

1. General

1.1. SUMMARY

1.1.1. This Section includes requirements for supply and installation of clear intumescent fire protection for wood, meeting the requirements of building codes, insurance rating organizations, and authorities having jurisdiction.

1.2. RELATED REQUIREMENTS

1.2.1. Section 09 90 00 – Painting and Coating

1.2.2. Section 09 96 43 – Fire Retardant Coating

1.2.3. Section 09 96 46 – Intumescent Coating

1.3. REFERENCE STANDARDS

1.3.1. American Society for Testing and Materials (ASTM International):

1.3.1.1. ASTM E84 – 09, Standard Test Method for Surface Burning Characteristics of Building Materials.

1.3.1.2. ASTM D3363, Standard Test Method for Film Hardness by Pencil Test.

1.3.2. CAN/ULC S102-18, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

1.4. ADMINISTRATIVE REQUIREMENTS

1.4.1. Preconstruction Meetings: Arrange for a preconstruction meeting to confirm installation methods and materials in accordance with [Section 01 31 19 – Project Meetings], attended by [Constructor], installing [Subcontractor], Consultant and Owner.

1.5. SUBMITTALS

1.5.1. Provide required information in accordance with Section 01 33 00 – Submittal Procedures.

1.5.2. Action Submittals: Provide the following submittals before starting any work of this Section:

1.5.2.1. Product Data: Submit copies of manufacturer's product literature indicating specified materials, including listing of accessory materials required for complete installation and manufacturer's written installation instructions.

1.5.3. Informational Submittals: Provide the following submittals [when requested by the Consultant] [with required product data];

1.5.3.1. Manufacturer's certification indicating testing results showing compliance with listed performance standards.

1.5.3.2. Samples: Submit samples of intumescent coating on Wood Substrate

1.6. QUALITY ASSURANCE

1.6.1.Installation: Verify wood surfaces have been properly prepared, and install intumescent coatings in accordance with manufacturer's written recommendations published in their product technical literature and/or provided by manufacturer.

1.6.2.Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

1.6.2.1. Install Mock-Ups in areas designated by Architect, to demonstrate quality of materials and application.

1.6.2.2. Protect acceptable Mock-Ups during construction, Mock-Ups will be used as a standard for judging completeness and acceptance of work performed by this Section.

1.6.2.3. Refinish mock-up area as required to produce acceptable work.

1.6.2.4. Acceptance of Mock-Ups: Accepted Mock-Ups will form a part of final construction provided they are undisturbed at time of Substantial Performance.

1.7. DELIVERY, STORAGE, AND HANDLING

1.7.1.Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

1.7.2.Storage and Handling Requirements: Storage and Handling Requirements: Store materials in a clean, dry area in accordance with manufacturer's instructions; protect materials during handling and application to prevent damage or contamination.

1.8. SITE CONDITIONS.

1.8.1.Temperature: Maintain temperature of steel substrates and ambient air to a minimum of 10 degrees C (50 degrees F) during application and for 72 hours after application in accordance with Manufacturer's written instructions.

1.8.2.Ventilation: Provide a minimum of 4 air changes per hour during application and curing of fire retardant coating.

1.8.3.Relative Humidity: Limit relative humidity to a maximum of 85% RH during application and drying of intumescent coatings.

2. Products

2.1. MANUFACTURERS

2.1.1.Acceptable Manufacturer: Quantum Chemical, 780 458 3355, 15 Riel Drive, St. Albert, Alberta, Canada, T8N 3Z2. [No substitutions] [Substitutions accepted as follows:].

2.1.2.Substitutions: Consultant may consider additional manufacturers having similar products to Acceptable Products Manufacturers listed above provided they submit requests for substitution in accordance with Section 01 25 00 – Substitution Procedures before starting any work of this Section:

2.1.2.1.1. Do not use substitute materials to establish Bid Price.

- 2.1.2.1.2. Substitutions that appear as a part of the project without review and acceptance by the Consultant will be rejected, and replaced with one of the specified materials.

2.2. PERFORMANCE RERQUIREMENTS

2.2.1. Materials: [Description].

3. Spec Note: Use of a sealer coat may be required in order to build 5.5 mil dry film thickness. This will depend on the wood surface and application of a seal coat will have to be determined during mock-up construction.

3.1.1.1. Sealer

- 3.1.1.2. Use a seal coat of this product or other wood sealer approved by Quantum Chemical to ensure adequate surface film build if specified by Architect during Mock-Up approval.

3.1.1.3. Intumescent Coating.

- 3.1.1.3.1. Intumescent coating will meet Class A Flame Spread and Smoke Developed Rating as tested by Intertek Testing Services NA Ltd. or another certified, independent testing laboratory.

- 3.1.1.3.2. Intumescent coating will comply with all drawings and specifications and the following performance criteria:

- 3.1.1.3.2.1. ASTM E84 Flame Spread of 15 (Class A) and Smoke Developed Index of 220. (SafeCoat® Clear II applied at 200 sq. ft. per gallon on 3/8" douglas fir plywood)

- 3.1.1.3.2.2. CAN/ULC S102 Flame Spread of 15 (Class A) and Smoke Developed Index of 145. (SafeCoat® Clear II applied at 200 sq. ft. per gallon on douglas fir tongue and groove)

- 3.1.1.3.2.3. ASTM D3363 Pencil Hardness 2H

- 3.1.1.3.2.4. VOC Content: Part A - 0.45 g/l, Part B – 0.00 g/l.

- 3.1.1.3.2.5. Percent Solids by Weight; Part A – 97%, Part B 46%.

- 3.1.1.3.3. Basis of Design Product: Quantum Chemical, SafeCoat® Clear II.

4. Execution

4.1. PREPARATION

- 4.1.1. Surface Preparation: provide clean, dry surface free of contamination.

- 4.1.2. Provide drop cloths, masking, or other satisfactory protection for surfaces not to receive coating to prevent damage from overspray.

4.2. INSTALLATION

- 4.2.1. Comply with manufacturer's current instructions for equipment and application procedures.
- 4.2.2. Apply intumescent coating at 8 mil wet film thickness, 5.5 mil dry film thickness.
- 4.2.3. Provide a uniform finish matching system description submitted with Product Data and matching site applied mock-ups accepted by Consultant.

4.3. SITE QUALITY CONTROL

- 4.3.1. Site Quality Control Reporting: Submit a signed "Quality Control Report for SafeCoat® Products" available from Quantum Chemical, or a signed project summary report on the Quantum QA App available from Quantum Chemical.

4.4. CLOSEOUT ACTIVITIES

4.4.1. Protection

- 4.4.1.1. Areas subject to overspray that are to remain permanently exposed as detailed on the drawing, must be protected to prevent contact with intumescent material.

5. END OF SECTION