

## ARCHITECTURAL SPECIFICATION

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

Spray applied, thin film intumescent, fire retardant coating for interior use over combustible substrates. Fire retardant coatings shall be supplied as a ready to use, single package coating, applied over a suitable substrate. Only trained, qualified contractors shall apply.

#### 1.2 RELATED SECTIONS

Section \_\_\_\_: Painting

#### 1.3 REFERENCE

- A. Reference Standards: Current edition at date of bid.
- B. American Society for Testing and Materials (ASTM):  
ASTM E 84 - Test for Surface Burning Characteristics of Building Materials.
- C. Association of the Wall and Ceiling Industries International (AWCI)  
Inspection Procedure for Field Applied Sprayed Fire Protection Materials.
- B. Steel Structures Painting Council (SSPC) Paint Application Specification No. 2, Measurement of Dry Paint.

#### 1.4 PERFORMANCE REQUIREMENTS

- A. Fire retardant coating at a thickness to achieve a Class A fire rating to the specified substrate.
- B. Surface Burning Characteristics: Class A (Tested to ASTM E 84)
  - 1. Flame Spread: 5
  - 2. Smoke Developed: 0

#### 1.5 QUALITY ASSURANCE

- A. Product Qualifications  
This product is Classified by Underwriters Laboratories, Inc. Each container shall bear the UL Classification Marks.

## **1.6 SUBMITTALS**

- A. Submit under provisions of Section \_\_\_\_\_.
  - B. Shop Drawings: Show locations and fire retardant coating design.
  - C. Product Data: Published fire retardant coating description, performance characteristics and limitations.
  - D. Test Documentation: Underwriter's Laboratories, Inc. (UL) certification with design data, material thickness and substrate described.
  - E. Manufacturer's Instructions: Application manual (latest revision) with special requirements, procedures and conditions.
  - F. Manufacturer's Certification:
    - 1. Approved applicator certification.
    - 2. Product Data Sheets and Material Safety Data Sheets.
  - G. LEED Submittals, New Construction, v2.2:
    - 1. MR Credit 4.1, 4.2: 10% minimum by cost, total value of materials for the project, percent by weight of post-consumer and post-industrial recycled content.
    - 2. MR Credit 5.1, 5.2: 10% minimum by cost, total value of materials for the project. Percent by weight of materials extracted, harvested, recovered or manufactured within 500 miles of the project site.
- NOTE: "Intumescent Fireproofing" materials are not considered "Adhesives & Sealants" or "Paints & Coatings" per Green Seal Standards and, thus, do not qualify for Credit EQ 4.1 or 4.2

## **1.7 QUALIFICATIONS**

- A. Applicator: successful experience in work of this type; trained and certified by manufacturer.
- B. Manufacturer: 10 years experience in manufacturing intumescent fire resistive coatings.

## **1.8 REGULATORY REQUIREMENTS**

- A. Comply with applicable building codes for fire retardant coatings to provide the required fire rating.
- B. Independent Inspection: Testing and laboratory services required for work of this Section, as specified.

- C. Fire Testing and Certification by Independent Laboratories: Underwriter's Laboratories, Inc. (UL) documentation to acceptable building code.
- D. Volatile Organic Compound (VOC) Content: Less than 1.5 lbs./gal.

## **1.9 SAMPLE INSTALLATION**

Prior to actual start up, a sample installation shall be prepared and submitted following all specified procedures. Representatives of all interested parties having a vested interest in the installation will then approve this sample installation. Final acceptance of the sample installation shall be by Owner or Owner representative in writing. All subsequent contract work shall conform to the surface quality of the sample installation. The sample will be available for the duration of the project to provide a project standard. The sample may be left as part of the project.

## **1.10 DELIVERY, STORAGE AND HANDLING**

- A. Comply with manufacturer's written instructions.
- B. Deliver material in sealed, undamaged containers with appropriate labels.
- C. Use coating within the specified shelf life. Remove from project site all coatings whose shelf life has expired.
- D. Store coating in strict accordance to manufacturer's written instructions.

## **1.11 ENVIRONMENTAL REQUIREMENTS**

- A. Air and Substrate Temperature: Comply with manufacturer's application manual (latest revision). Minimum 41°F (5°C) and rising for 24 hours after application.
- B. Relative Humidity: Maximum 85% during application and drying period.
- C. The substrate temperature shall be 5°F (3°C) above the dew point during application.
- D. Ventilate enclosed spaces. Refer to safe practices as prescribed by the Engineer.

## **1.12 COORDINATION**

- A. Coordinate with work in Section \_\_\_\_\_ and of Section \_\_\_\_\_. Substrate shall be free of any contaminants before application of fire retardant coating.
- B. Coordinate application of fire retardant coating prior to installation of ducts, equipment and other construction materials. (If possible)

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURERS**

- A. The approved fire resistive coating shall be THERMO-LAG 220 as manufactured by:
- Carboline  
350 Hanley Industrial Court  
St. Louis, MO 63144  
Telephone No: 314-644-1000
- B. Physical Properties should include:
- a. The fire retardant coating shall be intumescent and single component.
- b. The Solids by Volume shall be greater than 50%
- c. Surface Burning Characteristics: ASTM E 84 Class A Rated
- Flame Spread: 5
  - Smoke Development: 0
- d. The VOC of the fire resistive coating shall be less than 1.5 lbs./gal.
- C. Substitution Requests: Submit for approval under provisions of Section \_\_\_\_\_.  
Submit all requests for equivalent materials at least two weeks prior to bid opening.

### **2.2 ARCHITECTURAL FINISH**

- A. Fire Retardant Coating Finish: See Section - Sample Installation: Coating shall have a smooth finish and must be approved by the project team.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Verify that conditions are ready to receive work. Do not begin work until unsatisfactory conditions are corrected. Beginning work constitutes acceptance of existing conditions.
- B. Verify that the substrate is free of oil, grease, loose mill scale, dirt and other substances, which may impair bonding.
- C. Verify that areas to utilize fire retardant coating are accessible to receive work.

### **3.2 PREPARATION**

- A. Provide protective covers to prevent overspray on surfaces not designated to receive fire retardant coating.

### **3.3 APPLICATION**

- A. Mix and apply the fire retardant coating in strict accordance to the manufacturer's written instructions. Where there is conflict with the provisions of the contract documents, more stringent requirements apply. Consult fire retardant coating manufacturer for specific coating application details
- B. Control the fire retardant coating thickness by utilizing a depth gauge.

### **3.4 QUALITY CONTROL**

- A. Special Inspections: Comply with provisions of Section \_\_\_ for testing and inspections by Owner's Special Inspector as specified.

### **3.5 PATCHING AND REPAIR**

- A. Remove, patch and repair non-conforming and damaged areas per manufacturer's instructions.

### **3.6 CLEANING**

- A. Clean surfaces contaminated by fire retardant coating.