Cafco SPRAYFILM® WB3

Water Based Intumescent Coating

Promat

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INTRODUCTION

Cafco SPRAYFILM® WB3 is a water based intumescent coating consisting of polyvinyl acetate resins and fillers for the fire protection of structural steel. It can be sealed and protected with a decorative top coat.

Cafco SPRAYFILM® WB3 is applied directly to the contour of primed I and H section columns, angles, channels and beams and hollow sections, to provide fire protection for up to 120 minutes. In a fire, a chemical reaction takes place causing the Cafco SPRAYFILM® WB3 to expand and form an insulating layer which slows the temperature of the steel rising to a critical level.

Properties and performance	
Colour and finish	White with a slight sheen. Preferably spray applied with airless paint equipment for speed and quality of finish. Brush and roller application is also possible.
Maximum thickness per coat	Wet film thickness (WFT) at 1.6mm using spray and 0.76mm using brush. For airless spraying, several thin coats as opposed to one heavy coat will give greater control over finish and thickness.
Practical coverage	Dependent on surface texture, substrate, application method and technique.
Theoretical coverage	Approximately 27m²/pail at 0.5mm dry film thickness (DFT)
Number of coats	One or more as required
Cure	By air drying
Initial set	Approximately 6 hours at 20°C and 50% RH for 0.4mm WFT
Solids by weight	70% ± 2%
Density	1.33kg/litre
Surface burning	Flame spread 5, smoke development 35 when tested to ASTM E84.
Durometer hardness	80 shore D when tested to ASTM D2240
Impact resistance	18kg/m when tested to ASTM D2794
Abrasion resistance	0.6505g/1000 cycles when tested to ASTM D4060
pH value	8.0 ± 0.2 at 25°C
Fire resistance	Structures protected with Cafco SPRAYFILM® WB3 have undergone fire resistance tests at approved independant laboratories to recognised standards throughout the world, including: • UK (BS476: Part 21: 1987) • Canada and USA (ASTM E119 and ASTM E84) • Australia (AS1530: Part 4) Assessed in accordance with ASFP “Fire protection for structural steel in buildings” procedures.

ADVANTAGES

- Provides fire resistance for up to 120 minutes in accordance with BS476: Part 21 and AS1530: Part 4 and up to 180 minutes in accordance with ASTM E119.
- Durable and decorative finish.
- Steelwork may be left exposed to view.
- Chemical and abuse resistant.
- Can be top coated to match surroundings.
- Easy application and clean up with water.
- Fast drying time.

QUALITY ASSURANCE

Promat manufactures to a quality system in accordance with ISO 9001:2000 and has received full accreditation to these standards.

Operating to these standards means that all activities, which have a bearing upon quality, are set out in written procedures. Systematic and thorough checks are made on all materials and their usage. Test equipment is subjected to regular checks and is referred back to national standards.

The information given in this data sheet is based on actual tests and is believed to be typical of the product. No guarantee of results is implied however, since conditions of use are beyond our control.

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Please consult your nearest Promat office for specific details pertaining to local conditions.

Preparation	
Typical substrates	Primed steel
Substrate preparation	The substrate shall be clean, dry and free from dust, oil and any other condition preventing good adhesion. Before applying Cafco SPRAYFILM® WB3 to structural steel, the steel must be blast cleaned to SA 2.5 (ISO 8501-1: 1998), primed with a compatible primer approved by Promat Sprays Division and applied in full compliance with the manufacturer's recommendations. Primers compatible with Cafco SPRAYFILM® WB3 are generally of the following types: ● Alkyd zinc phosphate ● Epoxy polyamide zinc phosphate ● Zinc silicate (inorganic zinc)* ● Epoxy zinc rich (organic zinc)* * Tie coat required If left exposed for long periods zinc rich epoxies may form a layer of zinc salts on the surface. These salts must be completely removed before applying Cafco SPRAYFILM® WB3.

