

FIREPRO

FIRE PROTECTIVE BUILDING PRODUCTS



C963 DATASHEET - 02-12-09

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FIREPRO C963

Intumescent Coating for Fire Protection of Structural Steel

- Easy to Specify
- Easy to Apply
- Versatile

DESCRIPTION

A coating system for the protection of structural steel that enables the steel to be highlighted as a feature of the building design. C963 combines final decoration of steel with its fire protection.

The Basecoat is applied to the steel as a paint. In a fire the coating expands to insulate and protect the substrate from the effects of the fire. The Topseal is an integral part of the system and protects the Basecoat against moisture and damage. It provides the decorative finish.

C963 provides half hour and one hour fire protection to most universal and hollow steel sections and one and a half hour protection to many universal beams and columns.

SPECIFICATION

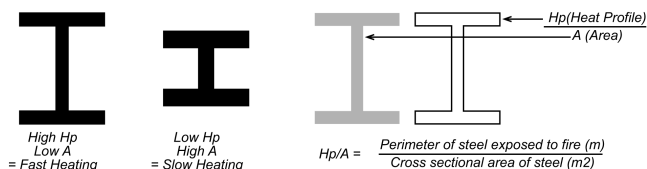
Apply Firepro C963 to achieve 30, 60 or 90 minutes Fire Resistance. Overcoat with Firepro Topseal to colour finish.

QUANTITY OF BASECOAT REQUIRED

HP/A CALCULATIONS AND THE CORRECT THICKNESS OF FIREPRO C963 TO USE ARE PREPARED FOR YOU BY FIREPRO CENTABUILD LTD.

The Hp/A ratio, sometimes termed the section factor, is a ratio used to quantify the heating rate of a steel member in a fire. In Australia the exposed surface area to mass ratio E ($m^2/T = (HP / A) / 7.85$ for 7850 Kg/M³ Steel).

The Hp/A value is a ratio of perimeter length, Hp, to cross section area, A.



To calculate the loadings the following information is required:

1. Time period of Fire rating required.
2. Steel section specification, eg: 310 UB 40kg 310 UB 46kg
3. Is the steel section used as a beam or column?
4. The number of sides exposed to flame?

STEEL PREPARATION AND PRIMERS

Firepro C963 is applied over primed surfaces that have been suitably prepared.

Primed steel should have grease, oil, other paint coatings and any contaminants removed before basecoat application.

Before priming it is recommended that steel surfaces be blast cleaned to SA2½. Where blast cleaning is not practical, millscale, rust and old coatings should be removed by power tools such as power wire brushing to AS1627.2 ST2 taking care not to burnish the steel.

PRIMERS: The recommended primer for non galvanised steel is Firepro C627 High Performance Red Oxide Primer. Other primers may be suitable, but Firepro cannot guarantee their performance. Primers based on chlorinated rubber, bitumen or epoxy coatings are not suitable.

APPLICATION

Firepro C963 is a universal grade and may be applied by brush, roller or airless spray. Application by airless spray will give the best standard of finish. Firepro C963 is intended for use by professional applicators of high performance coatings in building construction situations. Registered applicators available. See separate Application Notes for details.

COLOUR and TOPSEAL

Stock colour - white. Wide range of tinted topseals available.

REDECORATION

Firepro C963 can be re-decorated with the appropriate topseal. Any damage to coatings can easily be repaired. Refer to Application Notes for details.

DURABILITY

Firepro C963 has good resistance to impact and abrasion. Additional durability is provided by the protective topseal. If used externally, the external topseal system must be used, and this topseal reapplied regularly to maintain its protective shield. Any damage to the surface must be repaired immediately. All external surfaces should be inspected annually and maintenance performed as required to any areas worn or damaged.

APPROVALS and TESTING

Fully fire tested to BS476 Part 21 for up to one and a half hour's fire protection for many universal sections and up to one hour's protection for the specified range hollow sections. BRANZ Assessment FAR2425 to AS1530.4. See the reverse of this sheet for details.

