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**SECTION 07 81 20**

**INTUMESCENT MASTIC FIREPROOFING**

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**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section Includes: Provide intumescent mastic type sprayed-on thin-film fireproofing system with integral (or applied) color.
- B. Related Sections:
  - 1. Section 07 81 00: Applied fireproofing.
  - 2. Section 07 84 00: Firestopping.

**1.2 REFERENCES**

- A. Underwriters Laboratories (UL): Fire Hazard Classification.

**1.3 SUBMITTALS**

- A. Product Data: Submit manufacturer's literature.
  - 1. Deferred Approvals: Submit data necessary for applicable authorities for each type of fireproofing assembly required for Project.
- B. Samples: Furnish samples of fireproofing color, texture and finish.
- C. Certificate: Submit manufacturer certification indicating applicator acceptability and material compliance with applicable codes and Contract Documents.
  - 1. Certification shall indicate new materials used to patch existing fireproofed members at new and existing work are compatible with existing fireproofing materials and meet all performance requirements.
- D. Test Reports: Submit reports indicating compliance with design and performance requirements.
  - 1. Furnish test reports of independent testing agencies acceptable to applicable authorities indicating conformance to ASTM E119 and ASTM E84.
  - 2. Enforcement Agency Approvals: Provide information required by enforcing agencies to establish acceptance of materials in general and for specific applications.

**1.4 QUALITY ASSURANCE**

- A. Sustainability Characteristics: Comply with CALGreen requirements including those relative to finish material pollution control for composite wood products formaldehyde limitations.
- B. Qualification of Applicator: Firm acceptable to manufacturer of fireproofing materials, with minimum five years successful experience on projects of similar scope.

**1.5 SITE CONDITIONS**

- A. Ensure structural members to which fireproofing is applied are not enclosed and surfaces are open to view until application is reviewed.
- B. Do not apply fireproofing when temperature of substrate material and surrounding air is below 40 degrees F.

**PART 2 - PRODUCTS****2.1 SYSTEMS MANUFACTURERS**

- A. A/D Fire Protection Systems Inc. (Fipro)/Thermo-Lag E100.
- B. Albi Manufacturing /Albi Clad 800.
- C. Isolatek International/Cafco Sprayfilm WB 4.
- D. Substitutions: Refer to Section 01 25 00.

**2.2 MATERIALS**

- A. System Description Includes: Provide exterior intumescent mastic type sprayed-on thin-film fireproofing.
  - 1. Color: Provide system with integral (or applied) color; color as indicated, as selected by Architect from manufacturer's full range of colors where not otherwise indicated.
- B. Regulatory Requirements: Comply with applicable codes for fireproofing.
  - 1. Fire Resistance Ratings: Comply with required ratings based on tests in accordance with ASTM E119.
  - 2. Surface Burning Characteristics: Maximum 25 flame spread and 450 smoke density when tested in accordance with ASTM E84.
  - 3. Volatile Organic Compound (VOC) Emissions: Provide materials conforming to applicable air quality management district limitations on VOC emissions.
- C. Design Criteria: Provide materials capable of attaining fire ratings as required by applicable codes for steel construction as indicated.
- D. Performance Criteria: Provide materials listed by UL or independent testing and inspection agency acceptable to applicable authorities.
- E. Fireproofing: Intumescent mastic type thin film fireproofing system for sprayed-on application resulting in hard surface which does not flake, dust, crack, nor delaminate.
  - 1. Manufacturer's standard materials, one or two-coat system, blended for even texture; with no asbestos.

2. Avoid materials that can leach harmful chemicals into ground water; do not allow potentially harmful chemicals to enter sewers nor storm drains.
3. Select materials that can be reused or recycled and materials with significant percentage of recycled content; set specific recycled content percentages for individual materials; avoid materials difficult to recycle.

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- A. Comply with manufacturer's recommendations for preparation of surfaces to receive thin-film intumescent fireproofing.
- B. Protect adjacent surfaces and equipment from damage by over-spray, fallout, and dusting; mask adjacent work as required.
- C. Provide temporary enclosure to prevent spray from contaminating air.
- D. Close off and seal duct work in areas where fireproofing is being applied.
- E. Clean substrate of dirt, dust, grease, oil, loose material, paints, primers, and other matter which affects bond of fireproofing.
- F. Remove incompatible materials that affect bond by scraping, brushing, scrubbing or sand blasting.
- G. Verify bond requirements and compatibility of surfaces to receive fireproofing before application of fireproofing.
  1. Where substrate is questionable provide testing as necessary. Where bond is questionable, provide barrier coat ensuring bond.
- H. Ensure ducts, piping, equipment and items that could interfere with application of fireproofing are not positioned until fireproofing work is completed.

### **3.2 APPLICATION**

- A. Mix and apply fireproofing in strict accordance with manufacturer's recommendations.
  1. Color: Color as required to match approved samples, uniform throughout, free of visible irregularities.
- B. Apply fireproofing in sufficient thickness and density to achieve required fire ratings.
- C. Apply fireproofing over substrate, building to required thickness with as many passes or stages necessary to cover with monolithic blanket of uniform density, texture, and color matching approved sample.

**3.3 FIELD QUALITY CONTROL**

- A. Inspection and Testing: Comply with requirements of applicable authorities.
  - 1. Test intumescent fireproofing to ensure applied thickness and density meets fire rating requirements and reviewed test reports.
  - 2. Correct unacceptable work and pay for further testing required for acceptability of installation.
  - 3. Patch test areas as required to re-establish fireproofing integrity.

**3.4 CLEANING**

- A. Remove excess and over-spray, droppings and debris.
- B. Remove fireproofing from materials and surfaces not required to be fireproofed.

**3.5 PROTECTION**

- A. Protect applied fireproofing from damage by subsequent operations.

**END OF SECTION**