

PRODUCT DESCRIPTION

CAFCO SprayFilm WB 5 is a patented and technically advanced water-based, Intumescent Fire Resistive Material (IFRM) designed for the fire protection of interior structural steel.

CAFCO SprayFilm WB 5 represents a generational breakthrough in material advantages and efficiencies. Architects can design steel that can be decorative, aesthetically pleasing, and very cost effective. CAFCO SprayFilm WB 5 can be top coated to match its surroundings or left exposed to view while providing the required fire resistance rating.

PRODUCT ADVANTAGES

- Water-Based intumescent coating with zero VOC's
- Industry leading thermal performance, allowing for significantly reduced dry film thicknesses (DFT's)
- Semi smooth architectural finish
- ICC ES Approved (ICC ESR-1092)
- Can be finished with a wide variety of topcoat types and colors
- Quick, easy application and clean up
- Provides up to 3-hour fire resistance ratings in accordance with ANSI/UL 263, ASTM E119 and CAN/ULC-S101

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 5 has been evaluated to meet rigorous industry test standards.

Physical Performance

Characteristic	ASTM Method	Tested Performance*	
Abrasion Resistance	D4060	0.2600 g/ 1,000 cycles	
Bond Strength	D4541	340 psi (2,013 kPa)	
Durometer Hardness (Shore D)	D2240	69 Shore D	
Impact Resistance	D2794	152 inch-lb (17.17 Nm) @ 2 mm	
Surface Burning	E84	Flame Spread 5 Smoke Developed 30	Class A

* Values represent independent laboratory tests under controlled conditions.

Technical Data

Color	White
Density	11.0 lb/gal ±0.5.
pH Value	8.0 to 8.5
Application Temperature	Min. 50°F (10°C), Max. 100°F (38°C)

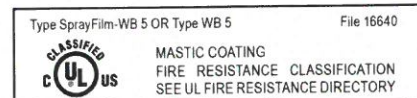
FIRE TEST PERFORMANCE

CAFCO SprayFilm WB 5 has been extensively tested for fire resistance and is rated for up to 3 hours for floor assemblies, beams, and columns.

- Classified by UL in accordance with ANSI/UL 263 (ASTM E119)
- Classified by UL in accordance with CAN/ULC-S101 (ASTM E119)

CAFCO SprayFilm WB 5 has also been tested for surface burning characteristics in accordance with ASTM E84 and is rated Class A.

Flame Spread5 Smoke Developed30



CODE COMPLIANCES

CAFCO SprayFilm WB 5 satisfies the requirements of the following:

- IBC® - INTERNATIONAL BUILDING CODE® (ICC ESR-1092)
- City of Los Angeles
- NBC - National Building Code of Canada

MAJOR SPECIFICATIONS

CAFCO SprayFilm WB 5 complies with the requirements of the following specifications:

- MasterSpec®, Section 078123 Applied Fireproofing (AIA)
- MasterFormat® 2014, Section 07 81 00 Applied Fireproofing (CSC,CSI)
- Unified Facilities Guide Specification, UFGS 07 81 00 Spray-Applied Fireproofing (USACE, NAVFAC, AFCEC, NASA)
- Master Construction Specifications, Number 07 81 00 Applied Fireproofing (VA)
- Code of Federal Regulations, Title 40 Protection of the Environment (EPA)
- PBS-P100, Facilities Standards for the Public Buildings Services (GSA)

APPLICATION

- A compatible primer must be applied to the steel substrate. Refer to the Primers for CAFCO SprayFilm Intumescent Fireproofing Technical Data Sheet.
- The applied thickness of CAFCO SprayFilm WB 5 will depend upon the specified fire rating and size / shape of the steel member to be protected.
- If desired, a finish coat may be applied in the desired color and finish directly over CAFCO SprayFilm WB 5 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 5 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

1.3.4 SECTION 078123 - INTUMESCENT FIREPROOFING

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. UL 263 (ASTM E119) - Fire Tests of Building Construction and Materials.

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), Minimum: 69 Shore D.