Application	
Methods	Cafco SPRAYFILM® WB3 is supplied ready for use and should not be diluted. The primer thickness should be measured and recorded prior to the application of Cafco SPRAYFILM® WB3, in order to be able to accurately check the thickness of Cafco SPRAYFILM® WB3 during and after application. Stir Cafco SPRAYFILM® WB3 thoroughly with a drill type mixer prior to application by either airless spray, brush or roller. Protect from rain and high humidity during application and drying.
Thickness checking during	To ensure the correct thickness is being applied, frequent measurements should be taken using a wet film thickness gauge. To determine approximate dry film thickness (DFT) based on wet film thickness (WFT), multiply WFT by 0.72. For example: 1.3mm WFT x 0.72 = 0.936mm DFT
Limitations	Take a dry film thickness reading as soon as the coating is fully cured. An Elecometer 211 permanent magnetic banana gauge or Elecometer 456 electromagnetic (electronic gauge) type may be used. Ensure primer thickness is deducted from final thickness reading. If Cafco SPRAYFILM® WB3 is left exposed, it must be protected from rain and high humidity or sealed with a topcoat appropriate for the environmental conditions. Please contact Promat for appropriate products.

FIRE PROTECTION THICKNESS

The thickness of the fire protection for a given period of fire resistance in a cellulosic type fire, relates to the Hp/A ratio of the steel section. Hp/A is the ratio of the heated perimeter of a steel section exposed to fire to the cross-sectional area of the same steel.

All column and beam sections have their own specific Hp/A ratio. Please consult Promat to establish the Hp/A ratio for a particular beam or column section and to ascertain the required thickness of Cafco SPRAYFILM® WB3.

For advice on thickness calculations for I and H section beams and columns, castellated sections, composite floors, upgrading of concrete slabs and more complex situations, please contact Promat.

See the tables on pages 4 to 10 on thickness for the fire resistance required.

HEALTH AND SAFETY

Adequate ventilation must be provided during use. Avoid contact with the skin and eyes by using eye protection, gloves, barrier cream and a face mask.

If the product comes into contact with the skin, wash immediately with soap and water. If the eyes are affected, flush with plenty of water and seek medical attention immediately.

A safety data sheet is available from Promat upon request.

Promat activities are conducted with due regard to all statutory requirements with appropriate safeguards against exposing employees and the public to health and safety risks.

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FIRE PROTECTION THICKNESS

TABLE 1 Cafco SPRAYFILM® WB3 thicknesses for H section columns (4-sided exposure). Critical temperature 550°C. (AS1530: Part 4)

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
Up to 45	0.23mm	0.60mm	1.50mm	1.50mm
46-50	0.23mm	0.60mm	1.50mm	1.50mm
51-55	0.23mm	0.60mm	1.50mm	1.50mm
56-60	0.23mm	0.60mm	1.50mm	1.50mm
61-65	0.23mm	0.60mm	1.50mm	1.50mm
66-70	0.23mm	0.60mm	1.50mm	1.67mm
71-75	0.23mm	0.60mm	1.50mm	1.83mm
76-80	0.23mm	0.60mm	1.50mm	2.00mm
81-85	0.23mm	0.60mm	1.50mm	2.08mm
86-90	0.23mm	0.60mm	1.50mm	2.15mm
91-95	0.23mm	0.60mm	1.50mm	2.23mm
96-100	0.23mm	0.60mm	1.50mm	2.31mm
101-105	0.23mm	0.60mm	1.50mm	2.38mm
106-110	0.23mm	0.60mm	1.50mm	2.46mm
111-115	0.23mm	0.60mm	1.50mm	2.54mm
116-120	0.23mm	0.60mm	1.50mm	2.62mm
121-125	0.23mm	0.66mm	1.57mm	2.69mm
126-130	0.23mm	0.71mm	1.62mm	2.77mm
131-135	0.23mm	0.75mm	1.67mm	2.85mm
136-140	0.23mm	0.80mm	1.72mm	2.92mm
141-145	0.23mm	0.85mm	1.78mm	3.00mm
146-150	0.23mm	0.87mm	1.83mm	3.11mm
151-155	0.23mm	0.88mm	1.88mm	3.23mm
156-160	0.24mm	0.89mm	1.93mm	3.34mm
161-165	0.24mm	0.90mm	1.98mm	3.45mm
166-170	0.24mm	0.90mm	2.03mm	3.57mm
171-175	0.24mm	0.91mm	2.08mm	3.68mm
176-180	0.24mm	0.92mm	2.14mm	3.80mm

