

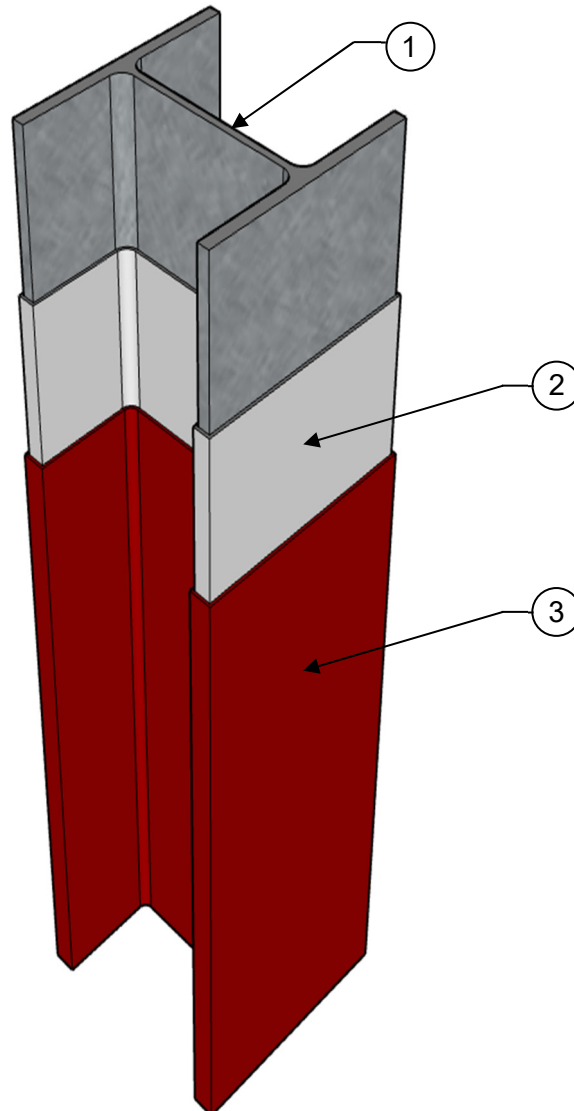
Applicant: FLAMEOFF COATINGS, INC.

Product: FLAMEOFF® FIRE BARRIER PAINT

Standard: ASTM E119 (UL 263) / CAN/ULC-S101

**Structural
Shape:** W-shape (H-section or I-section) Columns

IFRM = Intumescent Fire-Resistive Materials



COMPONENTS OF CONSTRUCTION:

1. **Structural Steel Column** – Wide flange steel columns (H-section or I-section) with H_p/A or W/D 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 should 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-1191-02 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-1191-02 TABLE 1 – MINIMUM COATING THICKNESS FOR A W-SHAPE (H- OR I-SECTION) COLUMN SECTION FACTOR TO ACHIEVE ESTIMATED FIRE RESISTANCE PERIOD

Section Factor		Fire Resistance Period (min)					
Hp/A (m ⁻¹)	W/D (lbs./in)	60		90		120	
		Thickness in mm (mils)					
70	1.91	0.8	(32)	1.5	(58)	2.1	(81)
75	1.79	0.8	(32)	1.5	(58)	2.2	(86)
80	1.67	0.8	(32)	1.5	(58)	2.3	(91)
85	1.58	0.8	(32)	1.6	(61)	2.4	(96)
90	1.49	0.8	(32)	1.6	(64)	2.6	(101)
95	1.41	0.8	(32)	1.7	(68)	2.7	(106)
100	1.34	0.8	(32)	1.8	(71)	2.8	(112)
105	1.28	0.8	(32)	1.9	(74)	3.0	(117)
110	1.22	0.9	(34)	2.0	(77)	3.1	(122)
115	1.16	0.9	(35)	2.0	(81)	3.2	(127)
120	1.12	0.9	(37)	2.1	(84)	3.4	(132)
125	1.07	1.0	(39)	2.2	(87)	3.5	(137)
130	1.03	1.0	(41)	2.3	(91)	3.6	(142)
135	0.99	1.1	(42)	2.4	(94)	3.7	(148)
140	0.96	1.1	(44)	2.5	(97)	3.9	(153)
145	0.92	1.2	(46)	2.5	(100)	4.0	(158)
150	0.89	1.2	(48)	2.6	(104)	4.1	(163)
155	0.86	1.3	(50)	2.7	(107)	4.3	(168)
160	0.84	1.3	(51)	2.8	(110)	4.4	(173)
165	0.81	1.3	(52)	2.9	(113)	4.5	(178)
170	0.79	1.3	(53)	3.0	(117)	4.7	(184)
175	0.77	1.4	(53)	3.0	(120)	4.8	(189)
180	0.74	1.4	(54)	3.1	(123)	4.9	(194)
185	0.72	1.4	(55)	3.2	(126)	5.0	(199)
190	0.71	1.4	(56)	3.3	(129)	5.2	(204)
195	0.69	1.4	(56)	3.4	(133)	5.3	(209)
200	0.67	1.5	(58)	3.4	(136)	5.4	(214)
205	0.65	1.5	(60)	3.5	(139)	5.6	(219)
210	0.64	1.6	(61)	3.6	(142)	5.7	(224)
215	0.62	1.6	(63)	3.7	(145)	5.8	(229)
220	0.61	1.7	(65)	3.8	(148)	5.9	(233)
225	0.60	1.7	(67)	3.8	(151)	6.1	(238)
230	0.58	1.7	(69)	3.9	(155)	6.2	(243)
235	0.57	1.8	(71)	4.0	(158)	6.3	(248)
240	0.56	1.8	(73)	4.1	(161)	6.4	(253)
245	0.55	1.9	(74)	4.2	(164)	6.5	(258)
250	0.54	1.9	(76)	4.2	(167)	6.7	(263)
255	0.53	2.0	(78)	4.3	(170)	6.8	(267)
260	0.52	2.0	(80)	4.4	(173)	6.9	(272)
265	0.51	2.1	(82)	4.5	(179)	7.1	(281)
270	0.50	2.1	(84)	4.7	(184)	7.4	(290)
275	0.49	2.2	(86)	4.8	(190)	7.6	(299)
280	0.48	2.2	(87)	5.0	(196)	7.8	(308)
285	0.47	2.3	(89)	5.1	(201)	8.1	(317)
290	0.46	2.3	(91)	5.3	(207)	-	(-)
295	0.45	2.4	(93)	5.4	(213)	-	(-)
300	0.45	2.4	(95)	5.6	(219)	-	(-)
305	0.44	2.5	(97)	5.7	(224)	-	(-)

For SI: 1 inch = 25.4 mm

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