

Product properties

Cafco SPRAYFILM® WB3 is a water based intumescent coating consisting of polyvinyl acetate resins and fillers for the fire protection of structural steel. The product is preferably spray applied with airless paint equipment for speed and quality of finish; brush and roller application is possible if necessary. The material can be sealed and protected with a decorative top coat. It 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 to expand and form an insulating layer which slows the temperature of the steel rising to a critical level. Steel structures protected with Cafco SPRAYFILM® WB3 have undergone fire resistance tests up to 120 minutes in approved independent laboratories to recognised standards throughout the world, including:

- Australia (AS 1530: Part 4: 2014)
- UK (BS 476: Part 21: 1987)
- Canada and USA (ASTM E84 and E119: 1998)

Material properties

Color and finish	White with a flat matt finish texture
Density	1.33kg/litre
Alkalinity	pH 8.0 ±0.2 at 25°C
Cure	By air drying
Initial set	Approx. 6 hour at 20°C (68°F), 50% RH and 0.4mm WFT
Theoretical coverage	Approx. 18.79m ² /container at 0.7mm DFT
Practical coverage	Dependent on surface texture, substrate, application method and technique
Number of coatings	One or more as required
Maximum thickness per coating (WFT)	1mm with spray; 0.76mm with brush or roller. For airless spraying, several thin coatings as opposed to one heavy coating will give greater control over finish and thickness.
Solids by weight	70% ±2%
Packaging	25kg pail container
Storage	Indoors in dry condition between 10°C and 38°C. Protected from frost, excessive heat (above 45°C) and strong radiant sunlight.
Shelf life	Maximum 10 months in original sealed containers

Physical performance

Property	Test method	Test results
Impact resistance	ASTM D2794	18kg/m
Durometer hardness	ASTM D2240	80 shore D
Abrasion resistance	ASTM D4060	0.6505g at 1000 cycles

Preparation

Typical substrate

Primed steel in building structural frames.

Substrate preparation

The substrate shall be clean, dry and free from dust, loose mill scale, loose rust, oil and any other condition preventing good adhesion.

Application to primed steel is highly recommended. Please consult Promat for the approved range and compatibility of the primers, e.g. Cafco SPRAYFILM TOPCOAT®-PU.

Application

Initial steps

Cafco SPRAYFILM® WB3 must be installed by an applicator recognised by Promat and applied in accordance with the installation guideline by Promat.

Method

Cafco SPRAYFILM® WB3 is supplied ready for use in sealed pail containers. The material generally does not need to be diluted but should be thoroughly stirred with a rotar type mixer prior to application.

An airless spray pump is recommended for application of Cafco SPRAYFILM® WB3.

Coating thickness

The thickness of the fire protection for a given period of fire resistance in 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. Please consult Promat to establish the Hp/A ratio for a particular structural steel column or beam section to ascertain the required fire protection thickness of Cafco SPRAYFILM® WB3.

Disclaimer

All physical and mechanical values herein this document are averages based on standard production and tested according to standard procedures. These typical values are given for guidance. The figures can change depending on the test methods used. Cafco SPRAYFILM® WB3 is manufactured under a quality management system certified in accordance with ISO 9001: 2008. For complete UL listing to application of this product, please visit UL website at <http://www.ul.com>.