Listing and Technical Evaluation Report™

A Duly Authenticated Report from an Approved Agency

Report No: 2303-18

Issue Date: July 26, 2023

Revision Date: August 22, 2025

Subject to Renewal: October 1, 2026

FRX Fire Protection Wood Treatment

Trade Secret Report Holder:

Chemical Technologies Holding Corporation

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17817 Saint Rose Rd
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Turnkey Lumber Inc
179 NH Route 12N
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CSI Designations:

DIVISION: 06 00 00 - WOOD, PLASTICS AND COMPOSITES

Section: 06 05 73 - Fire Retardant Wood Treatment of Wood Products
Section: 06 11 00 - Wood Framing
Section: 06 17 00 - Shop-Fabricated Structural Wood

1 Innovative Product Evaluated[1]

1.1 FRX Fire Protection Wood Treatment (FRX FRTW)

2 Product Description and Materials

2.1 The innovative product evaluated in this report is shown in **Figure 1** and is described in **Table 1**.

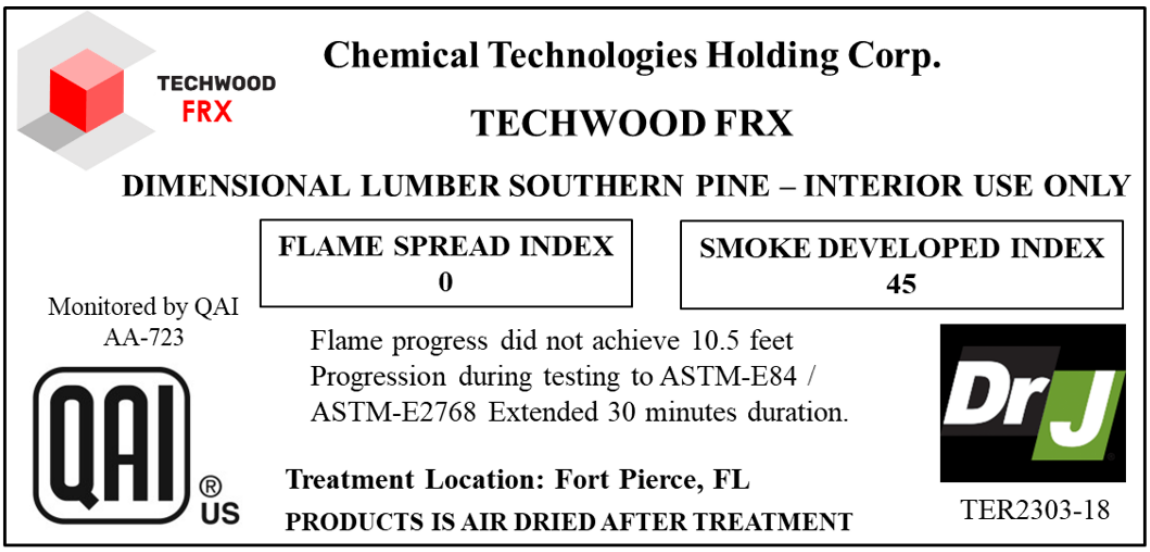

Figure 1. Example of FRX Fire Protection Wood Treatment (FRX FRTW) Acceptable Product Stamp

Table 1. Product Information

Product	Description	Wood Products Covered	Spray Information	AWPA Use Categories
FRX FRTW	A factory applied wood protection that uses a proprietary formulation of Disodium Octaborate Tetrahydrate (DOT) and fire-retardant additives to permanently impregnate wood members by zero to low-pressure chemical delivery.	Southern Pine (SP) SP Plywood	For SP species, FRX FRTW provides a minimum absorption rate of 23 g/ft^2 during soaking process and coating process.	UC1 – Interior/Dry – millwork and finishing UC2 – Interior/Damp – interior beams, timbers, flooring, framing, millwork, and sill plates.