D. ASTM D2794 - Impact Resistance. 152 inch-lb (17.17 kg-m).

E. ASTM D4060 - Abrasion Resistance. Maximum 0.2600 grams/1000 cycles.

F. ASTM D4541 - Bond Strength. Minimum: 340 psi. (2013 k Pa.)

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 UL 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 or ULC and bear the UL and/or ULC 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 5 as supplied by Isolatak International or CAFCO Industries.

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 UL 263 or ASTM E119 or CAN/ULC-S101, and reported by Underwriters Laboratories, Inc. or Underwriters Laboratories of Canada only.

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 UL design number.

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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We support our customers with unsurpassed technical expertise and customer service, complemented by an extensive global network of experienced sales representatives and recognized applicators. For detailed product information or for the name of the sales representative in your area please contact us.

The performance data herein reflect our expectations based on tests conducted in accordance with recognized standard methods under controlled conditions. The applicator, general contractor, property owner and/or user MUST read, understand and follow the directions, specifications and/or recommendations set forth in Isolatak International's publications concerning use and application of these products, and should not rely merely on the information contained in this product data sheet. Isolatak International is not responsible for property damage, bodily injuries, consequential damages, or losses of any kind that arise from or are related to the applicator's, general contractor's, or property owners' failure to follow the recommendations set forth in Isolatak International's publications. The sale of these products shall be subject to the Terms and Conditions set forth in the Company's invoices.



Isolatak International provides passive fireproofing materials under the CAFCO® trademark throughout the Americas and other markets and under the ISOLATEK® trademark throughout the world.

800.631.9600 or 973.347.1200
www.isolatak.com | technical@isolatak.com



Section 1 – Chemical Product / Company Information

Product Name: CAFCO® SprayFilm® WB 5 **Effective Date:** April 22, 2015

Product Use/Class: Fireproofing coating

Manufacturer: United States Mineral Products Company
dba Isolatek International
41 Furnace Street
Stanhope, NJ 07874 USA
(973)-347-1200 **Preparer:** R&D Department

In Case of Emergency Call: CHEMTREC **Supersedes:** October 28, 2014

800.424.-9300 (USA) +1 703.527.3887 (Int'l)

Section 2 – Hazards Identification

GHS Classification:	Hazard Category	Route of Exposure
Hazard Class		
Skin Irritation	2	Skin
Skin Sensitizer	1	Skin
Eye Irritation	2B	Eye
Inhalation Toxicity	4	Nose/Mouth

Global Harmonization Labeling and Classification:

Signal word: Warning

Hazard Symbol(s): GHS07



Overview: A thick liquid that poses little immediate hazard.

Primary Route(s) of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Medical Conditions Prone to Aggravation by Exposure: Sensitive skin; respiratory conditions

Hazard Statements:	
H303	May be harmful if swallowed.
H313	May be harmful in contact with skin.
H320	Causes eye irritation.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements:	
P202	Do not handle until safety precautions have been read and understood.
P261	Avoid breathing dust/ fumes/ gas/ mist/ vapours/ spray.
P271	Use only outdoors or in a well ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284	Wear respiratory protection.
P403+235	Store in a well ventilated place. Keep cool.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Response:	
P301+P330 P331+P312	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/ physician if you feel unwell.
P302+P352+ P332+P313+ P363	IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention. Wash contaminated clothing before reuse.
P304+P340+ P342+P313	IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Get medical advice/ attention.
P305+P351+ P338+P337+ P313	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

Storage:	
P402+P403+ P404+P410+ P411	Store in a dry place. Store in a well ventilated place. Store in a closed container. Protect from sunlight. Store at temperatures not exceeding 38°C/ 100°F.

Disposal:	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations (see section 13).

Section 3 – Composition / Information On Ingredients

Chemical Name	CAS Number	Wt. %
Ammonium Polyphosphate	68333-79-9	15-35
Pentaerythritol	115-77-5	7-13
Melamine	108-78-1	7-13
Titanium Dioxide	13463-67-7	7-13
Glass wool fiber	65997-17-3	3-7

Section 4 – First Aid Measures

General – If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

First Aid – Skin Contact: Wash with soap and water. Remove contaminated clothing. If persistent irritation occurs, seek medical attention.

