Promat

Product data sheet

Cafco® SPRAYFILM WB3 (UL TYPE PS3)

Water based intumescent paint

Material properties	
Colour and finish	White with a flat matt finish. 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 18.79m² per container (1mm per litre) at 1mm WFT = 0.7mm DFT (Dry film thickness) = 1 litre per m² 1mm = 1000m (microns)
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 (UL TYPE PS3) 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.

Product description

Cafco® SPRAYFILM WB3 (UL TYPE PS3) is a water based intumescent coating consisting of polyvinyl acetate resins and fillers for the fire protection of structural steel. It is preferably spray applied with airless paint equipment for speed and quality of finish. Brush and roller application is also possible.

Cafco® SPRAYFILM WB3 (UL TYPE PS3) can be sealed and protected with a decorative top coat. Cafco® SPRAYFILM WB3 (UL TYPE PS3) is applied directly to the contour of primed I and H section columns, angles, channels and beams and both square and circular hollow sections, to provide fire protection for up to 120 minutes. In a fire, a chemical reaction takes place causing the Cafco® SPRAYFILM WB3 (UL TYPE PS3) to expand and form an insulating layer which slows the temperature of the steel rising to a critical level.

Quality assurance

Promat manufactures to a quality system in accordance with ISO 9001: 2008 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.

System advantages/customer benefits

- → 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.

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.

Al 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 (UL TYPE PS3).

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.

Cafco® SPRAYFILM WB3 (UL TYPE PS3)

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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 (UL TYPE PS3) 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 manufacturers recommendations. Primers compatible with Cafco® SPRAYFILM WB3 (UL TYPE PS3) 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 (UL TYPE PS3).

Application	
Methods	Cafco® SPRAYFILM WB3 (UL TYPE PS3) 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 (UL TYPE PS3), in order to be able to accurately check the thickness of Cafco® SPRAYFILM WB3 (UL TYPE PS3) during and after application. Stir Cafco® SPRAYFILM WB3 (UL TYPE PS3) 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 (UL TYPE PS3) 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.

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

Top coating

In exposed and semi-exposed exterior environments, Cafco® SPRAYFILM WB3 (UL TYPE PS3) should be coated with a compatible water resistant finish coat in order to give the desired colour and to seal the Cafco® SPRAYFILM WB3 (UL TYPE PS3).

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 manufacturers recommendations.

Ensure that the correct DFT of Cafco® SPRAYFILM WB3 (UL TYPE PS3) is applied and is thoroughly dry before application of any top coat.

Typically, allow a minimum of 7 days for the Cafco® SPRAYFILM WB3 (UL TYPE PS3) to fully cure before application of any top coat system.

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

Packaging

25 kg plastic pails

Storage requirements

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

Shelf life

Maximum 10 months in original sealed containers.

Environmental

Do not discharge into drains, watercourses or soil.

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 al statutory requirements with appropriate safeguards against exposing employees and the public to health and safety risks.

All physical and mechanical values are averages based on standard production and tested according to internal procedures. The typical values are given for guidance. The figures can change dependent on the test methods used. If a particular value is of prime importance for a specification, please consult Promat Technical Department.

Promat

Australia

Promat Australia Pty Ltd

South Australia office
1 Scotland Road
SA 5031 Mile End South
1800 Promat (776 628)
+61 8 8352 1014
PAPL.mail@etexgroup.com

New South Wales office
Unit 1, 175 Briens Road
Northmead, NSW 2152
1800 Promat (776 628)
+61 2 9630 0258
PAPL.mail@etexgroup.com

Victoria office
Suite 205, 198 Harbour Esplanade
Docklands, VIC 3008
1800 Promat (776 628)
1800 334 598
PAPL.mail@etexgroup.com

Queensland office
1800 011 376
1800 334 598
PAPL.mail@etexgroup.com

China

Promat Shanghai Ltd
No.2, Tai Hua Street
Yonghe Economic District
Guangzhou City
Guangdong Province 511356
+86 20 8136 1167
promat.cn@etexgroup.com