2.2 As needed, review material properties for design in **Section 6** and the regulatory evaluation in **Section 8**.

3 Definitions[2]

3.1 New Materials[3] are defined as building materials, equipment, appliances, systems, or methods of construction, not provided for by prescriptive and/or legislatively adopted regulations, known as alternative materials.[4] The design strength and permissible stresses shall be established by tests[5] and/or engineering analysis.[6]

3.2 Duly authenticated reports[7] and research reports[8] are test reports and related engineering evaluations that are written by an approved agency[9] and/or an approved source.[10]

3.2.1 These reports utilize intellectual property and/or trade secrets to create public domain material properties for commercial end-use.

3.2.1.1 This report protects confidential Intellectual Property and trade secretes under the regulation, 18.US.Code.90, also known as Defend Trade Secrets Act of 2016 (DTSA).[11]

3.3 An approved agency is *"approved"* when it is ANAB ISO/IEC 17065 accredited. DrJ Engineering, LLC (DrJ) is accredited and listed in the ANAB directory.

3.4 An approved source is *"approved"* when a professional engineer (i.e., Registered Design Professional, hereinafter RDP) is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the state legislature via its professional engineering regulations.[12]

3.5 Testing and/or inspections conducted for this duly authenticated report were performed by an ISO/IEC 17025 accredited testing laboratory, an ISO/IEC 17020 accredited inspection body, and/or a licensed RDP.

3.5.1 The Center for Building Innovation (CBI) is ANAB[13] ISO/IEC 17025 and ISO/IEC 17020 accredited.

3.6 The regulatory authority shall enforce[14] the specific provisions of each legislatively adopted regulation. If there is a non-conformance, the specific regulatory section and language of the non-conformance shall be provided in writing[15] stating the nonconformance and the path to its cure.

3.7 The regulatory authority shall accept duly authenticated reports from an approved agency and/or an approved source with respect to the quality and manner of use of new materials or assemblies as provided for in regulations regarding the use of alternative materials, designs, or methods of construction.[16]

3.8 ANAB is an International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MLA) signatory. Therefore, recognition of certificates and validation statements issued by conformity assessment bodies accredited by all other signatories of the IAF MLA with the appropriate scope shall be approved.[17] Thus, all ANAB ISO/IEC 17065 duly authenticated reports are approval equivalent,[18] and can be used in any country that is an MLA signatory found at this link: https://iaf.nu/en/recognised-abs/

3.9 Approval equity is a fundamental commercial and legal principle.[19]

4 Applicable Local, State, and Federal Approvals; Standards; Regulations[20]

4.1 *Local, State, and Federal*

4.1.1 Approved in all local jurisdictions pursuant to ISO/IEC 17065 duly authenticated report use, which includes, but is not limited to, the following featured local jurisdictions: Austin, Baltimore, Broward County, Chicago, Clark County, Dade County, Dallas, Detroit, Denver, DuPage County, Fort Worth, Houston, Kansas City, King County, Knoxville, Las Vegas, Los Angeles City, Los Angeles County, Miami, Nashville, New York City, Omaha, Philadelphia, Phoenix, Portland, San Antonio, San Diego, San Jose, San Francisco, Seattle, Sioux Falls, South Holland, Texas Department of Insurance, and Wichita.[21]

4.1.2 Approved in all state jurisdictions pursuant to ISO/IEC 17065 duly authenticated report use, which includes, but is not limited to, the following featured states: California, Florida, New Jersey, Oregon, New York, Texas, Washington, and Wisconsin.[22]

4.1.3 Approved by the Code of Federal Regulations Manufactured Home Construction: Pursuant to Title 24, Subtitle B, Chapter XX, Part 3282.14[23] and Part 3280[24] pursuant to the use of ISO/IEC 17065 duly authenticated reports.

