

# BXUV.Y616 - 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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## Fire-resistance Ratings - ANSI/UL 263

**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](#)

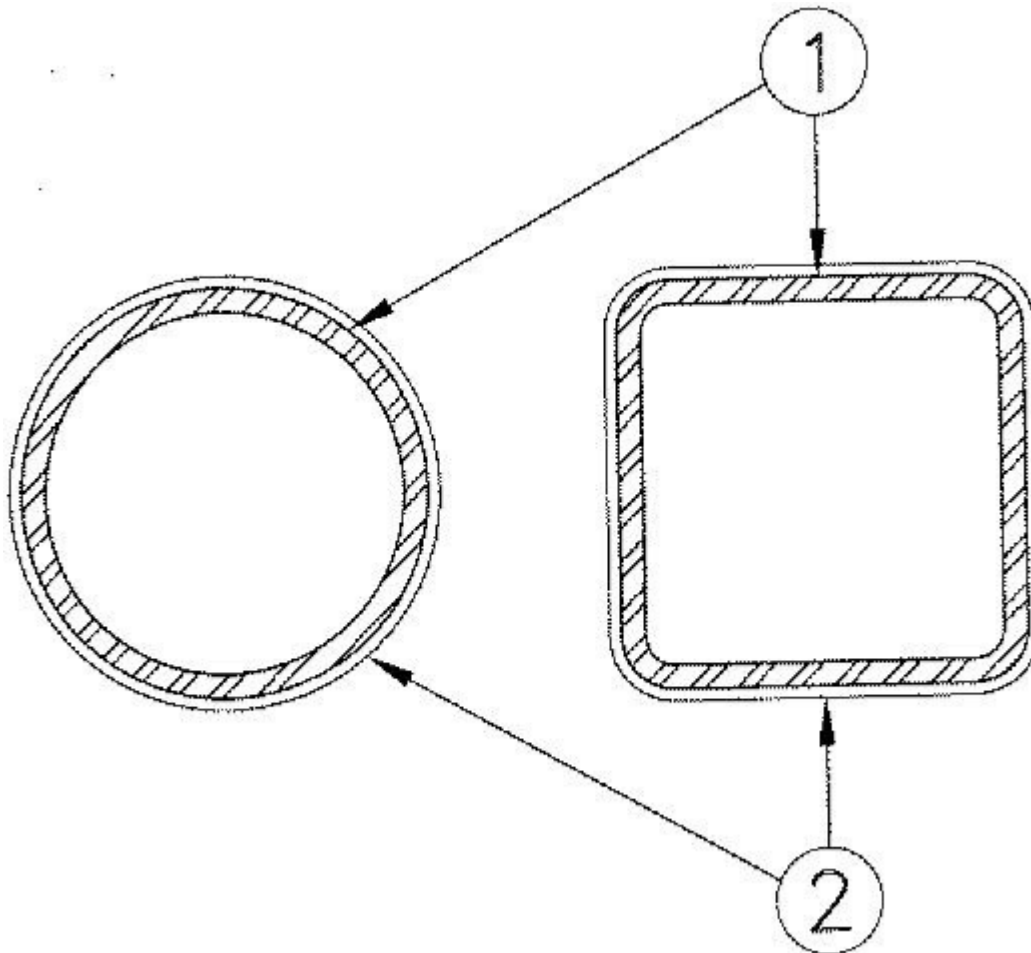
[See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada  
Design Criteria and Allowable Variances](#)

## **Design No. Y616**

September 2, 2021

**Ratings - 1, 1-1/2, 2 and 3 Hr. (See Item 2)**

**\* 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 Column** — Steel tube (ST) or steel pipe (SP) with the minimum sizes shown in the table below. Columns shall be free of dirt, loose scale and oil. Columns shall be primed with a metal alkyd or epoxy primer at a nominal thickness of 1 mil.

2. **Intumescent Fire-resistant Materials\*** — Coating spray or brush applied directly from containers to desired thickness. See table below for appropriate minimum final dry thickness and applicable rating.

