

BXUV.X829 - 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.

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

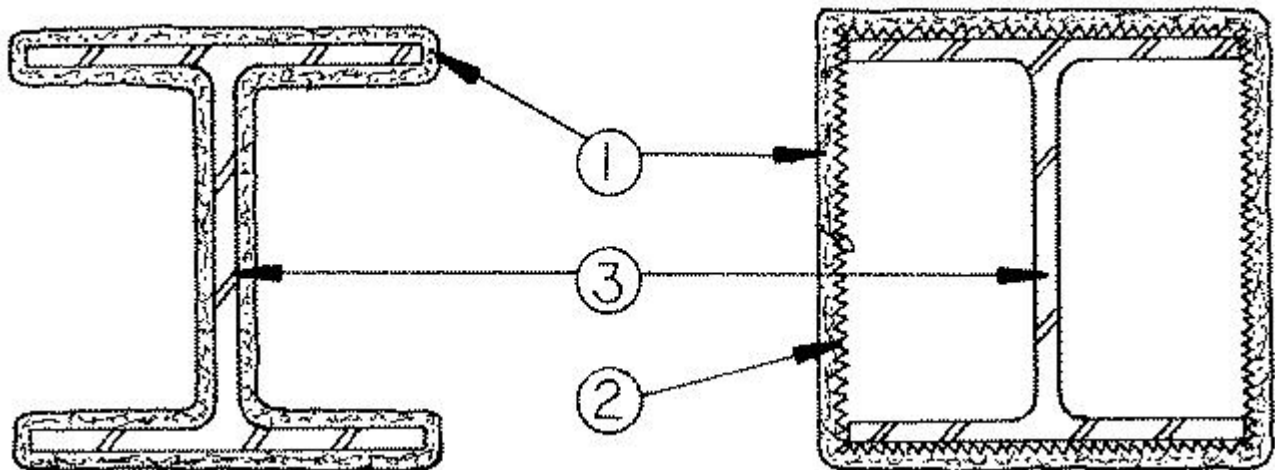
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variances

Design No. X829

May 03, 2018

Ratings — 1/2, 1, 1-1/2, 2, 3, 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 Fire Resistive Materials*** — Applied by spraying with water, in one or more untamped coats at the thickness shown in the table below to steel surfaces which are free of dirt, oil or scale. Use of adhesive is optional. Minimum average untamped density is 13 pcf with minimum ind untamped density of 11 pcf for Types II, II HS, and D-C/F. Min avg and min ind untamped densities of 22 and 19 pcf, respectively, for Type HP. Tamping is optional. For method of density determination refer to Design Information Section. The thickness of Spray-Applied Fire Resistive Materials (Item 1) required for rating periods of 1 h, 1-1/2 h, 2 h, 3 h, 4 h of contour sprayed columns may be determined by the equation:

$$h = \frac{R}{1.01 (W/D) + 0.66}$$

Where:

h=Protection material thickness in the range 0.375-3.75 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=0.55 to 7.0

The thickness of Spray-Applied Fire Resistive Materials in the range of 0.375-3.75 in. required for rating periods of 1 h, 1-1/2 h, 2 h, 3 h, 4 h of contour sprayed columns with W/D=0.30-0.55 may be determined by the equation:

$$h = \frac{R}{0.95 (W/D) + 0.45}$$

As an alternative to the equations, the minimum thickness of protection Material required for various fire resistance ratings of contour or box sprayed columns may be determined from the table below:

Column Size	W/D	Min Thkns In.				
		1 Hr	1-1/2 Hr	2 Hr	3 Hr	4 Hr
W8X10	0.33	1-1/4	1-13/16	2-5/16	3-9/16	—
*W6X16	0.57	11/16	1-1/8	1-9/16	2-7/16	3-1/4
W8X28	0.68	11/16	1-1/8	1-7/16	1-7/8	2-5/16
W10X49	0.83	11/16	1	1-1/4	1-11/16	2-1/8
W12X106	1.46	7/16	3/4	1	1-7/16	1-15/16
W14X233	2.52	5/16	1/2	1/2	15/16	1-5/16
W14X730	6.68	3/8	3/8	3/8	3/8	9/16
* = A 1/2 Hour Rating may be obtained on a minimum W6x16 column with a minimum 3/8 in. of material.						
The thicknesses of protection material contained in the table below are applicable when the protection of the contour sprayed column's flange tips are reduced to one-half.						
W8X10	0.33	1-3/8	2	2-5/8	—	—
W6X16	0.57	13/16	1-5/16	1-3/4	2-3/4	3-11/16
W8X28	0.68	13/16	1-5/16	1-11/16	2-9/16	3-7/16
W10X49	0.83	13/16	1-1/8	1-7/16	1-15/16	2-7/16
W12X106	1.46	1/2	13/16	1-1/8	1-5/8	2-3/16

W14X233	2.52	7/16	9/16	9/16	1-1/16	1-1/2
W14X730	6.68	3/8	3/8	3/8	1/2	11/16

ISOLATEK INTERNATIONAL — Type D-C/F, HP, II, or II HS. Type D-C/F, HP or II investigated for exterior use. Type EBS or Type X adhesive/sealer optional.

2. **Metal Lath** — (Optional for contour application) — 3.4 lb/sq yd galvanized or painted expanded steel lath. Lath shall be lapped 1 in. and tied together with No. 13 SWG galvanized steel wire spaced vertically 6 in. O.C. or alternately, attached with No. 24 MSG spring clips, 1/2 in. wide, pushed onto column flanges, vertically spaced 6 in. O.C.

3. **Steel Column** — Min. sizes as shown above in Item 1.

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Last Updated on 2018-05-03

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