Hong Kong

Promat International (Asia Pacific) Ltd
Room 1010, C.C. Wu Building
302-308 Hennessy Road
Wanchai
+852 2836 3692
promat.hk@etexgroup.com

Malaysia

Etex Malaysia Sdn Bhd
(Formerly known as Promat (Malaysia) Sdn. Bhd.)
Unit 19-02-01, Level 2, Wisma Tune
19 Lorong Dungun, Damansara Heights
50490 Kuala Lumpur
+60 3 2095 8555
promat.my@etexgroup.com

Singapore

Promat Building System Pte Ltd
10 Science Park Road, #03-14 The Alpha
Singapore Science Park II
117684 Singapore
+65 6776 7635
promat.sg@etexgroup.com

www.promat.com

- The technical data provided in this publication is based on mean values prevalent at time of publication and is thus subject to fluctuation. It should not be regarded as a guarantee to system performance.
- All data contained herein conforms to and frequently surpasses generally accepted fire protection standards recognised by most professional fire science practitioners and regulatory authorities worldwide. The same general principle is equally applicable to all Promat products and systems. Promat has access to a considerable body of test authentication data and this can be provided on a complimentary basis upon request. It should be noted however that this publication replaces all previous editions in its entirety.
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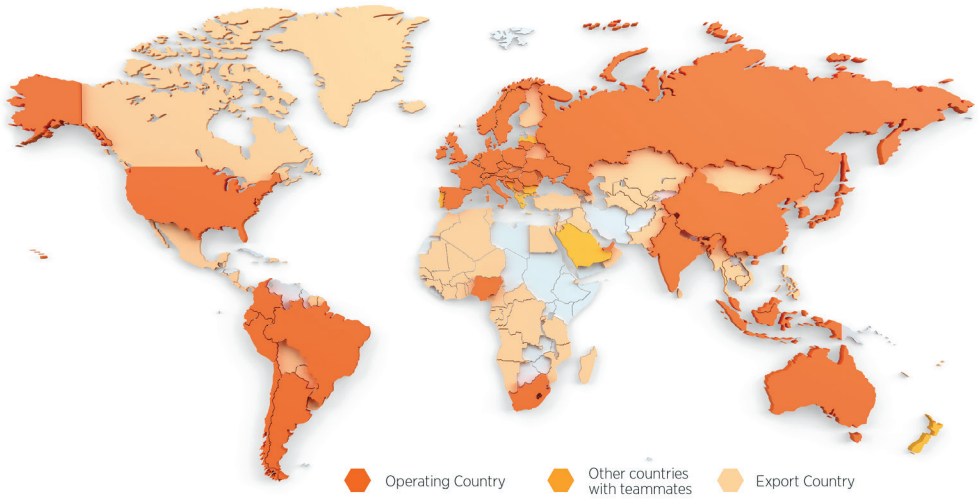

About Etex

Etex is an international building materials specialist; the company wants to inspire people around the world to build living spaces that are ever more safe, sustainable, smart and beautiful. Founded since 1905 and headquartered in Belgium, Etex currently operates more than 110 sites including plants, quarries and offices in 42 countries with over 11,000 employees globally.

Etex fosters a collaborative and caring culture, a pioneering spirit and a passion to always do better for its customers. Building on its experience and global market needs, the company strives to improve its customers quality of living with ever more effective lightweight solutions.

Its three R&D centres support four global sales divisions:

- Building Performance: Leader in plasterboards and fibre cement boards, and the global reference in passive fire protection solutions for the residential and commercial segments.
- Exteriors: Provider of innovative, durable, high performance and beautiful fibre cement exterior materials for architectural, residential and agricultural projects.
- Industry: Front runner of engineering expertise to drive the future of high performance thermal and acoustic insulation as well as passive fire protection in the industrial, aerospace and energy sectors.
- New Ways: As a new division created in January 2020, New Ways offers high-tech offsite modular solutions based on wood and steel framing.

Etex is Inspiring Ways of Living, for more information, please visit our website: www.etexgroup.com