	11/16	1	1-3/8	2	2-7/16
W14x228	2.49	5/16	7/16	5/8	15/16	1-1/4
W14x730	6.62	—	—	1/4	3/8	9/16

The thicknesses of Spray-Applied Fire Resistive Materials contained in the table below are applicable when the protection of the contour sprayed column's flange tips are reduced to one-half.

Min Col Size	W/D	Min Thk In.				
		1 Hr	1-1/2 Hr	2 Hr	3 Hr	4 Hr
W6x9	0.33	1-1/4	1-3/4	2-3/8	3-1/2	—
W6x16	0.57	15/16	1-7/16	1-7/8	2-15/16	3-3/8
W8x28	0.67	7/8	1-3/8	1-3/4	2-3/8	3
W10x49	0.83	3/4	1-1/8	1-11/16	2-1/4	2-3/4
W14x228	2.49	3/8	1/2	3/4	1-3/16	1-5/8
W14x730	6.62	—	—	1/4	9/16	3/4

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

**SOUTHWEST FIREPROOFING PRODUCTS CO** — Types 7GP, 7HD.

**GCP APPLIED TECHNOLOGIES INC** — Types 105, Monokote Acoustic 5, Z-106, Z-106/HY.

1A. **Alternate Spray-Applied Resistive Materials\*** — See table below for appropriate thickness. Applied in several coats to steel surfaces which must be clean and free of dirt, loose scale and oil. Min avg and min ind density of 22/19 pcf, respectively. For method of density determination refer to General Information Section.

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

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