CERTIFICATE OF SUPPLY

Firepro provides a Certificate of Supply. The Certificate includes confirmation signed by the Applicator that the product has been applied in accordance with specification.

NOTE: The technical information and suggestions for use and application presented herein represent the best information available to us and are believed to be reliable. They should not however be construed as controlling suggestions and there is no warranty of performance of our materials either expressed or implied. We urge that users of our materials conduct confirmatory tests to determine final suitability for their specific end uses. All dimensions are nominal. **We reserve the right to make changes or to withdraw designs and products without notice.**

FIREPRO C963 Intumescent Coating for Steel

Dry Film Thickness (note: solids content of wet C963 is 75% ±2)

Universal Column			
Hp/A	30mins	60mins	90mins
30	0.30	0.30	0.51
35	0.30	0.30	0.55
40	0.30	0.30	0.59
45	0.30	0.30	0.64
50	0.30	0.30	0.68
55	0.30	0.30	0.72
60	0.30	0.30	0.76
65	0.30	0.32	0.80
70	0.30	0.32	0.84
75	0.30	0.34	0.88
80	0.30	0.36	0.92
85	0.30	0.38	0.96
90	0.30	0.40	1.00
95	0.30	0.40	1.04
100	0.30	0.43	1.08
105	0.30	0.45	1.12
110	0.30	0.47	1.16
115	0.30	0.52	1.20
120	0.30	0.54	1.24
125	0.30	0.54	1.28
130	0.30	0.55	1.32
135	0.30	0.57	
140	0.30	0.58	
145	0.30	0.59	
150	0.30	0.60	
155	0.30	0.61	
160	0.30	0.62	
165	0.30	0.63	
170	0.30	0.64	
175	0.30	0.65	
180	0.30	0.66	
185	0.30	0.67	
190	0.30	0.68	
195	0.30	0.69	
200	0.30	0.70	
205	0.30	0.82	
210	0.30	0.94	
215	0.30	1.06	
220	0.30	1.18	
225	0.30	1.27	
230	0.30	1.27	
235	0.30	1.29	
240	0.30	1.32	
245	0.30	1.34	
250	0.30	1.37	
255	0.30	1.39	
260	0.30	1.42	
265	0.30	1.43	
270	0.30	1.46	
275	0.30	1.49	
280	0.30	1.51	
285	0.30	1.54	
290	0.31		
295	0.31		
300	0.32		
305	0.33		
310	0.33		
315	0.34		
320	0.35		

Universal 3 sided Beam			
Hp/A	30mins	60mins	90mins
25	0.28	0.27	0.66
30	0.28	0.27	0.66
35	0.28	0.27	0.66
40	0.28	0.27	0.66
45	0.28	0.27	0.66
50	0.28	0.27	0.66
55	0.28	0.27	0.66
60	0.28	0.27	0.66
65	0.28	0.27	0.66
70	0.28	0.27	0.66
75	0.28	0.27	0.66
80	0.28	0.28	0.66
85	0.28	0.29	0.72
90	0.28	0.31	0.77
95	0.28	0.32	0.83
100	0.28	0.33	0.88
105	0.28	0.35	0.94
110	0.28	0.36	0.99
115	0.28	0.38	1.05
120	0.28	0.39	1.11
125	0.28	0.40	1.16
130	0.28	0.42	1.22
135	0.28	0.43	1.27
140	0.28	0.45	1.33
145	0.28	0.46	1.38
150	0.28	0.47	
155	0.28	0.49	
160	0.28	0.50	
165	0.28	0.51	
170	0.28	0.53	
175	0.28	0.54	
180	0.28	0.56	
185	0.28	0.57	
190	0.28	0.58	
195	0.28	0.60	
200	0.28	0.61	
205	0.28	0.63	
210	0.28	0.64	
215	0.28	0.66	
220	0.28	0.69	
225	0.28	0.73	
230	0.28	0.77	
235	0.28	0.81	
240	0.28	0.86	
245	0.28	0.90	
250	0.28	0.94	
255	0.28	0.99	
260	0.28	1.03	
265	0.28	1.07	
270	0.28	1.12	
275	0.28	1.16	
280	0.28	1.18	
285	0.28	1.24	
290		1.29	
295		1.33	
300		1.37	

