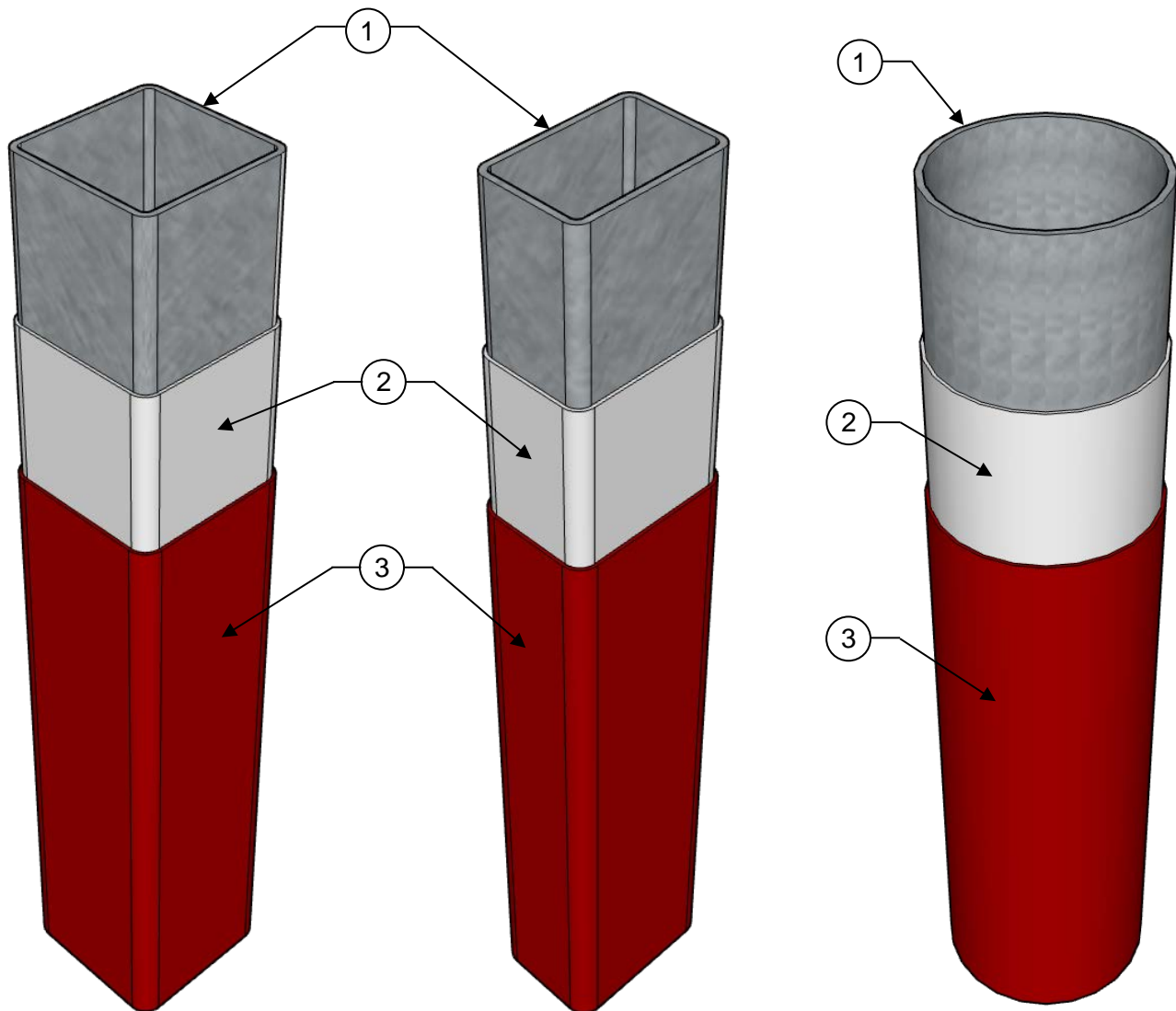


**Applicant:** FLAMEOFF COATINGS, INC.  
**Product:** FLAMEOFF® FIRE BARRIER PAINT  
**Standard:** ASTM E119 (UL 263) / CAN/ULC-S101

