

## PRODUCT DESCRIPTION

CAFCO SprayFilm WB 7 is a patented and technically advanced water-based, Intumescent Fire Resistant Material (IFRM) designed for the fire protection of interior structural steel.

CAFCO SprayFilm WB 7 represents a generational breakthrough in material advantages and efficiencies. Architects can design steel that is decorative, aesthetically pleasing, and very cost effective. CAFCO SprayFilm WB 7 can be top coated to match its surroundings and left exposed to view while providing the required fire resistance rating.

## PRODUCT ADVANTAGES

- Water-Based intumescent coating with zero VOC's
- Leading thermal performance, allowing for significantly reduced dry film thicknesses (DFT's)
- Semi smooth architectural finish
- Can be finished with a wide variety of topcoat types and colors
- Quick, easy application and clean up
- Provides up to 2-hour fire resistance ratings in accordance with BS 476
- Assessed and listed by UL (per BS 476)

## PHYSICAL PERFORMANCE

It is important for fire protection materials to be able to withstand abuse. American Society for Testing and Materials (ASTM) test methods are used to evaluate the performance of intumescent materials when subjected to these various physical forces. CAFCO SprayFilm WB 7 has been evaluated to meet rigorous industry test standards.

### Physical Performance

Characteristic	ASTM Method	Laboratory Tested Performance*	
Abrasion Resistance	D4060	0.139 g / 1,000 cycles	
Bond Strength	D4541	415 psi (2861 kPa)	
Durometer Hardness (Shore D)	D2240	63 Shore D	
Impact Resistance	D2794	328 in-lb @ 2mm	
Surface Burning	E84	Flame Spread Smoke Developed	Class A

\* Values represent independent laboratory tests under controlled conditions.

### Technical Data

Color	White
Density	11.5 lb/gal ± 1.0
pH Value	8.2
Application Temperature	Min. 50° F (10° C), Max. 100° F (38° C)

## FIRE TEST PERFORMANCE

CAFCO SprayFilm WB 7 has been tested for fire resistance and is rated for up to 2-hours for I-section beams and columns, and HSS columns.

- Tested per BS 476: Part 21: 1987 at Exova Warrington Fire
- Compliant Assessment per 5th Edition ASFP Yellow Book

## MAJOR SPECIFICATIONS

CAFCO SprayFilm WB 7 has been assessed for the following jurisdictions:

- Hong Kong
- Macau (IDQ)
- Malaysia (Bomba)
- Middle East
- Taiwan
- Australia
- New Zealand
- Latin America

## APPLICATION

- A compatible primer must be applied to the steel substrate. Refer to the Primers for CAFCO Intumescent Fireproofing Technical Data Sheet.
- The applied thickness of CAFCO SprayFilm WB 7 will depend upon the specified fire rating and size / shape of the steel member to be protected.
- A finish coat may be applied in the desired color and finish directly over CAFCO SprayFilm WB 7 in accordance with the guidelines noted in our Finish Coat Materials Technical Data Sheet.

### Packaging/Storage

Packaging	5.0 U.S. gal (18.9 L) container
Net Contents	5.0 U.S. gal / 55 lbs (18.9 L / 25 kg)
Gross Weight (Approx)	58 lbs (26.3 kg)
Shelf Life	12 months in unopened sealed containers, properly stored.
Storage	Storage Temperature 33° F - 100° F (1° C - 38° C) Must protect from freezing and excessive heat. Store in a dry environment.

# CAFCO® SprayFilm® WB 7 Guide Specification

## SECTION 078123 - Intumescent Fireproofing

The following is an outline/short language specification. Complete specifications for intumescent fire resistive materials are available on various media upon request.

### PART 1 - GENERAL

#### 1.1 Scope

- 1.1.1 This specification covers labor, materials, equipment, and application necessary for, and incidental to, the complete and proper installation of intumescent fire protection for application to steel structures and supports in accordance with all applicable requirements of contract documents.
- 1.1.2 This specification shall be supplemented by the applicable requirements of building codes, insurance rating organizations and all other authorities having jurisdiction.

#### 1.2 Section Includes

- 1.2.1 Intumescent fire protection material.
- 1.2.2 Topcoat protective decorative finish.

#### 1.3 Related Sections

- 1.3.1 SECTION 051200 – STRUCTURAL STEEL FRAMING
- 1.3.2 SECTION 053100 – STEEL DECKING
- 1.3.3 SECTION 072100 – THERMAL INSULATION
- 1.3.5 SECTION 078443 – JOINT FIRESTOPPING

#### 1.4 References

- 1.4.1 Underwriters Laboratories (UL) Fire Resistance Directory.
- 1.4.2 Test Standards
  - A. BS 476 - Fire tests.
  - B. ASTM E84 - Surface Burning Characteristics of Building Materials. Class A Rating Required; Flame Spread Maximum: 5 and Smoke Developed Maximum: 30.
  - C. ASTM D2240 – Durometer Hardness (Shore D).
  - D. ASTM D2794 – Impact Resistance.
  - E. ASTM D4060 – Abrasion Resistance.
  - F. ASTM D4541 – Bond Strength.

- 1.4.3 Steel Structures Painting Council (SSPC) Surface Preparation Standards.

- 1.4.4 Material manufacturer's current published information including, but not limited to, application guide.

