

SECTION 06073
FIRE RETARDANT TREATMENTPART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Fire retardant treatment for wood, including framing, decking, sheathing and other wood construction, not exposed to weather.

Specifier Note: Revise Paragraph below to suit project requirements. Add section numbers and titles per CSI MasterFormat and specifier's practice.

- B. Related Sections: Section(s) related to this section include:
1. Rough Carpentry: Division 6 Rough Carpentry Section.
 2. Finish Carpentry: Division 6 Finish Carpentry Section
 3. Architectural Woodwork: Division 6 Architectural Woodwork Section.

Specifier Note: Article below can be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This Article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section.

1.02 REFERENCES

- A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation. Most recent editions should be used.
- B. American Society for Testing and Materials (ASTM):
1. ASTM D 5516 Standard Test Method for Evaluating the Flexural Properties of Fire-Retardant Treated Softwood Plywood Exposed to Elevated Temperatures.
 2. ASTM D 5664 Standard Test Method for Evaluating the Effects of Fire-Retardant Treatments and Elevated Temperatures on Strength Properties of Fire-Retardant Treated Lumber.
 3. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.
- C. American Wood-Preservers' Association (AWPA):
1. AWPA Standard C20 Structural Lumber - Fire Retardant Treatment by Pressure Processes.

2. AWPA Standard C27 Plywood - Fire Retardant Treatment by Pressure Processes.
 3. AWPA Standard C31 Lumber Used Out of Contact with the Ground and Continuously Protected From Liquid Water - Treatment by Pressure Processes.
 4. AWPA Standard P5 Standard for Waterborne Preservatives.
 5. AWPA Standard P17 Fire Retardant Formulations.
 6. AWPA Use Category System, Appendix H.
 7. AWPA Use Category UC1.
 8. AWPA Use Category UC2.
- D. Military Specification (Mil. Spec.):
1. Mil. Spec. L-19140E Lumber and Plywood, Fire-Retardant Treated.
- E. National Fire Protection Association (NFPA):
1. NFPA 255 Standard Test Method for Surface Burning Characteristics of Building Materials.
- F. Underwriters Laboratories, Inc. (UL):
1. UL 723 Test for Surface Burning Characteristics of Building Materials.
 2. UL Building Materials Directory.

Specifier Note: Article below should be restricted to statements describing design or performance requirements and functional, not dimensional, tolerances of a complete system. Limit descriptions to composite and operational properties to extent necessary to link multiple components of a system together and to interface with other systems.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide fire retardant treatment which will perform in accordance with manufacturer's stated performance criteria without defects, damage or failure.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor either before, during or after construction. Coordinate this Article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data, including manufacturer's SPEC-DATA® product sheet, for specified products.
- C. Quality Assurance Submittals: Submit the following:
1. Test Report: Certified test report showing compliance with specified performance characteristics and physical properties. Include in test report certification that fire retardant solution does not contain ammonium phosphate.

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- a. Evaluation Report: National Evaluation Report
NER- 303 or ICBO ER-5755 indicating flamespread,
strength, corrosion and hygroscopic properties.
 2. Certificate: Certification from treatment plant certifying
wood treatment applied complies with Dricon fire
retardant treatment by Arch Wood Protection.
- D. Closeout Submittals: Submit the following:
1. Warranty: Warranty documents specified herein.

Specifier Note: Article below should include prerequisites, standards, limitations and criteria which establish an overall level of quality for products and workmanship for this section. Coordinate Article below with Division 1 Quality Assurance Section.

1.05 QUALITY ASSURANCE

- A. Wood Treatment Plant Qualifications: Wood treatment plant experienced in performing work of this section which has specialized in the treatment of wood similar to that required for this project and a plant licensed by Arch Wood Protection.

Specifier Note: Retain Paragraph below to suit project requirements; otherwise, delete Paragraph below.

1. Certificate: When requested, submit certificate indicating qualification.

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements. General statements to comply with a particular code are typically addressed in Conditions of the Contract. Repetitive statements should be avoided. Edit paragraph below to suit project requirements.

- B. Regulatory Requirements: Provide fire retardant treatment which complies with the following regulatory requirements:
1. New York City MEA (199-81-M, 200-81-M).
 2. FHA Minimum Property Standard #2600.
 3. HUD Materials Release 1261.
 4. Wisconsin Material Approval 960073-W.

Specifier Note: Article below should include special and unique requirements. Coordinate Article below with Division 1 Product Requirements Sections. Coordinate Article below with related Division 6 Wood & Plastics Sections.