4.1.4 Approved means complying with the requirements of local, state, or federal legislation.

4.2 *Standards*

4.2.1 *ANSI/AWC NDS: National Design Specification (NDS) for Wood Construction*

4.2.2 *ASTM D198: Standard Test Methods of Static Tests of Lumber in Structural Sizes*

4.2.3 *ASTM D4587: Standard Practice For Fluorescent UV-Condensation Exposures Of Paint And Related Coatings*

4.2.4 *ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials*

4.2.5 *ASTM E2768: Standard Test Method for Extended Duration Surface Burning Characteristics of Building Materials (30 min Tunnel Test)*

4.2.6 *AWPA A3: Standard Methods for Determining Penetration of Preservatives and Fire Retardants*

4.2.7 *AWPA E12: Standard Method of Determining Corrosion of Metal in Contact with Treated Wood*

4.2.8 *AWPA M4: Standard for the Care of Preservative-Treated Wood Products*

4.2.9 *DOC PS 1: Structural Plywood*

4.2.10 *DOC PS 2: Performance Standard for Wood-based Structural-use Panels*

4.2.11 *NFPA 255: Standard Method of Test of Surface Burning Characteristics of Building Materials*

4.2.12 *UBC 8-1: Surface Burning Characteristics of Building Materials*

4.2.13 *UL 723: Test for Surface Burning Characteristics of Building Materials*

4.3 *Regulations*

4.3.1 *IBC – 15, 18, 21, 24: International Building Code®*

4.3.2 *IRC – 15, 18, 21, 24: International Residential Code®*

4.3.3 *CBC – 19, 22: California Building Code[25] (Title 24, Part 2)*

4.3.4 *CRC – 19, 22: California Residential Code[25] (Title 24, Part 2.5)*

5 Listed[26]

5.1 Equipment, materials, products, or services included in a List published by a nationally recognized testing laboratory (i.e., CBI), an approved agency (i.e., CBI and DrJ), and/or and approved source (i.e., DrJ), or other organization(s) concerned with product evaluation (i.e., DrJ), that maintains periodic inspection (i.e., CBI) of production of listed equipment or materials, and whose listing states either that the equipment or material meets nationally recognized standards or has been tested and found suitable for use in a specified manner.

6 Tabulated Properties Generated from Nationally Recognized Standards

6.1 FRX Fire Protection Wood Treatment is a protective treatment for solid sawn SP and SP plywood to be used as floor, roof, and wall structural members.

6.1.1 Structural applications include, but are not limited to, use as beams, columns, headers, joists, rafters, wall studs and chords, and webs of trusses.

6.1.2 Use as sill plates in direct contact with concrete or masonry is approved.

6.2 FRX Fire Protection Wood Treatment products are suitable for above ground applications not subject to contact with liquid water.

6.2.1 When used in exterior applications, products treated with FRX Fire Protection Wood Treatment must be protected from direct wetting. ***Note:*** A minimum of one coat of primer and two coats of exterior grade finish paint, or the equivalent, shall be used.

6.3 *Fire Performance*

6.3.1 Solid sawn wood products protected by FRX Fire Protection Wood Treatment were evaluated in accordance with ASTM E84, with the requirements that the test shall be continued for an additional 20 minute period and the flame front shall not progress more than 10 1/2' (3,200 mm) beyond the centerline of the burners at any time during the test (ASTM E2768), as specified in IBC Section 2303.2 and 2021 IRC Section R802.1.5.

6.3.2 Surface burning characteristics are provided in **Table 2**.

Table 2. Surface Burning Characteristics of FRX Fire Protection Wood Treatment Meeting the Requirements of ASTM E2768

Wood Product	Flame Spread Index	Smoke Developed Index	Minimum Thickness of FRX FRTW (in.)
SP Dimensional Lumber	≤ 25	≤ 450	1 1/2
SI: 1 in = 25.4 mm			

6.3.3 The engineered wood products protected by FRX Fire Protection Wood Treatment, evaluated in accordance with ASTM E84, are shown in **Table 3**.

Table 3. Surface Burning Characteristics of FRX Fire Protection Wood Treatment Meeting the Requirements of ASTM E84

Wood Product	Flame Spread Index	Smoke Developed Index	Minimum Thickness of FRX FRTW (in)
SP Plywood	≤ 25	≤ 450	19/32
SI: 1 in = 25.4 mm 1. FRX Fire Protection Wood Treatment coating conditioned for a minimum of 21 days			

6.4 Field cuts, notches, or bored holes must be site treated in accordance with the manufacturer instructions and AWPA M4, in accordance with IRC Section R304.1.1[27] and IRC Section R305.1.2.[28]

6.5 *Corrosion*

6.5.1 Products protected by FRX Fire Protection Wood Treatment were tested to determine the amount of corrosion that metals would exhibit when indirect contact with FRX Fire Protection Wood Treatment products for extended periods. This testing was conducted using AWPA test E12.