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
181-185	0.25mm	0.92mm	2.19mm	3.91mm
186-190	0.25mm	0.93mm	2.24mm	4.02mm
191-195	0.25mm	0.94mm	2.29mm	4.43mm
196-200	0.25mm	0.95mm	2.34mm	4.79mm
201-205	0.25mm	0.95mm	2.40mm	5.14mm
206-210	0.26mm	0.96mm	2.45mm	5.50mm
211-215	0.26mm	0.97mm	2.50mm	5.86mm
216-220	0.27mm	0.97mm	2.55mm	6.21mm
221-225	0.27mm	0.98mm	2.60mm	–
226-230	0.28mm	0.99mm	2.66mm	–
231-235	0.28mm	1.00mm	2.71mm	–
236-240	0.29mm	1.00mm	2.76mm	–
241-245	0.29mm	1.04mm	2.81mm	–
246-250	0.30mm	1.06mm	2.86mm	–
251-255	0.30mm	1.09mm	2.92mm	–
256-260	0.31mm	1.12mm	2.97mm	–
261-265	0.31mm	1.14mm	3.02mm	–
266-270	0.32mm	1.17mm	3.14mm	–
271-275	0.32mm	1.19mm	3.24mm	–
276-280	0.33mm	1.22mm	3.34mm	–
281-285	0.33mm	1.25mm	3.44mm	–
286-290	0.34mm	1.27mm	3.54mm	–
291-295	0.34mm	1.30mm	3.64mm	–
296-300	0.35mm	1.33mm	3.74mm	–
301-305	0.35mm	1.35mm	3.84mm	–
306-310	0.36mm	1.38mm	3.94mm	–
311-315	0.36mm	1.41mm	4.04mm	–
316-320	0.37mm	1.43mm	4.32mm	–

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TABLE 2 Cafco SPRAYFILM® WB3 thicknesses for I section beams (3-sided exposure). Critical temperature 620ºC, continuous concrete topping. (AS1530: Part 4)

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
Up to 45	0.23mm	0.25mm	1.20mm	1.20mm
46-50	0.23mm	0.25mm	1.20mm	1.20mm
51-55	0.23mm	0.25mm	1.20mm	1.20mm
56-60	0.23mm	0.25mm	1.20mm	1.20mm
61-65	0.23mm	0.25mm	1.20mm	1.20mm
66-70	0.23mm	0.25mm	1.20mm	1.23mm
71-75	0.23mm	0.25mm	1.20mm	1.28mm
76-80	0.23mm	0.27mm	1.20mm	1.33mm
81-85	0.23mm	0.28mm	1.20mm	1.39mm
86-90	0.23mm	0.30mm	1.20mm	1.44mm
91-95	0.23mm	0.32mm	1.20mm	1.49mm
96-100	0.23mm	0.34mm	1.20mm	1.63mm
101-105	0.23mm	0.36mm	1.20mm	1.78mm
106-110	0.23mm	0.38mm	1.20mm	1.94mm
111-115	0.23mm	0.40mm	1.20mm	2.04mm
116-120	0.23mm	0.42mm	1.20mm	2.10mm
121-125	0.23mm	0.44mm	1.20mm	2.17mm
126-130	0.23mm	0.46mm	1.20mm	2.23mm
131-135	0.23mm	0.48mm	1.20mm	2.30mm
136-140	0.23mm	0.50mm	1.20mm	2.36mm
141-145	0.23mm	0.52mm	1.20mm	2.43mm
146-150	0.23mm	0.54mm	1.26mm	2.49mm
151-155	0.23mm	0.56mm	1.31mm	2.56mm
156-160	0.23mm	0.57mm	1.37mm	2.62mm
161-165	0.23mm	0.57mm	1.42mm	2.69mm
166-170	0.23mm	0.57mm	1.48mm	2.75mm
171-175	0.23mm	0.61mm	1.58mm	2.82mm
176-180	0.23mm	0.64mm	1.70mm	2.88mm

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
181-185	0.23mm	0.67mm	1.83mm	2.95mm
186-190	0.23mm	0.70mm	1.95mm	3.01mm
191-195	0.23mm	0.73mm	2.02mm	3.18mm
196-200	0.23mm	0.76mm	2.07mm	3.33mm
201-205	0.23mm	0.80mm	2.11mm	3.48mm
206-210	0.23mm	0.83mm	2.15mm	3.64mm
211-215	0.24mm	0.86mm	2.19mm	3.79mm
216-220	0.24mm	0.88mm	2.23mm	3.94mm
221-225	0.24mm	0.89mm	2.27mm	4.21mm
226-230	0.24mm	0.91mm	2.31mm	4.57mm
231-235	0.24mm	0.93mm	2.36mm	4.93mm
236-240	0.25mm	0.94mm	2.40mm	5.29mm
241-245	0.25mm	0.96mm	2.44mm	5.64mm
246-250	0.25mm	0.97mm	2.48mm	6.00mm
251-255	0.25mm	0.99mm	2.52mm	–
256-260	0.25mm	1.00mm	2.56mm	–
261-265	0.26mm	1.02mm	2.60mm	–
266-270	0.26mm	1.04mm	2.64mm	–
271-275	0.27mm	1.05mm	2.69mm	–
276-280	0.28mm	1.07mm	2.73mm	–
281-285	0.28mm	1.08mm	2.77mm	–
286-290	0.29mm	1.10mm	2.81mm	–
291-295	0.29mm	1.11mm	2.85mm	–
296-300	0.30mm	1.13mm	2.89mm	–
301-305	0.30mm	1.14mm	2.93mm	–
306-310	0.31mm	1.16mm	2.98mm	–
311-315	0.31mm	1.18mm	3.02mm	–
316-320	0.32mm	1.19mm	3.22mm	–

