ISOLATEK® INTERNATIONAL

ISOLATEK® Type WB 4
(Worldwide)

CAFCO® SprayFilm® WB 4
(Americas)

Intumescent Fireproofing

PRODUCT DESCRIPTION

ISOLATEK Type WB 4 Intumescent Fire Resistive Material (IFRM), when combined with ISOLATEK Type Topseal®, is a water-based system investigated by Underwriters Laboratories (UL) for exterior applications.

ISOLATEK Type WB 4 gives architects the ability to design using steel that can be decorative and aesthetically pleasing. It can be top coated to match its surroundings and allows steel to be left exposed to view while providing the fire resistance rating.

PRODUCT ADVANTAGES

- *Water-based intumescent coating with low VOC's*
- *The only water-based intumescent coating that is UL classified for exterior use*
- *Semi smooth architectural finish*
- *Can be finished with a wide variety of topcoat types and colors*
- *Quick, easy application and clean up*
- *Wide range of testing*
- *Provides up to 4-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. ISOLATEK Type WB 4 has been evaluated to meet rigorous industry test standards.

Physical Performance

Characteristic	ASTM Method	Tested Performance*	
Abrasion Resistance	D4060	0.2300 g/ 1,000 cycles	
Bond Strength	D4541	2,220 kPa (322 psi)	
Durometer Hardness (Shore D)	D2240	81 Shore D	
Impact Resistance	D2794	11 Nm (98 inch-lb)	
Surface Burning	E84	Flame Spread 15 Smoke Developed 0	Class A

* Values represent independent laboratory tests under controlled conditions.

Technical Data

Color	White
Density	12.0 lb/gal ±0.5
PH Value	7.5 to 8.5
Application Temperature	Min. 10° C (50° F), Max. 38° C (100° F)

FIRE TEST PERFORMANCE

ISOLATEK Type WB 4 has been extensively tested for fire resistance and is rated for up to 4 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)

ISOLATEK Type WB 4 has also been tested for surface burning characteristics in accordance with ASTM E84 and is rated Class A.

Flame Spread .....15 Smoke Developed 0

Type WB 4 File 16640

CLASSIFIED c UL us

MASTIC COATING
FIRE RESISTANCE CLASSIFICATION
SEE UL FIRE RESISTANCE DIRECTORY

CODE COMPLIANCES

ISOLATEK Type WB 4 satisfies the requirements of the following:

- IBC® - INTERNATIONAL BUILDING CODE®
- City of Los Angeles (LADBS, Category 1 Material)
- NBC - National Building Code of Canada
- ICC-ES, AC23 and AC10 Requirements (UL ER13348-01)

MAJOR SPECIFICATIONS

ISOLATEK Type WB 4 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 ISOLATEK Type Intumescent Fireproofing Technical Data Sheet.
- ISOLATEK Type WB 4 can be brushed or sprayed, not rolled and is also available in a trowel grade formulation (ISOLATEK Type WB 4 TG).
- The applied thickness of ISOLATEK Type WB 4 will depend upon the specified fire rating and size / shape of the steel member to be protected.
- For exterior use, ISOLATEK Type 4 must be sealed with ISOLATEK Type Topseal followed by an approved exterior finish coat to protect against humidity, chemical and damage. Refer to the Topseal and Finish Coat Materials Technical Data Sheets.

Packaging/Storage

Packaging	18.9 L (5.0 U.S. gal) container
Net Contents	18.9 L / 26.3 kg (5.0 U.S. gal / 58 lbs)
Gross Weight (Approx)	27.6 kg (61 lbs)
Shelf Life	12 months in unopened sealed containers, properly stored.
Storage	Storage Temperature 1° C - 38° C (33° F - 100° F) Must protect from freezing and excessive heat. Store in a dry environment.

ISOLATEK® Type WB 4 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 Inc. (UL) Fire Resistance Directory

1.4.2 Test Standards

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

B. ASTM E84 (UL723, CAN/ULC-S102) - Surface Burning Characteristics of Building Materials. Class A Rating Required; Flame Spread Maximum: 15 and Smoke Developed Maximum: 0.

C. ASTM D2240 – Durometer Hardness (Shore D Only). Minimum: 81 Shore D.

D. ASTM D2794 – Impact Resistance. 1.13 kg-m (98 inch-lb).

E. ASTM D4060 – Abrasion Resistance. Maximum 0.2300 grams/1,000 cycles.

F. ASTM D4541 – Bond Strength. Minimum: 2220 k Pa. (322 psi.),

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 1° C - 38° C (33° F - 100° F), 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 10° C (50° F), a minimum substrate and ambient temperature of 10° C (50° F) 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 ISOLATEK Type WB 4 as supplied by Isolatek 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 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.

Isolatek International provides passive fireproofing materials under the CAFCO® and FENDOLITE® trademarks throughout the Americas and under the ISOLATEK® trademark throughout the remainder of the world.

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ISOLATEK® Brand

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