6.5.2 The assessment is provided in **Table 4**.

Table 4. Corrosion Testing[1]

Lumber Species	Metal	Contact
Southern Pine (SP)	Mild Carbon Steel	Acceptable if >10% (nominal) coating
	HDG Steel	Acceptable
	Electro Galvanized Steel	Acceptable
	Stainless Steel	Acceptable
	Aluminum	Acceptable
	Brass	Acceptable

1. FRX Fire Protection Wood Treatment coating conditioned for a minimum of 21 days

6.6 *Design*

6.6.1 An ASTM D198 test was conducted to determine if there were any changes in the structural capabilities of wood products treated with FRX Fire Protection Wood Treatment, from wood products that had not been treated. It was determined that were no significant differences in the Modulus of Elasticity, Modulus of Rupture, Energy, or any change in Span Tables. As such, allowable design stresses for FRX Fire Protection Wood Treatment protected wood products for dry conditions of use, are the same as the wood product before treatment.

6.6.2 FRX Fire Protection Wood Treatment is a factory-treated wood protection that uses Disodium Octaborate Tetrahydrate (DOT), biocides for mold abatement, and fire-retardant additives to permanently impregnate members by zero to low-pressure chemical delivery.

6.6.2.1 Because the wood is not incised, the NDS Incising Factor in NDS Section 4.3.8 is not applicable.

6.6.3 Maximum duration of load design stress increase shall not exceed 1.6. Duration of load design stress increase equal to or less than 1.6 shall be in accordance with NDS Section 2.3.4.

6.6.4 The design provisions for wood construction noted in IBC Section 2302.1 and IRC Section R301.1.3 apply to FRX Fire Protection Wood Treatment, unless otherwise noted in this report.

6.6.5 *Connections:*

6.6.5.1 Lateral loads for nails, screws and bolts, and withdrawal loads for nails and screws installed in FRX Fire Protection Wood Treatment, shall be in accordance with the NDS using the published values of the corresponding species Specific Gravity (SG).

6.6.6 *Fasteners:*

6.6.6.1 Fasteners used with FRX Fire Protection Wood Treatment shall be in accordance with IBC Section 2304.10.5 and IRC Section R304.3,[29] except that aluminum fasteners are permitted when the products are used in interior applications.

6.7 The exception noted in IBC Section 2304.10.6.1 allows plain carbon steel fasteners, including nuts and washers, in SBX/DOT and zinc borate preservative-treated wood in an interior, dry environment.

6.8 Where the application falls outside of the performance evaluation, conditions of use, and/or installation requirements set forth herein, alternative techniques shall be permitted in accordance with accepted engineering practice and experience. This includes but is not limited to the following areas of engineering: mechanics or materials, structural, building science, and fire science.

7 Certified Performance[30]

7.1 All construction methods shall conform to accepted engineering practices to ensure durable, livable, and safe construction and shall demonstrate acceptable workmanship reflecting journeyman quality of work of the various trades.[31]

7.2 The strength and rigidity of the component parts and/or the integrated structure shall be determined by engineering analysis or by suitable load tests to simulate the actual loads and conditions of application that occur.[32]

8 Regulatory Evaluation and Accepted Engineering Practice

8.1 FRX Fire Protection Wood Treatment complies with the following legislatively adopted regulations and/or accepted engineering practice for the following reasons:

8.1.1 FRX Fire Protection Wood Treatment has been evaluated to determine its suitability to treat structural wood products used in above ground applications where they are required by code to provide the following:

8.1.1.1 Flame spread index and smoke developed index properties where required by IBC Section 2303.2, IRC Section R302.9, and 2021 IRC Section R802.1.5.