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TABLE 3 Cafco SPRAYFILM® WB3 thicknesses for hollow section beams and columns (4-sided exposure). Critical temperature 550°C. (AS1530: Part 4)

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
Up to 45	0.23mm	0.40mm	1.80mm	3.50mm
46-50	0.23mm	0.40mm	1.80mm	3.50mm
51-55	0.23mm	0.42mm	1.80mm	3.50mm
56-60	0.23mm	0.44mm	1.80mm	3.50mm
61-65	0.23mm	0.47mm	1.80mm	3.50mm
66-70	0.23mm	0.49mm	1.80mm	3.50mm
71-75	0.24mm	0.51mm	1.92mm	3.50mm
76-80	0.24mm	0.53mm	2.07mm	3.50mm
81-85	0.25mm	0.56mm	2.20mm	3.50mm
86-90	0.25mm	0.58mm	2.34mm	3.50mm
91-95	0.25mm	0.60mm	2.47mm	3.50mm
96-100	0.26mm	0.66mm	2.54mm	3.50mm
101-105	0.27mm	0.72mm	2.59mm	3.67mm
106-110	0.28mm	0.78mm	2.65mm	3.94mm
111-115	0.28mm	0.84mm	2.70mm	4.22mm
116-120	0.29mm	0.90mm	2.75mm	4.50mm
121-125	0.30mm	0.96mm	2.80mm	4.78mm
126-130	0.31mm	1.02mm	2.85mm	5.06mm
131-135	0.32mm	1.03mm	2.91mm	5.33mm
136-140	0.33mm	1.06mm	2.96mm	5.61mm
141-145	0.34mm	1.08mm	3.01mm	5.89mm
146-150	0.35mm	1.11mm	3.06mm	6.17mm
151-155	0.36mm	1.13mm	3.11mm	6.44mm
156-160	0.37mm	1.15mm	3.17mm	–
161-165	0.38mm	1.18mm	3.22mm	–
166-170	0.39mm	1.20mm	3.27mm	–
171-175	0.40mm	1.23mm	3.32mm	–
176-180	0.40mm	1.25mm	3.38mm	–

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
181-185	0.41mm	1.27mm	3.43mm	–
186-190	0.41mm	1.30mm	3.48mm	–
191-195	0.42mm	1.32mm	3.57mm	–
196-200	0.42mm	1.35mm	3.70mm	–
201-205	0.43mm	1.37mm	3.82mm	–
206-210	0.43mm	1.40mm	3.94mm	–
211-215	0.44mm	1.42mm	4.06mm	–
216-220	0.44mm	1.44mm	4.19mm	–
221-225	0.45mm	1.47mm	4.31mm	–
226-230	0.45mm	1.49mm	4.43mm	–
231-235	0.46mm	1.52mm	4.55mm	–
236-240	0.46mm	1.54mm	4.68mm	–
241-245	0.47mm	1.56mm	4.80mm	–
246-250	0.47mm	1.59mm	4.92mm	–
251-255	0.48mm	1.61mm	5.04mm	–
256-260	0.48mm	1.64mm	5.17mm	–
261-265	0.49mm	1.66mm	5.29mm	–
266-270	0.49mm	1.68mm	5.41mm	–
271-275	0.50mm	1.71mm	5.53mm	–
276-280	0.50mm	1.73mm	5.56mm	–
281-285	0.50mm	1.76mm	5.78mm	–
286-290	0.51mm	1.78mm	5.90mm	–
291-295	0.51mm	1.80mm	6.02mm	–
296-300	0.52mm	1.86mm	6.15mm	–
301-305	0.52mm	1.90mm	6.27mm	–
306-310	0.53mm	1.95mm	6.39mm	–
311-315	0.53mm	1.99mm	6.51mm	–
316-320	0.54mm	2.04mm	–	–