**Structural Shape:** Steel Tube and Pipe Columns

*IFRM = Intumescent Fire-Resistive Materials*

**COMPONENTS OF CONSTRUCTION:**

*Listings are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the listing or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this listing, or as to any product covered by the listing.*

1. **Structural Steel Column** – Square tube, rectangular tube, or circular pipe steel columns with Hp/A or A/P section factors based on exposure on four sides. Columns shall be free of dirt, loose scale, and oil before application of metal alkyd primer.
2. **Primer Coating** – Structural steel to be primed with a layer of an alkyd metal primer with an average applied dry film thickness of 3.7 mils (0.09 mm). Primed surface shall be cleaned, dried, and free of dirt, loose scale, grease, oil, and any contaminant that would inhibit bonding of the FlameOff® Barrier Paint to the primer.
3. **FlameOff® Fire Barrier Paint** – Coating applied in accordance with manufacturer's instructions to the minimum dry film thicknesses shown in IFRM-1191-03 Table 1, based on the column section factor and fire resistance period. Coating thicknesses may be interpolated between section factors at the same fire resistance period. Extrapolation beyond the minimum and maximum section factors and fire resistance periods is not permitted.

**IFRM-1191-03 TABLE 1 – MINIMUM COATING THICKNESS FOR A STEEL TUBE OR PIPE COLUMN SECTION FACTOR TO ACHIEVE ESTIMATED FIRE RESISTANCE PERIOD**

Section Factor		Fire Resistance Period (min)							
Hp/A (m <sup>-1</sup> )	A/P (in)	45		60		90		120	
		Thickness in mm (mils)							
80	0.49	0.7	(29)	1.5	(60)	3.1	(123)	4.7	(185)
85	0.46	0.8	(30)	1.6	(62)	3.2	(127)	4.9	(192)
90	0.44	0.8	(31)	1.6	(64)	3.3	(132)	5.1	(199)
95	0.41	0.8	(32)	1.7	(67)	3.5	(136)	5.2	(206)
100	0.39	0.8	(33)	1.7	(69)	3.6	(140)	5.4	(212)
105	0.37	0.9	(34)	1.8	(70)	3.7	(144)	5.5	(218)
110	0.36	0.9	(35)	1.8	(72)	3.8	(148)	5.7	(226)
115	0.34	0.9	(35)	1.9	(74)	3.8	(152)	5.9	(234)
120	0.33	0.9	(36)	1.9	(76)	3.9	(155)	6.1	(242)
125	0.31	0.9	(37)	2.0	(77)	4.0	(158)	6.3	(250)
130	0.30	1.0	(38)	2.0	(79)	4.1	(162)	6.5	(258)
135	0.29	1.0	(41)	2.1	(82)	4.4	(174)	6.7	(266)
140	0.28	1.1	(45)	2.1	(84)	4.5	(179)	6.9	(274)
145	0.27	1.2	(48)	2.2	(87)	4.7	(184)	7.2	(282)
150	0.26	1.3	(52)	2.3	(89)	4.8	(189)	7.4	(290)
155	0.25	1.4	(56)	2.3	(92)	4.9	(195)	7.6	(297)
160	0.25	1.5	(59)	2.4	(95)	5.1	(200)	7.8	(305)
165	0.24	1.6	(63)	2.5	(97)	5.2	(205)	8.0	(313)
170	0.23	1.7	(66)	2.5	(100)	5.3	(211)	8.2	(321)
175	0.22	1.8	(70)	2.6	(102)	5.5	(216)	8.4	(329)
180	0.22	1.9	(74)	2.7	(105)	5.6	(221)	8.6	(337)
185	0.21	2.0	(77)	2.7	(108)	5.8	(226)	8.8	(345)

For SI: 1 inch = 25.4 mm

Footnote: Empty cells ("–") indicate unknown performance of coating thickness.