First Aid – Eye Contact: Flush eyes thoroughly with copious amounts of water. Seek medical attention if irritation persists.

First Aid – Inhalation: Remove to fresh air. Seek medical attention if irritation persists.

First Aid – Ingestion: If swallowed do not induce vomiting. Rinse mouth out with water. If Irritation persists seek medical attention.

Protection of first aid responders: Wear proper personal protective clothing and equipment.

Section 5 – Fire Fighting Measures

Extinguishing Media: NFPA non-combustible liquid: ABC dry chemical, foam or carbon dioxide.

Unusual Fire & Explosion Hazards: Product is not considered a fire hazard. Closed container may rupture (due to build up of pressure) when exposed to extreme heat. Irritating or toxic substances may be emitted upon burning, combustion or decomposition (including but not limited to ammonia gas, nitrogen oxide, titanium oxide, and phosphorous oxide gases).

Special Firefighting Procedures: Wear positive pressure self-contained NIOSH approved breathing equipment and approved protective equipment if necessary.

Section 6 – Accidental Release Measures

Personal precautions, Protective Equipment, and Emergency Response:
Use personal protective equipment as recommended in section 8.

Methods and materials for containment and cleaning up:
If spilled, absorb spill with vermiculite or other inert material (such as sand). Collect up and place in an appropriate container

Section 7 – Handling And Storage

Precautions for safe handling: When working with any chemical product, use good workplace procedures. Do not cut, puncture, or weld on or near the container. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well ventilated conditions. Avoid skin and eye contact. Avoid inhalation of mist, spray, fume or vapor. Avoid drinking, tasting, swallowing or ingesting this product. Wash contaminated clothing before reuse.

Conditions for safe storage: Keep away from heat, sparks, and open flames. Avoid extreme heat or cold. Store above freezing. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Empty container containing residual product which may exhibit hazards of product. Do not reuse empty container.

Section 8 – Exposure Controls / Personal Protection

Permissible Exposure Limits

Chemical Name	CAS Number	OSHA PEL	ACGIH TLV	NIOSH	Mexico
Pentaerythritol	115-77-5	15 mg/m ³ TWA (total dust) 5 mg/m ³ TWA (respirable fraction)	10 mg/m ³ TWA (total dust)	10 mg/m ³ TWA (total dust) 5 mg/m ³ TWA (respirable dust)	10 mg/m ³ TWA 20 mg/m ³ STEL
Melamine	108-78-1	N/A	N/A	N/A	N/A
Ammonium Polyphosphate	68333-79-9	N/A	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	15 mg/m ³ TWA	10 mg/m ³ TWA	5000 mg/m ³ IDLH	10 mg/m ³ TWA (as Ti) 20 mg/m ³ STEL (as Ti)
Glass wool fibers	65997-17-3	5 mg/m ³ TWA (respirable fraction) 15 mg/m ³ TWA (total dust)	1 fiber/cc TWA	5 mg/m ³ TWA (total dust) 3 fibers/cc TWA	N/A

Engineering Controls: Provide ventilation to ensure compliance with applicable exposure limits

Respiratory Protection: A dust mask should be used in cases where the individual is exposed to airborne mists of the material.

Skin Protection: Wear cloth, rubber, or latex gloves. Use typical long sleeve work clothing or a "Tyvek" type suit .

Eye Protection: Wear proper eye protection; at minimum, safety glasses with side shields.

Work / Hygienic Practices: Use proper personal protective equipment. Eye wash stations are recommended in the work area.

Section 9 – Physical And Chemical Properties

Appearance:	white liquid
Odor:	Mild, minty
pH:	7-9
Melting Point (°F):	Not Applicable
Boiling Point (°F):	>210-215°F
Flash Point:	>200°F (SCC)
Evaporation Rate:	1 (water=1)
Flammability:	Not Applicable
Lower Explosive Limit:	Not Applicable
Upper Explosive Limit:	Not Applicable
Vapor Pressure (mm Hg):	Not Applicable
Relative Density (kg/mm³):	Not Applicable
Solubility in Water:	Not Applicable
Specific Gravity (H₂O=1):	1.1-1.5
Physical State:	white paste
% Volatiles:	25-30%
Viscosity	20-40K CPS
Auto ignition temperature	Not Applicable