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TABLE 4 Cafco SPRAYFILM® WB3 thicknesses for I section beams (3-sided exposure). Critical temperature 620ºC, continuous concrete topping. (BS476: Part 21: 1987)

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
Up to 45	0.23mm	0.25mm	1.20mm	1.20mm
46-50	0.23mm	0.25mm	1.20mm	1.20mm
51-55	0.23mm	0.25mm	1.20mm	1.20mm
56-60	0.23mm	0.25mm	1.20mm	1.20mm
61-65	0.23mm	0.25mm	1.20mm	1.20mm
66-70	0.23mm	0.25mm	1.20mm	1.20mm
71-75	0.23mm	0.25mm	1.20mm	1.20mm
76-80	0.23mm	0.27mm	1.20mm	1.23mm
81-85	0.23mm	0.28mm	1.20mm	1.32mm
86-90	0.23mm	0.30mm	1.20mm	1.40mm
91-95	0.23mm	0.32mm	1.20mm	1.48mm
96-100	0.23mm	0.34mm	1.20mm	1.70mm
101-105	0.23mm	0.36mm	1.20mm	1.95mm
106-110	0.23mm	0.38mm	1.20mm	2.05mm
111-115	0.23mm	0.40mm	1.20mm	2.11mm
116-120	0.23mm	0.42mm	1.20mm	2.17mm
121-125	0.23mm	0.44mm	1.20mm	2.23mm
126-130	0.23mm	0.46mm	1.20mm	2.29mm
131-135	0.23mm	0.48mm	1.20mm	2.35mm
136-140	0.23mm	0.50mm	1.20mm	2.41mm
141-145	0.23mm	0.52mm	1.20mm	2.47mm
146-150	0.23mm	0.54mm	1.26mm	2.53mm
151-155	0.23mm	0.56mm	1.31mm	2.59mm
156-160	0.23mm	0.57mm	1.37mm	2.65mm
161-165	0.23mm	0.57mm	1.42mm	2.71mm
166-170	0.23mm	0.57mm	1.48mm	2.77mm
171-175	0.23mm	0.61mm	1.58mm	2.83mm
176-180	0.23mm	0.64mm	1.70mm	2.89mm

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
181-185	0.23mm	0.67mm	1.83mm	2.95mm
186-190	0.23mm	0.70mm	1.95mm	3.01mm
191-195	0.23mm	0.73mm	2.02mm	3.40mm
196-200	0.23mm	0.76mm	2.07mm	3.73mm
201-205	0.23mm	0.80mm	2.11mm	4.07mm
206-210	0.23mm	0.83mm	2.15mm	4.26mm
211-215	0.24mm	0.86mm	2.19mm	4.48mm
216-220	0.24mm	0.88mm	2.23mm	4.70mm
221-225	0.24mm	0.89mm	2.27mm	4.91mm
226-230	0.24mm	0.91mm	2.31mm	5.13mm
231-235	0.24mm	0.93mm	2.36mm	5.35mm
236-240	0.25mm	0.94mm	2.40mm	5.57mm
241-245	0.25mm	0.96mm	2.44mm	5.78mm
246-250	0.25mm	0.97mm	2.48mm	6.00mm
251-255	0.25mm	0.99mm	2.52mm	6.22mm
256-260	0.25mm	1.00mm	2.56mm	6.43mm
261-265	0.26mm	1.02mm	2.60mm	–
266-270	0.26mm	1.04mm	2.64mm	–
271-275	0.27mm	1.05mm	2.69mm	–
276-280	0.28mm	1.07mm	2.73mm	–
281-285	0.28mm	1.08mm	2.77mm	–
286-290	0.29mm	1.10mm	2.81mm	–
291-295	0.29mm	1.11mm	2.85mm	–
296-300	0.30mm	1.13mm	2.89mm	–
301-305	0.30mm	1.14mm	2.93mm	–
306-310	0.31mm	1.16mm	2.98mm	–
311-315	0.31mm	1.18mm	3.02mm	–
316-320	0.32mm	1.19mm	3.22mm	–

NOTE: The above tables are based on report no. WF 176738A.

