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**IFTI SPEC NOTE: This master specification is written to include SPEC NOTES noted as “IFTI Spec Note” in order to assist designers in their decision-making process. SPEC NOTES precede the text to which they apply. This section should serve as a guideline only and should be edited by a knowledgeable person to meet the requirements of each specific project.**

**Text indicated in bold and by square brackets is optional. Make appropriate decisions and delete the optional text as well as the brackets in the final copy of the specification. Delete or hide the SPEC NOTES in the final version of the document.**

**This specification section is written to follow the recommendations of the Construction Specifications Institute/Construction Specifications Canada (CSI/CSC) such as MasterFormat™, SectionFormat™, and PageFormat™. It is also written with metric and imperial units of measurement.**

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## PART 1 - GENERAL

**IFTI Spec Note: Use the following information as additional wording to Section 07 21 19. Use relevant paragraphs as necessary**

### 1.1 SUMMARY

- A. Surface preparation and application of fire-protective intumescent thermal barrier coating to spray-applied polyurethane foams.

### 1.2 INFORMATIONAL SUBMITTALS

**IFTI Spec Note: Always verify applicability and validity of test reports. Do not specify out-of-date reports.**

- A. Evaluation reports: Submit Evaluation reports in accordance with **[ICC-ESR 3702] [IAPMO ER 499] [UL R-40016]** showing compliance with applicable building codes.
  - 1. Submit Evaluation report from accredited independent evaluation agency, indicating compliance of intumescent thermal barrier with specifications for specified performance characteristics and physical properties.

### 1.3 QUALITY ASSURANCE

- A. Qualifications:
  - 1. **[Thermal Barrier Installer: company specializing in intumescent thermal barrier installations with 3 years documented experience and approved by manufacturer.]**

### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Thermal Barriers:
  - 1. Deliver materials to the project in manufacturer's unopened packages, fully identified as to trade name, type and other identifying data. Handle and store in accordance with manufacturer's instructions.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Thermal Barrier Coating Manufacturer:
  - 1. International Fireproof Technology Inc; 6208, 17528 Von Karman Ave, Irvine, CA 92614, United States Tel: (949) 975-8588 Web: www.painttoprotect.com; as listed in this Specification.
- B. Substitution Limitations: **[No further substitutions are acceptable.] [Conforming to requirements of Section 01 25 00 - Substitution Procedures]**

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## 2.2 INTUMESCENT THERMAL BARRIER COATING SYSTEM

### A. Regulatory Requirements:

1. Products shall meet requirements of municipal, state, or federal authorities having jurisdiction.
2. Fire protective coating systems shall comply with the following requirements:
  - a. Provide rated systems complying with the following requirements based on tests performed by a qualified testing agency acceptable to authorities having jurisdiction:
  - b. All systems and products shall bear the classification rating and listing of a qualified testing agency based on designations listed by one of the following:

**Retain only subparagraph(s) below that reference the directories of testing agency or agencies approved by authorities having jurisdiction.**

1. ASTM E84 FSR 0 SDC 10
2. ASTM E119
3. ISO 9705
4. ASTM E2768
5. NFPA 286
6. NFPA 285
7. IAPMO ER499
8. ESR-3702
9. UL R40016

### B. Design and Performance Requirements

1. Material Compatibility:
  - a. Provide materials for use within each coating system that are compatible with one another and substrates indicated.
  - b. Apply all products according to spreading rates recommended in writing by intumescent thermal barrier coating manufacturer.
  - c. Comply with requirements for fire-protective coating classification and surface-burning characteristics indicated.
2. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction.

### C. Bonding Primer (where required): Interior unconditioned spaces subject to freeze thaw cycling, temperature and humidity variations or as required per tested and listed system. Waterborne, acrylic emulsion, adhesion-promoting bonding primer recommended in writing by manufacturer, if required, compatible with substrate and other materials indicated.

1. Application thickness (DFT):
  - a. Prime Coat: 2 – 5 mils dft.
2. Acceptable product:
  - a. Sherwin Williams DTM Bonding Primer
  - b. Sherwin Williams Extreme Bond Primer
  - c. PPG Gripper Universal Primer
  - d. Zinsser Bondz Primer
  - e. General Coatings Mfg. Corp. Ultra Bond 16

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- f. Approved equivalent recommended in writing by intumescent thermal barrier manufacturer.

D. Fire-protective Intumescent Thermal Barrier Coating:

- 1. Protective coating with following characteristics, specifically formulated for application over polyurethane foam plastics and compatible with insulation:
  - a. Finish: Flat
  - b. Color: [Ice Grey] [White] [Dark Grey] [Charcoal Black]
  - c. VOC Content: 19 g/L less water as per EPA 24
  - d. Shore D Hardness (before topcoat and finish coat are applied): 40.
  - e. Solids by Volume: 67%
  - f. Specific Gravity: 1.30 +/- 0.05 g/cc
  - g. Drying Time @ 25 deg C (77 deg F) and 50% R.H:
    - 1. To touch: 1-2 hours
    - 2. To recoat (if required): 2-4 hours
  - h. Flashpoint: None
  - i. Reducing or Cleaning: Water
- 2. Acceptable Product: “DC315” by International Fireproof Technology Inc.