8.1.1.2 Flexure (MOR/MOE) of solid sawn and engineered lumber after treating in accordance with ASTM D198.

8.2 Any building code, regulation and/or accepted engineering evaluations (i.e., research reports, duly authenticated reports, etc.) that are conducted for this Listing were performed by DrJ, which is an ISO/IEC 17065 accredited certification body and a professional engineering company operated by RDP or approved sources. DrJ is qualified[33] to practice product and regulatory compliance services within its scope of accreditation and engineering expertise,[34] respectively.

8.3 Engineering evaluations are conducted with DrJ's ANAB accredited ICS code scope of expertise, which is also its areas of professional engineering competence.

8.4 Any regulation specific issues not addressed in this section are outside the scope of this report.

9 Installation

9.1 Installation shall comply with the approved construction documents, the manufacturer installation instructions, this report, and the applicable building code.

9.2 In the event of a conflict between the manufacturer installation instructions and this report, contact the manufacturer for counsel on the proper installation method.

9.3 Products treated with FRX Fire Protection Wood Treatment shall be installed in accordance with the applicable code, the approved construction documents, this report, the manufacturer instructions, and standard framing practice as applied to SP lumber and SP Plywood for floor, wall, and roof structural members.

10 Substantiating Data

10.1 Testing has been performed under the supervision of a professional engineer and/or under the requirements of ISO/IEC 17025 as follows:

10.1.1 Flame spread index and smoke developed index testing in accordance with ASTM E84 and/or ASTM E2768

10.1.2 Reaction with metals testing in accordance with AWPA E12

10.2 Information contained herein may include the result of testing and/or data analysis by sources that are approved agencies, approved sources, and/or an RDP. Accuracy of external test data and resulting analysis is relied upon.

10.3 Where applicable, testing and/or engineering analysis are based upon provisions that have been codified into law through state or local adoption of regulations and standards. The developers of these regulations and standards are responsible for the reliability of published content. DrJ's engineering practice may use a regulation-adopted provision as the control. A regulation-endorsed control versus a simulation of the conditions of application to occur establishes a new material as being equivalent to the regulatory provision in terms of quality, strength, effectiveness, fire resistance, durability, and safety.

10.4 The accuracy of the provisions provided herein may be reliant upon the published properties of raw materials, which are defined by the grade mark, grade stamp, mill certificate, or duly authenticated reports from approved agencies and/or approved sources provided by the supplier. These are presumed to be minimum properties and relied upon to be accurate. The reliability of DrJ's engineering practice, as contained in this duly authenticated report, may be dependent upon published design properties by others.

10.5 *Testing and Engineering Analysis*

10.5.1 The strength, rigidity, and/or general performance of component parts and/or the integrated structure are determined by suitable tests that simulate the actual conditions of application that occur and/or by accepted engineering practice and experience.[35]

10.6 Where additional condition of use and/or regulatory compliance information is required, please search for FRX Fire Protection Wood Treatment on the DrJ Certification website.

11 Findings

11.1 As outlined in **Section 6**, FRX Fire Protection Wood Treatment has performance characteristics that were tested and/or meet applicable regulations. In addition, they are suitable for use pursuant to its specified purpose.

11.2 When used and installed in accordance with this duly authenticated report and the manufacturer installation instructions, FRX Fire Protection Wood Treatment shall be approved for the following applications:

11.2.1 FRX Fire Protection Wood Treatment protection does not affect the allowable design stresses permitted for untreated lumber as applied to solid sawn lumber.

11.2.2 Use as sill plates in direct contact with concrete or masonry is approved.

11.2.3 FRX Fire Protection Wood Treatment protected products are suitable for above ground applications not subject to continuous contact with liquid water.

11.2.4 When used in exterior applications, products coated with FRX Fire Protection Wood Treatment must be protected from direct wetting. Flashing is required for horizontal applications. A minimum of one coat of primer and two coats of finish paint or equivalent shall be used.

11.2.5 SP lumber products protected with FRX Fire Protection Wood Treatment meet the requirements where surface burning characteristics are required to be tested by IBC Section 2303.2 and 2021 IRC Section R802.1.5 in accordance with ASTM E84 continued for an additional 20-minute period and the flame front shall not progress more than 10.5' (3,200 mm) beyond the center line of the burners at any time during the test, and ASTM E2768, as noted in **Table 2**.