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TABLE 5 Cafco SPRAYFILM® WB3 thicknesses for I section beams (4-sided exposure). Critical temperature 550ºC. (BS476: Part 21: 1987)

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
Up to 45	0.23mm	0.57mm	1.20mm	1.20mm
46-50	0.23mm	0.57mm	1.20mm	1.20mm
51-55	0.23mm	0.57mm	1.20mm	1.22mm
56-60	0.23mm	0.57mm	1.20mm	1.33mm
61-65	0.23mm	0.57mm	1.20mm	1.44mm
66-70	0.23mm	0.57mm	1.20mm	1.53mm
71-75	0.23mm	0.57mm	1.20mm	1.82mm
76-80	0.23mm	0.57mm	1.20mm	2.05mm
81-85	0.23mm	0.57mm	1.20mm	2.09mm
86-90	0.23mm	0.57mm	1.20mm	2.17mm
91-95	0.23mm	0.57mm	1.20mm	2.25mm
96-100	0.23mm	0.57mm	1.20mm	2.33mm
101-105	0.23mm	0.57mm	1.21mm	2.41mm
106-110	0.23mm	0.57mm	1.27mm	2.48mm
111-115	0.23mm	0.57mm	1.33mm	2.56mm
116-120	0.23mm	0.57mm	1.38mm	2.64mm
121-125	0.23mm	0.57mm	1.44mm	2.72mm
126-130	0.23mm	0.63mm	1.50mm	2.80mm
131-135	0.23mm	0.68mm	1.63mm	2.88mm
136-140	0.23mm	0.74mm	1.76mm	2.95mm
141-145	0.23mm	0.79mm	1.89mm	3.03mm
146-150	0.23mm	0.85mm	2.03mm	3.24mm
151-155	0.23mm	0.88mm	2.06mm	3.41mm
156-160	0.23mm	0.90mm	2.12mm	3.59mm
161-165	0.23mm	0.91mm	2.17mm	3.76mm
166-170	0.23mm	0.93mm	2.22mm	3.93mm
171-175	0.24mm	0.95mm	2.27mm	4.13mm
176-180	0.24mm	0.96mm	2.33mm	4.36mm

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
181-185	0.24mm	0.98mm	2.38mm	4.58mm
186-190	0.24mm	1.00mm	2.43mm	4.80mm
191-195	0.24mm	1.01mm	2.48mm	5.02mm
196-200	0.25mm	1.03mm	2.54mm	5.24mm
201-205	0.25mm	1.05mm	2.59mm	5.47mm
206-210	0.25mm	1.07mm	2.64mm	5.69mm
211-215	0.25mm	1.08mm	2.69mm	5.91mm
216-220	0.26mm	1.10mm	2.75mm	6.13mm
221-225	0.27mm	1.12mm	2.80mm	6.36mm
226-230	0.27mm	1.13mm	2.85mm	6.58mm
231-235	0.28mm	1.15mm	2.91mm	–
236-240	0.29mm	1.17mm	2.96mm	–
241-245	0.30mm	1.18mm	3.01mm	–
246-250	0.30mm	1.20mm	3.18mm	–
251-255	0.31mm	1.22mm	3.32mm	–
256-260	0.32mm	1.25mm	3.47mm	–
261-265	0.32mm	1.27mm	3.62mm	–
266-270	0.33mm	1.30mm	3.76mm	–
271-275	0.34mm	1.32mm	3.91mm	–
276-280	0.35mm	1.34mm	4.06mm	–
281-285	0.35mm	1.37mm	4.18mm	–
286-290	0.36mm	1.39mm	4.30mm	–
291-295	0.37mm	1.41mm	4.43mm	–
296-300	0.38mm	1.44mm	4.56mm	–
301-305	0.38mm	1.46mm	4.68mm	–
306-310	0.39mm	1.49mm	4.81mm	–
311-315	0.40mm	1.51mm	4.94mm	–
316-320	0.40mm	1.54mm	5.06mm	–

NOTE: The above tables are based on report no. WF 176738A.