**FOR STEEL PIPE**

Steel Size	A/P	HP/A	1 Hr		1-1/2 Hr		2 Hr		3 Hr	
			in.	mm	in.	mm	in.	mm	in.	mm
SP 3 x 0.25	0.23	169	0.102	2.58	0.221	5.62	0.340	8.65	N/A	N/A
SP 5 x 0.3125	0.29	135	0.081	2.05	0.175	4.46	0.270	6.86	N/A	N/A
SP 5 x 0.375	0.35	114	0.067	1.70	0.145	3.69	0.224	5.69	N/A	N/A
SP 6 x 0.432	0.40	102	0.058	1.48	0.127	3.23	0.196	4.97	N/A	N/A
SP 4 x 0.5	0.44	93	0.053	1.35	0.115	2.94	0.178	4.52	N/A	N/A
SP 8 x 0.5	0.47	85	0.047	1.20	0.093	2.35	0.147	3.74	0.288	7.31

N/A = Not Available

**FOR SQUARE AND RECTANGULAR STEEL TUBE**

Steel Size	A/P	HP/A	1 Hr		1-1/2 Hr		2 Hr		3 Hr	
			in.	mm	in.	mm	in.	mm	in.	mm
ST 5x3x1/4	0.23	169	0.102	2.58	0.221	5.62	0.340	8.65	in.	mm

ST 5x3x5/16	0.29	135	0.081	2.05	0.175	4.46	0.270	6.86	N/A	N/A
ST 8x6x3/8	0.35	114	0.067	1.70	0.145	3.69	0.224	5.69	N/A	N/A
ST 6x6x7/16	0.40	102	0.058	1.48	0.127	3.23	0.196	4.97	N/A	N/A
ST 5x3x1/2	0.44	93	0.053	1.35	0.115	2.94	0.178	4.52	N/A	N/A
ST 8x8x1/2	0.47	85	0.047	1.20	0.093	2.35	0.147	3.74	0.288	7.31

N/A = Not Available

As an alternate to the above table, the required thickness of coating (in inches) to be applied to all surfaces of steel tube (ST) and steel pipe (SP) columns may be determined from the equations listed below. The equations may only be used for the indicated hourly rating, and for the corresponding listed ranges of thickness and A/P.

Hourly Ratng	Thickness Equation, in.	Thickness Range, in.	A/P Ratio Range
1	$T = 0.02336/(A/P)$	0.050 to 0.102	0.23 to 0.47
1-1/2	$T = 0.05081/(A/P)$	0.108 to 0.221	0.23 to 0.47
2	$T = 0.07826/(A/P)$	0.167 to 0.340	0.23 to 0.47

Where T = Thickness of coating in inches, A = Cross-sectional area of the pipe in square inches, and P = Heated perimeter of steel pipe or tube section in inches.

**GREENTECH ASIA PACIFIC SDN BDH** — Type WB 5, Investigated for Interior Conditioned Space and Interior General Purpose, Investigated for Exterior Use with top coat as described in Item 3.

**GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C** — Type WB 5, Investigated for Interior Conditioned Space and Interior General Purpose, Investigated for Exterior Use with top coat as described in Item 3.

**ISOLATEK INTERNATIONAL** — Type SprayFilm WB 5, Type WB 5, Investigated for Interior Conditioned Space and Interior General Purpose, Investigated for Exterior Use with top coat as described in Item 3.

**NEWKEM PRODUCTS CORP** — Type WB 5, Investigated for Interior Conditioned Space and Interior General Purpose, Investigated for Exterior Use with top coat as described in Item 3.

3. **Top Coat** — (Not Shown) — Type TNEMEC 740 required for Exterior Use with Type SprayFilm WB5, applied at a minimum dry thickness of 7 mils over the intumescent material. See Classification information in the Mastic and Intumescent Coating (CDWZ) category, Isolatek International, for mixing requirements.

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