- 1.4.5 AWCI Technical Manual 12-B "Standard Practice for the Testing and Inspection of Field Applied Thin-Film Intumescent Fire-Resistive Materials; an Annotated Guide", Latest Edition.

#### 1.5 System Description

- 1.5.1 The intumescent fire protection materials shall be applied at the required thickness to provide the fire resistive ratings.

#### 1.6 Submittals

- 1.6.1 Manufacturer's Data: Submit manufacturer's specifications, including certification as may be required to show material compliance with contract documents.

#### 1.7 Quality Assurance

- 1.7.1 Manufacturer - Company specializing in manufacturing fire protection products.
- 1.7.2 The intumescent fire resistive material shall be manufactured under the Follow-Up Service program of UL and bear the UL label (mark).
- 1.7.3 Applicator - A firm with expertise in the installation of fire resistive or similar materials. This firm shall be recognized or otherwise approved by fire resistive material supplier.
- 1.7.4 Product - The product shall be approved by the architect and applicable authorities having jurisdiction.

#### 1.8 Delivery, Storage and Handling

- 1.8.1 Deliver materials to the project in manufacturer's unopened packages, fully identified as to trade name, type and other identifying data. Packaged materials shall bear the appropriate labels, seals and UL label (mark) for fire resistive ratings and shall be stored at temperatures between 33° F - 100° F (1° C - 38° C), in a dry interior location away from direct sunlight. PROTECT FROM FREEZING.

#### 1.9 Project/Site Conditions

- 1.9.1 When the temperature at the job site is less than 50° F (10° C), a minimum substrate and ambient temperature of 50° F (10° C) shall be maintained prior to, during, and a minimum of 72 hours after application. If necessary for job schedule, the General Contractor shall provide enclosures and heat to maintain proper temperatures and humidity levels in the application areas.
- 1.9.2 In enclosed areas, ventilation must not be less than 4 complete air exchanges per hour until the material is dry.
- 1.9.3 Relative humidity shall not exceed 85% throughout the total period of application and drying for the intumescent fire resistive material, and must not exceed 85% throughout the application and drying for the protective decorative topcoat.

#### 1.10 Sequencing and Scheduling

- 1.10.1 Applicator shall cooperate in the coordination and scheduling of fire protection work to avoid delays in job progress.
- 1.10.2 The installation of piping, ducts, conduit or other suspended equipment shall not commence until the application of the thin-film fire resistive material is complete in that area.

### PART 2 - PRODUCTS

#### 2.1 Compatible Metal Primer

- 2.1.1 Primer shall be approved by manufacturer and applied in full accordance with the primer manufacturer's written instructions.

#### 2.2 Intumescent Fire Protection System

- 2.2.1 The intumescent fire resistive material shall be CAFCO SprayFilm WB 7 as supplied by Isolatak International.
- 2.2.2 Intumescent fire resistive material shall be applied in accordance with drawings and/or specifications, and shall have been tested in accordance with the procedures of BS 476.

#### 2.3 Decorative Topcoating

- 2.3.1 Topcoat materials shall be as required for color-coding, aesthetics or additional surface protection, and approved by the thin-film fire resistive material manufacturer.

### PART 3 - EXECUTION

#### 3.1 Preparation

- 3.1.1 All surfaces to receive thin-film fire resistive material shall be clean, dry and free of oil, grease, loose mill scale, dirt, dust or other materials which would impair bond of the thin-film fire resistive material to the surface. Any cleaning of the surfaces to receive fire resistive material shall be the responsibility of the General Contractor or steel erector, as outlined in the structural steel section.
- 3.1.2 Confirm compatibility of surfaces to receive thin-film fire resistive material. Steel surfaces shall be primed with a compatible primer approved by the thin-film fire resistive material manufacturer.
- 3.1.3 Provide masking, drop cloths or other suitable coverings to prevent overspray onto surfaces not intended to be coated with intumescent coating.

#### 3.2 Application

- 3.2.1 The thin-film fire resistive material shall be applied at the required dry film thickness per the appropriate BS 476.

#### 3.3 Mock Up

- 3.3.1 Before proceeding with the work, the applicator shall apply the thin-film fire resistive material to a section witnessed by the architect's or owner's representative. The application shall be subject to their approval and shall be used as a guide for texture and thickness of the finished work.

#### 3.4 Clean Up and Repair

- 3.4.1 Upon completion of installation, all excess material, overspray and debris shall be cleared and removed from the job site.
- 3.4.2 All patching of and repair to thin-film fire resistive material, due to damage by other trades, shall be performed under this section and paid for by the trade responsible for the damage. Patching shall be performed by applicators recognized or otherwise approved by the manufacturer.

#### 3.5 Inspection and Testing

- 3.5.1 In addition to continuous Wet Film Thickness checks performed by applicator during application, the installed intumescent material shall be inspected by a qualified independent testing laboratory for thickness in accordance with the AWCI Technical Manual 12-B "Standard Practice For The Testing and Inspection Of Field Applied Thin-Film Intumescent Fire-Resistive Materials; an Annotated Guide", Second Edition, before application of the topcoat.
- 3.5.2 The results of the above tests shall be made available to all parties at the completion of each area and approved prior to the application of topcoat.



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