Cafco SPRAYFILM® WB3

Water Based Intumescent Coating

TABLE 6 Cafco SPRAYFILM® WB3 thicknesses for H section columns (4-sided exposure). Critical temperature 550ºC. (BS476: Part 21: 1987)

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
Up to 45	0.23mm	0.60mm	1.00mm	1.50mm
46-50	0.23mm	0.60mm	1.00mm	1.50mm
51-55	0.23mm	0.60mm	1.00mm	1.50mm
56-60	0.23mm	0.60mm	1.00mm	1.50mm
61-65	0.23mm	0.60mm	1.00mm	1.50mm
66-70	0.23mm	0.60mm	1.00mm	1.75mm
71-75	0.23mm	0.60mm	1.00mm	2.00mm
76-80	0.23mm	0.60mm	1.00mm	2.07mm
81-85	0.23mm	0.60mm	1.00mm	2.14mm
86-90	0.23mm	0.60mm	1.01mm	2.21mm
91-95	0.23mm	0.60mm	1.10mm	2.29mm
96-100	0.23mm	0.60mm	1.19mm	2.36mm
101-105	0.23mm	0.60mm	1.28mm	2.43mm
106-110	0.23mm	0.60mm	1.36mm	2.50mm
111-115	0.23mm	0.60mm	1.45mm	2.57mm
116-120	0.23mm	0.60mm	1.53mm	2.64mm
121-125	0.23mm	0.66mm	1.61mm	2.71mm
126-130	0.23mm	0.71mm	1.69mm	2.79mm
131-135	0.23mm	0.75mm	1.77mm	2.86mm
136-140	0.23mm	0.80mm	1.85mm	2.93mm
141-145	0.23mm	0.85mm	1.94mm	3.00mm
146-150	0.23mm	0.87mm	2.02mm	3.19mm
151-155	0.23mm	0.88mm	2.05mm	3.37mm
156-160	0.24mm	0.89mm	2.10mm	3.56mm
161-165	0.24mm	0.90mm	2.14mm	3.74mm
166-170	0.24mm	0.90mm	2.18mm	3.93mm
171-175	0.24mm	0.91mm	2.23mm	4.13mm
176-180	0.24mm	0.92mm	2.27mm	4.36mm

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
181-185	0.25mm	0.92mm	2.32mm	4.58mm
186-190	0.25mm	0.93mm	2.36mm	4.80mm
191-195	0.25mm	0.94mm	2.40mm	5.02mm
196-200	0.25mm	0.95mm	2.45mm	5.24mm
201-205	0.25mm	0.95mm	2.49mm	5.47mm
206-210	0.26mm	0.96mm	2.54mm	5.69mm
211-215	0.26mm	0.97mm	2.58mm	5.91mm
216-220	0.27mm	0.97mm	2.62mm	6.13mm
221-225	0.27mm	0.98mm	2.67mm	6.36mm
226-230	0.28mm	0.99mm	2.71mm	6.58mm
231-235	0.28mm	1.00mm	2.75mm	–
236-240	0.29mm	1.00mm	2.80mm	–
241-245	0.29mm	1.04mm	2.84mm	–
246-250	0.30mm	1.06mm	2.89mm	–
251-255	0.30mm	1.09mm	2.93mm	–
256-260	0.31mm	1.12mm	2.97mm	–
261-265	0.31mm	1.14mm	3.02mm	–
266-270	0.32mm	1.17mm	3.14mm	–
271-275	0.32mm	1.19mm	3.24mm	–
276-280	0.33mm	1.22mm	3.34mm	–
281-285	0.33mm	1.25mm	3.44mm	–
286-290	0.34mm	1.27mm	3.54mm	–
291-295	0.34mm	1.30mm	3.64mm	–
296-300	0.35mm	1.33mm	3.74mm	–
301-305	0.35mm	1.35mm	3.84mm	–
306-310	0.36mm	1.38mm	3.94mm	–
311-315	0.36mm	1.41mm	4.04mm	–
316-320	0.37mm	1.43mm	4.32mm	–

NOTE: The above tables are based on report no. WF 176738A.

Cafco SPRAYFILM® WB3

Water Based Intumescent Coating

FIRE PROTECTION THICKNESS

TABLE 7 Cafco SPRAYFILM® WB3 thicknesses for hollow section beams and columns (4-sided exposure). Critical temperature 550ºC. (BS476: Part 21: 1987)