4 sided SHS		
Hp/A	30mins	60mins
30	0.53	0.53
35	0.53	0.53
40	0.53	0.53
45	0.53	0.53
50	0.53	0.53
55	0.53	0.53
60	0.53	0.53
65	0.53	0.53
70	0.53	0.59
75	0.53	0.65
80	0.53	0.73
85	0.53	0.81
90	0.53	0.88
95	0.53	0.96
100	0.53	1.04
105	0.53	1.10
110	0.53	1.15
115	0.53	1.21
120	0.53	0.13
125	0.53	0.13
130	0.53	1.37
135	0.53	1.43
140	0.53	1.48
145	0.53	1.54
150	0.53	1.60
155	0.53	1.66
160	0.55	1.72
165	0.56	
170	0.58	
175	0.59	
180	0.60	
185	0.62	
190	0.63	
195	0.65	
200	0.66	
205	0.67	
210	0.69	
215	0.70	
220	0.72	
225	0.73	
230	0.74	
235	0.76	
240	0.77	
245	0.78	
250	0.80	
255	0.81	
260	0.83	
265	0.84	
270	0.89	
275	0.94	
280	0.98	
285	1.03	
290	1.08	
295	1.12	
300		
305		
310		

CHS		
Hp/A	30mins	60mins
25	0.52	0.52
30	0.52	0.52
35	0.52	0.52
40	0.52	0.52
45	0.52	0.52
50	0.52	0.52
55	0.52	0.52
60	0.52	0.60
65	0.52	0.68
70	0.52	0.76
75	0.52	0.85
80	0.52	0.93
85	0.52	1.01
90	0.52	1.06
95	0.52	1.09
100	0.52	1.13
105	0.52	1.16
110	0.52	1.20
115	0.52	1.23
120	0.53	1.26
125	0.54	1.30
130	0.55	1.33
135	0.56	1.37
140	0.57	1.42
145	0.58	1.46
150	0.59	1.50
155	0.60	1.54
160	0.61	1.59
165	0.61	1.63
170	0.62	1.67
175	0.63	1.71
180	0.64	
185	0.65	
190	0.66	
195	0.67	
200	0.68	
205	0.69	
210	0.70	
215	0.71	
220	0.72	
225	0.73	
230	0.74	
235	0.75	
240	0.75	
245	0.76	
250	0.77	
255	0.78	
260	0.79	
265	0.80	
270	0.81	
275	0.82	
280	0.83	
285	0.84	
290	0.85	
295	0.86	
300	0.87	
305	0.88	

3 sided SHS Beam		
Hp/A	30mins	60mins
20	0.32	0.36
25	0.32	0.36
30	0.32	0.36
35	0.32	0.36
40	0.32	0.36
45	0.32	0.36
50	0.32	0.36
55	0.32	0.36
60	0.32	0.36
65	0.32	0.36
70	0.32	0.36
75	0.32	0.36
80	0.32	0.36
85	0.32	0.36
90	0.32	0.36
95	0.32	0.36
100	0.32	0.36
105	0.32	0.36
110	0.32	0.37
115	0.32	0.40
120	0.32	0.44
125	0.32	0.47
130	0.32	0.50
135	0.32	0.53
140	0.32	0.57
145	0.32	0.60
150	0.32	0.63
155	0.32	0.66
160	0.32	0.70
165	0.32	0.76
170	0.32	0.83
175	0.32	0.90
180	0.32	0.97
185	0.32	1.02
190	0.32	1.02
195	0.32	1.03
200	0.32	1.04
205	0.32	1.05
210	0.32	1.05
215	0.32	1.06
220	0.32	1.07
225	0.32	1.08
230	0.32	1.09
235	0.32	1.11
240	0.32	1.11
245	0.32	1.12
250	0.32	1.13
255	0.32	
260	0.32	
265	0.32	
270	0.32	
275	0.34	
280		
285		
290		
295		
300		