1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.

Specifier Note: Coordinate Article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section.

1.07 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under the Contract Documents.

Specifier Note: Coordinate Paragraph below with manufacturer's warranty requirements. Arch Wood Protection offers a 40 year roof warranty against heat degradation. Consult with manufacturer for warranty requirements.

1. Warranty Period: [Specify term.] years commencing on Date of Substantial Completion.

PART 2 PRODUCTS

Specifier Note: Retain Article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" may cause ambiguity in the specifications. Such phrases require verification (procedural, legal, regulatory and responsibility) for determining "or equal" products.

2.01 FIRE RETARDANT TREATMENT

- A. Manufacturer: Arch Wood Protection.

Specifier Note: Paragraph below is an addition to CSI Section Format. Retain or delete Paragraph below per project requirements and specifier's practice.

1. Contact: 1955 Lake Park Drive, Suite 250, Smyrna, GA 30080; Telephone: (770) 801-6600; Fax: (770) 801-1990.
- B. Product Treatment: Dricon fire retardant treatment for wood is produced by licensed treatment plant. Fire retardant chemical shall provide protection against termites and fungal decay, shall be registered for use as a wood preservative by the U.S. Environmental Protection Agency (EPA), shall comply with formulation FR-1 of the current edition of AWPA Standard P17, and shall be free of halogens, sulfates and ammonium phosphate. Treated wood shall have a flame-spread of less than 25 when tested in an extended 30 minute tunnel test in accordance with ASTM E 84, NFPA 255 or UL 723.

1. Corrosion Properties: Fire retardant treated wood in contact with carbon steel, galvanized steel, aluminum, copper and red brass shall exhibit corrosion rates less than 1 mil (0.025 mm) per year when tested in accordance with Fed. Spec. MIL-L-19140, Paragraph 4.6.5.2.
 2. Testing: Testing on fire performance, strength and corrosion properties of fire retardant treated wood shall be recognized by issuance of a National Evaluation Services Report.
- C. Fire Retardant Treatment: Manufacturer's solution for fire retardant treatment of wood.
1. Lumber Treatment Standard: Comply with AWPA Standard C20, current edition, and Appendix H of AWPA Use Category System.
 2. Plywood Treatment Standard: Comply with AWPA Standard C27, current edition, and Appendix H of AWPA Use Category System.

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitution Procedures) Section.

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

Specifier Note: Edit Article below to suit project requirements. Specify only those species of wood and plywood eligible for UL listing in UL Building Materials Directory. Lumber species include Douglas fir, redwood, hem/fir, spruce/pine/fir, southern pine, white pine, ponderosa pine, western red cedar, red oak, yellow poplar. Plywood species include: Douglas fir, redwood, southern pine, lauan. When using fire retardant chemicals in roof applications, local building code ventilation requirements need to be verified and addressed; coordinate with Division 7 Roofing Sections.

2.03 RELATED WOOD MATERIALS

- A. General: Refer to Division 6 Wood & Plastics Sections for related wood materials specified herein.
- B. Moisture Content: Provide fire retardant treated wood with moisture content as follows:
1. Lumber: Dried to a maximum moisture content of 19% after treatment.
 2. Plywood: Dried to a maximum moisture content of 15% after treatment.
- C. Lumber: Dressed lumber, S4S, unless otherwise indicated.
1. Light Framing:
 - a. Studs: [Specify species, grade and dimensions].
 - b. Other Light Framing: [Specify thickness and face veneer grade(s)].

- D. Plywood:
1. Performance Rated Plywood: [Specify thickness and face veneer grade(s)].
 2. Plywood: [Specify thickness and face veneer grade(s)].

2.04 SOURCE QUALITY

- A. Source Quality: Obtain fire retardant treatment from a single manufacturer.

Specifier Note: Coordinate Paragraph below with Division 1 Quality Control, Source Quality Control Section.

- B. Tests, Inspections: [Specify special plant and jobsite testing where required.].

PART 3 EXECUTION

Specifier Note: Article below is an addition to the CSI Section Format. Revise Article requirements and specifier's practice.

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, for fire retardant treatment installation.

Specifier Note: Coordinate Article below with Division 6 Wood Sections.

3.02 APPLICATION

- A. Fire Retardant Treatment: Apply a fire retardant treatment in accordance with requirements of applicable codes and manufacturer's requirements.

3.03 PROTECTION

- A. Protection: Protect fire retardant treated wood from damage during construction.