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
Up to 45	0.23mm	0.40mm	1.80mm	3.50mm
46-50	0.23mm	0.40mm	1.80mm	3.50mm
51-55	0.23mm	0.42mm	1.80mm	3.50mm
56-60	0.23mm	0.44mm	1.80mm	3.50mm
61-65	0.23mm	0.47mm	1.80mm	3.50mm
66-70	0.23mm	0.49mm	1.80mm	3.50mm
71-75	0.24mm	0.51mm	1.93mm	3.50mm
76-80	0.24mm	0.53mm	2.07mm	3.50mm
81-85	0.25mm	0.56mm	2.20mm	3.50mm
86-90	0.25mm	0.58mm	2.34mm	3.50mm
91-95	0.25mm	0.60mm	2.47mm	3.50mm
96-100	0.26mm	0.66mm	2.54mm	3.50mm
101-105	0.27mm	0.72mm	2.59mm	3.67mm
106-110	0.28mm	0.78mm	2.65mm	3.94mm
111-115	0.28mm	0.84mm	2.70mm	4.22mm
116-120	0.29mm	0.90mm	2.75mm	4.50mm
121-125	0.30mm	0.96mm	2.80mm	4.78mm
126-130	0.31mm	1.02mm	2.85mm	5.06mm
131-135	0.32mm	1.03mm	2.91mm	5.33mm
136-140	0.33mm	1.06mm	2.96mm	5.61mm
141-145	0.34mm	1.08mm	3.01mm	5.89mm
146-150	0.35mm	1.11mm	3.06mm	6.17mm
151-155	0.36mm	1.13mm	3.11mm	6.44mm
156-160	0.37mm	1.15mm	3.17mm	–
161-165	0.38mm	1.18mm	3.22mm	–
166-170	0.39mm	1.20mm	3.27mm	–
171-175	0.40mm	1.23mm	3.32mm	–
176-180	0.40mm	1.25mm	3.38mm	–

Hp/A	Thickness for the fire resistance required			
	30 min	60 min	90 min	120 min
181-185	0.41mm	1.27mm	3.43mm	–
186-190	0.41mm	1.30mm	3.48mm	–
191-195	0.42mm	1.32mm	3.57mm	–
196-200	0.42mm	1.35mm	3.70mm	–
201-205	0.43mm	1.37mm	3.82mm	–
206-210	0.43mm	1.40mm	3.94mm	–
211-215	0.44mm	1.42mm	4.06mm	–
216-220	0.44mm	1.44mm	4.19mm	–
221-225	0.45mm	1.47mm	4.31mm	–
226-230	0.45mm	1.49mm	4.43mm	–
231-235	0.46mm	1.52mm	4.55mm	–
236-240	0.46mm	1.54mm	4.68mm	–
241-245	0.47mm	1.56mm	4.80mm	–
246-250	0.47mm	1.59mm	4.92mm	–
251-255	0.48mm	1.61mm	5.04mm	–
256-260	0.48mm	1.64mm	5.17mm	–
261-265	0.49mm	1.66mm	5.29mm	–
266-270	0.49mm	1.68mm	5.41mm	–
271-275	0.50mm	1.71mm	5.53mm	–
276-280	0.50mm	1.73mm	5.66mm	–
281-285	0.50mm	1.76mm	5.78mm	–
286-290	0.51mm	1.78mm	5.90mm	–
291-295	0.51mm	1.80mm	6.02mm	–
296-300	0.52mm	1.86mm	6.15mm	–
301-305	0.52mm	1.90mm	6.27mm	–
306-310	0.53mm	1.95mm	6.39mm	–
311-315	0.53mm	1.99mm	6.51mm	–
316-320	0.54mm	2.04mm	–	–

NOTE: The above tables are based on report no. WF 176738B.

Cafco SPRAYFILM® WB3

Water Based Intumescent Coating

TOP COATING

In exposed and semi-exposed exterior environments, Cafco SPRAYFILM® WB3 should be coated with a compatible water resistant finish coat in order to give the desired colour and to seal the Cafco SPRAYFILM® WB3.

The topcoat system must be suitable for the environment in which it is to be used, and should be a good quality, long oil alkyd, silicone, acrylic latex or polyurethane type. All topcoats should be applied in accordance with the topcoat manufacturer's recommendations.

Ensure that the correct DFT of Cafco SPRAYFILM® WB3 is applied and is thoroughly dry before application of any top coat.

Typically, allow a minimum of 7 days for the Cafco SPRAYFILM® WB3 to fully cure before application of any top coat system.

For the top coat compatibility and minimum thickness requirements, always consult Promat.

PACKAGING

25kg plastic pails.

STORAGE

- Indoors in dry conditions between 10°C and 38°C.
- Protect from frost, excessive heat (above 45ºC) and strong radiant sunlight.

SHELF LIFE

Maximum 10 months in original sealed containers.

ENVIRONMENTAL

Do not discharge into drains, watercourses or soil.

Promat

For latest information of the Promat Asia Pacific organisation,
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