E. Decorative Topcoat (where desired)

- 1. Interior conditioned spaces: Water based latex-based paint recommended in writing by manufacturer compatible with substrate and other materials indicated.
  - a. Application thickness (DFT):
    - 1. First Coat: 1.8 – 2.4 mils dft
    - 2. Second Coat: 1.8 – 2.4 mils dft.
  - b. Acceptable product:
    - 1. Sherwin Williams ProMar 200 0 VOC Flat, EgShel, Semi-Gloss
    - 2. Sherwin Williams Pro Industrial Dryfall
    - 3. Approved equivalent recommended in writing by intumescent thermal barrier manufacturer.

F. Protective Topcoat: (where required)\*

- 1. Interior unconditioned spaces subject to humidity, condensation or at risk of direct contact with moisture: exterior/interior, VOC compliant, protective topcoat.
  - a. Application thickness (DFT):
    - 1. First Coat: 2 – 4 mils dft.
    - 2. Second Coat: 2-- 4 mils dft.
  - b. Acceptable Product:
    - 1. Sherwin Williams Pro Industrial Acrylic
    - 2. Sherwin Williams Sher-Cryl HPA
    - 3. Sherwin Williams SteelMaster 9500
    - 4. Approved equivalent recommended in writing by intumescent thermal barrier manufacturer.\*

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2. Unconditioned spaces subject to constant high humidity, condensation or at risk of direct contact with moisture: industrial, exterior/interior, VOC compliant, protective topcoat.
  - a. Application thickness (DFT):
    1. First Coat: 2 – 4 mils dft.
    2. Second Coat: 2-- 4 mils dft.
  - b. Acceptable Product:
    1. Sherwin Williams Pro Industrial Waterbased Acrolon 100
    2. Sherwin Williams Pro Industrial Waterbased Catalyzed Epoxy
    3. Approved equivalent recommended in writing by intumescent thermal barrier manufacturer.\*
  
3. Exterior Continuous Insulation systems as a component of exterior wall systems as shown in UL File FWFO.EWS0054 when installed behind approved claddings.
  - a. Application thickness (DFT):
    1. First Coat: 2 – 4 mils dft.
    2. Second Coat: 2-- 4 mils dft.
  - b. Acceptable Product:
    1. Sherwin Williams Sher-Cryl HPA

\*Topcoats have been investigated as to not reduce the fire resistance rating of the specific intumescent coating listed. Authorities Having Jurisdiction, Architects, Engineers or Specifiers should be consulted as to the particular requirements covering the installation and use of any coatings listed.

G. Accessories

1. Provide accessories to comply with manufacturer's recommendations and to meet fire resistance design and code requirements. Such accessories include, but are not limited to, any required or optional items such as bonding agents, mechanical attachments; and application aids.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION OF THERMAL BARRIER COATINGS**

- A. Comply with manufacturer's written instructions applicable to substrates and coating systems indicated. Refer to test report for applicable brand and type of sprayed polyurethane foam to verify compatibility, and if a primer is required. Provide compatible primer approved by intumescent thermal barrier manufacturer to required surfaces where required by applicable test reports.
- B. Do not paint unless substrates are acceptable and/or until all environmental conditions (heating, ventilation, lighting and completion of other subtrade work) are acceptable for applications of products.

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- C. Prime or “fog” glossy foam surfaces prior to applying intumescent thermal barriers.
- D. Apply intumescent thermal barrier coatings according to manufacturer's written instructions and to comply with requirements for fire-protective coating classification and applicable test reports for spray urethane foam insulation.
- E. Upon completion of installation, clean excess material, overspray, and debris. Remove and clear such materials from Project site.
- F. Ensure patching of, and repair to, intumescent thermal barriers due to damage by other trades, is performed under this section, and paid for by trade responsible for damage.
- G. Ensure patching is performed by an applicator with expertise in the installation of intumescent thermal barrier coatings.
- H. Continuously monitor WFT by performing checks to ensure correct thicknesses are applied.
- I. When applying as a component of an exterior wall system do not paint unless substrates are acceptable and/or until all environmental conditions are acceptable for applications of products. Thermal barrier must be protected from weather until the protective topcoats is applied.
- J. Do not apply topcoats on surfaces that are not sufficiently dry. Unless manufacturer’s directions state otherwise, each coat shall be sufficiently dry and hard before a following coat is applied.

### 3.2 IDENTIFICATION

- A. Upon completion, provide job site label or similar method of identifying product used. Affix job site label in a prominent location, clearly indicating applicator’s name, contact information, company information, products used, and measured thickness.

#### END OF SECTION

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