Section 10 – Stability And Reactivity

Chemical Stability (under normal conditions):	Stable
Possibility of Hazardous Reactions:	None
Conditions to Avoid:	Avoid high temperatures or freezing. Avoid incompatible materials.
Incompatibility:	Strong Acids, bases, and oxidizing agents.
Hazardous Decomposition Products:	Thermal decomposition may produce smoke, carbon monoxide (CO), carbon dioxide (CO ₂), oxides of titanium, oxides of phosphorous, and other products of incomplete combustion.
Hazardous Polymerization:	No hazardous polymerization will occur under normal conditions.

Section 11 – Toxicological Information

Information on likely routes of exposure:

General: Caution must be exercised through the prudent use of personal protective equipment and handling procedures to minimize exposure.

Eyes: May cause eye irritation.

Skin: Causes skin irritation.

Inhalation: High airborne concentrations of mist resulting from spraying may cause irritation of the respiratory tract and mucous membranes.

Ingestion: Not likely route of exposure but ingestion may cause irritation.

Carcinogenicity	IARC			NTP		OSHA
	Group 1	Group 2A	Group 2B	Known	Suspect	
Chemical Name						
Pentaerythritol	No	No	No	No	No	No
Melamine	No	No	No	No	No	No
Ammonium Polyphosphate	No	No	No	No	No	No
Titanium dioxide	No	No	Yes	No	No	No
Glass wool fibers	No	No	No	Yes	No	Yes

Acute toxicity

No toxicity studies have been conducted on this product.

Titanium dioxide

LD50 Oral	Rat	>10,000 mg/kg
LC50 Inhalation	Rat	>6.8 mg/L
LD50 Dermal	Rabbit	>10,000 mg/kg

Melamine

LD50 Oral	Rat	3161 mg/kg
LD50 Dermal	Rabbit	>1000 mg/kg

Ammonium polyphosphate

LD50	Rat	>2000mg/kg
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Pentaerythritol

LD50 Oral	Rabbit/rat/mouse	>18500 mg/kg
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Chronic effects – For this category no toxicological test data is available for the whole product.

Carcinogenicity - For this category no toxicological test data is available for the whole product.

Mutagenicity - For this category no toxicological test data is available for the whole product.

Teratogenicity - For this category no toxicological test data is available for the whole product.

Developmental effects - For this category no toxicological test data is available for the whole product.

Fertility effects - For this category no toxicological test data is available for the whole product.

Target organs – For this category no toxicological test data is available for the whole product.

Review Section 2 and 11 for any additional assessments

INTERNATIONAL REGULATIONS AS FOLLOWS:

Chemical Inventory Status

All chemicals in this product are listed or exempt from listing in the following:

U.S	Canada		Europe	Australia	Korea
TSCA	DSL	NDSL	EINECS ELINCS	AICS	ECL
Yes	Yes	No	Yes	Yes	Yes

CANADIAN WHMIS

This SDS has been prepared in compliance with Controlled Product Regulations and contains all information required.

CANADIAN WHMIS CLASS: D2B

HMIS Ratings

HEALTH 2

FLAMMABILITY 0

REACTIVITY 0

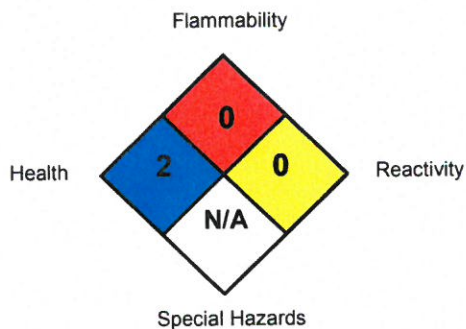
PERSONAL PROTECTION B

VOLATILE ORGANIC COMPOUNDS, GR/LTR MIXED (UNTHINNED): 0g/L

Section 16 – Other Information

N/E – Non Established
 N/A – Not Applicable

NFPA



Prepared By: Research Department, U.S.A.
Telephone: (973) 347-1200

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