PRODUCT DATA SHEET

ISOLATEK® Type WB 5™ INTUMESCENT FIRE PROTECTION

INTERIOR

Isolatek International's ***new*** **ISOLATEK Type WB 5** is the generational breakthrough in water-based intumescent technology which unlocks the door to exposed interior structural steel design once considered unaffordable.

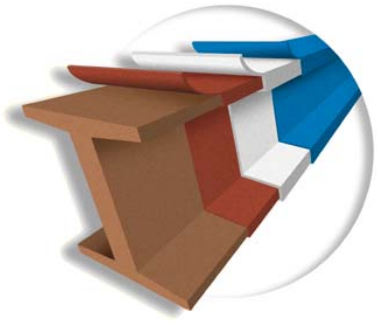
ISOLATEK Type WB 5 requires substantially less material to meet the required fire resistance ratings, making it the most efficient, cost effective water-based intumescent coating in the industry.

PRODUCT ADVANTAGES

- Water-Based intumescent coating with ***Zero VOCs***
- Industry leading Thermal Performance, allowing for significantly reduced Dry Film Thicknesses (DFTs) compared to the competition
- Durable, smooth architectural finish
- Quick, easy application and clean up
- Can be finished with a wide variety of topcoat types and colors
- Contains no solvents or harmful compounds
- Provides up to 3-hour fire resistance ratings in accordance with ANSI/UL 263, ASTM E119 and CAN/ULC-S101
- ICC ES Approved (ICC ESR 1092)

APPLICATION

- A primer must be applied to the steel substrate. Contact Isolatek Technical Services Department for a complete list of approved primers.
- The applied thickness of ISOLATEK Type 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 ISOLATEK Type WB 5 in accordance with the guidelines noted in our Finish Coat Materials data sheet.



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 5 has been evaluated to meet rigorous industry test standards.

ASTM PHYSICAL CHARACTERISTICS			
Test Method		***ISOLATEK Type WB 5****	
SURFACE BURNING	**E84**	Flame Spread - 5 Smoke Developed - 30	Class A
DUROMETER HARDNESS	**D2240**	69 Shore D	
IMPACT RESISTANCE	**D2794**	17.17 Nm (152 in-lb) @ 2 mm	
ABRASION RESISTANCE	**D4060**	0.2600 g/ 1000 cycles	
BOND STRENGTH	**D4541**	340 psi (2013 kPa)	

** Values represent independent laboratory tests under controlled conditions.*

TECHNICAL DATA	
PACKAGING	19 Litre (5 U.S. gallon) pail
DENSITY	1.32 kg/L ± 0.06 (11.0 lb/gal ±0.5)
COLOR	white
APPLICATION TEMP.	Min. 10ºC (50ºF), Max. 38ºC (100ºF)
pH VALUE	8.0 to 8.5
VOC COMPLIANCE	0.0 g/L
COVERAGE	31.4 m^2/L (1283 ft^2/gal) @ 25.4µ (DFT)
SHELF LIFE	12 months

Type WB 5 File R 16640

CLASSIFIED C UL US

MASTIC COATING
FIRE RESISTANCE CLASSIFICATION
SEE UL FIRE RESISTANCE DIRECTORY

ISOLATEK® Type WB 5™ Guide Specification

Section 07812—Intumescent Fire Resistive Material

Following is an outline/short language specification. Complete specifications for the Spray-Film Systems 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 05100: Structural Steel.

1.3.2 Section 05120 - 05500: Structural steel and metal fabrications with reference to primer receiving fire protection materials.

1.3.3 Section 07810: Spray-Applied Fire Resistive Material.

1.3.4 Section 07270: Firestopping and Smoke Seals.

1.3.5 Section 09900: Painting.

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: 5 and Smoke Developed Maximum: 30.

C. ASTM D2240 – Durometer Hardness (Shore D Only). Minimum: 69 Shore D.

D. ASTM D2794 – Impact Resistance. 152 inch-lb (17.17 Nm) @ 2 mm thickness.

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 licensed 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 70ºF (21ºC) and 100ºF (38ºC), in a dry interior location away from direct sunlight. DO NOT FREEZE.

1.9 PROJECT/SITE CONDITIONS

1.9.1 When the temperature at the job site is less than 50ºF (10ºC), a minimum substrate and ambient temperature of 50º F (10ºC) 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 shall 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 5 as supplied by Isolatek 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 licensed 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.

ISOLATEK INTERNATIONAL provides passive fire protection materials under the CAFCO® trade name throughout the Americas and the ISOLATEK® trade name worldwide.

For Further Information

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For more detailed product information, visit our website at **www.isolatek.com** or contact us at **technical@isolatek.com**