BXUVC.Z639
Fire Resistance Ratings

Page Bottom

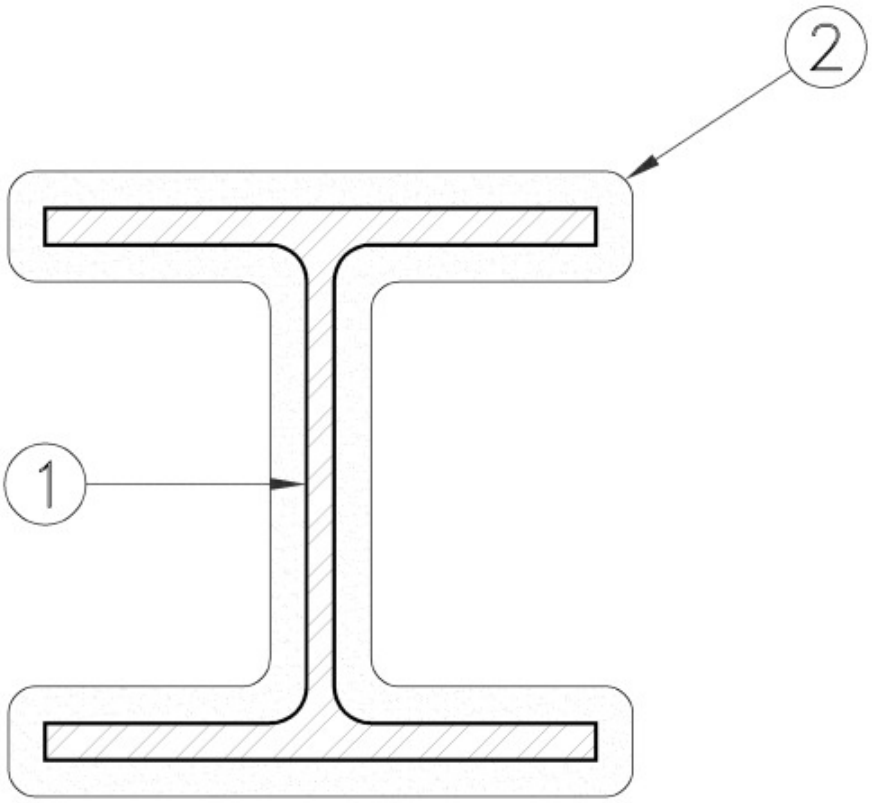
Fire Resistance Ratings

See General Information for Fire Resistance Ratings

Design No. Z639

September 19, 2008

Ratings — 3/4, 1, 1-1/2 & 2 h (See Item 2)



1. **Steel Column —** W-shaped columns with minimum M/D as specified in Item 2. Columns should be free of dirt, loose scale and oily deposits. Columns should be primed with an alkyd based primer and as per the coating manufacturer's specification and instructions.

- 2. **Thin-Film Intumescent Coatings —** CAVCC (Guide No. 40 U18.12.9). Intumescent coating designated "3M FireDam Intumescent Coating WB1000" applied in accordance with manufacturer's instructions to the minimum dry film thicknesses shown below:

Ratings, h	Min Column Size	Min M/D	Required Min Dry Film Thickness, mm
1-1/2	W 360 x 347	148	0.79
2	W 360 x 347	148	1.19

1	W 250 x 73	49	1.22
1-1/2	W 250 x 73	49	2.40
2	W 250 x 73	49	3.59
3/4	W 200 x 15	18	1.72
1	W 200 x 15	18	3.33

Alternatively, the required dry film thickness "t" may be determined by the following equation for W-Shaped columns within the parameters given below:

$$t = [\ T - 28.923\ ] \div [\ 0.5183 \times (M/D)\ ]$$

45 mins	≤	T	≤	120 mins
18 mins	≤	M/D	≤	148 max
0.76 mm	≤	t	≤	3.88 mm

t = Minimum dry film thickness in millimeters and within 0.76 mm to 3.88 mm range. If the dry film thickness computed by the formulae is outside this thickness range the formulae is not applicable.

T = Rating period in minutes and within 45 minutes and 120 minutes range.

M = Mass of column section in kg/m.

D = Heated perimeter of column section, m.

3M CANADA COMPANY

3. **Finish Coating —** (Not shown)—(Optional) For Interior General Purpose and Interior Conditioned Space Purpose, Type "Sherwin Williams Steel-Master 9500" or "ICI Devflex HP 4216". Top Coat applied over intumescent coating (Item 2) to max 0.08 mm dry film thickness.

Last Updated on 2008-09-19

Copyright © 2008 Underwriters' Laboratories of Canada®

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under ULC's Follow-Up Service. Only those products bearing the ULC Mark should be considered to be Listed and covered under ULC's Follow-Up Service. Always look for the Mark on the product.

ULC permits the reproduction of the material contained in the Online Certifications Directory subject to the following conditions: 1. The Guide Information, Designs and/or Listings (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from Underwriters Laboratories of Canada" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "Copyright © 2008 Underwriters Laboratories of Canada®"

An independent organization working for a safer world with integrity, precision and knowledge.