11.3 Any application specific issues not addressed herein can be engineered by an RDP. Assistance with engineering is available from Chemical Technologies Holding Corporation.

11.3.1 IBC Section 2303.2.3, in pertinent part, states:

> **2303.2.3 Other Means During Manufacture.** For wood products impregnated with chemicals by other means during manufacture, the treatment shall be an integral part of the manufacturing process of the wood product. The treatment shall provide permanent protection to all surfaces of the wood product.

11.3.2 See **Appendix A. Impregnation Testing**.

11.4 IBC Section 104.2.3[36] (IRC Section R104.2.2[37] and IFC Section 104.2.3[38] are similar) in pertinent part state:

> **104.2.3 Alternative Materials, Design and Methods of Construction and Equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative is not specifically prohibited by this code and has been approved.

11.5 **Approved:**[39] Building regulations require that the building official shall accept duly authenticated reports.[40]

11.5.1 An approved agency is *"approved"* when it is ANAB ISO/IEC 17065 accredited.

11.5.2 An approved source is *"approved"* when an RDP is properly licensed to transact engineering commerce.

11.5.3 Federal law, Title 18 US Code Section 242, requires that, where the alternative product, material, service, design, assembly, and/or method of construction is not approved, the building official shall respond in writing, stating the reasons why the alternative was not approved. Denial without written reason deprives a protected right to free and fair competition in the marketplace.

11.6 DrJ is a licensed engineering company, employs licensed RDPs and is an ANAB Accredited Product Certification Body – Accreditation #1131.

11.7 Through the IAF Multilateral Arrangement (MLA), this duly authenticated report can be used to obtain product approval in any jurisdiction or country because all ANAB ISO/IEC 17065 duly authenticated reports are equivalent.[41]

12 Conditions of Use

12.1 Material properties shall not fall outside the boundaries defined in **Section 6**.

12.2 As defined in **Section 6**, where material and/or engineering mechanics properties are created for load resisting design purposes, the resistance to the applied load shall not exceed the ability of the defined properties to resist those loads using the principles of accepted engineering practice.

12.3 FRX Fire Protection Wood Treatment treated wood products shall be kept dry prior to installation. If not immediately covered with felt, roofing, or other weather barriers during installation, it must be protected by a temporary weather resistant covering. If FRX Fire Protection Wood Treatment treated wood products become wet during construction, the products shall be dried to nineteen percent (19%) maximum moisture content before enclosure.

12.4 The service conditions for FRX Fire Protection Wood Treatment protected products are any above ground application not subject to exposure to liquid water, unless painted in accordance with **Section 6.2.1**.

12.5 Fastener design values shall be determined using the specific gravity of the lumber species used in the treated product.

12.6 Cutting and notching of products treated with FRX Fire Protection Wood Treatment is permitted where allowed by the applicable building code, the manufacturer recommendations, this report, or where the effects of such alterations are specifically considered in the design of the member by an RDP.

12.7 When required by adopted legislation and enforced by the building official, also known as the Authority Having Jurisdiction (AHJ) in which the project is to be constructed:

12.7.1 Any calculations incorporated into the construction documents shall conform to accepted engineering practice and, when prepared by an approved source, shall be approved when signed and sealed.

12.7.2 This report and the installation instructions shall be submitted at the time of permit application.

12.7.3 This innovative product has an internal quality control program and a third-party quality assurance program.

12.7.4 At a minimum, this innovative product shall be installed per **Section 9**.

12.7.5 The review of this report by the AHJ shall comply with IBC Section 104.2.3.2 and IBC Section 105.3.1.

12.7.6 This innovative product has an internal quality control program and a third party quality assurance program in accordance with IBC Section 104.7.2, IBC Section 110.4, IBC Section 1703, IRC Section R104.7.2, and IRC Section R109.2.

12.7.7 The application of this innovative product in the context of this report is dependent upon the accuracy of the construction documents, implementation of installation instructions, inspection as required by IBC Section 110.3, IRC Section R109.2, and any other regulatory requirements that may apply.

12.8 The approval of this report by the AHJ shall comply with IBC Section 1707.1, where legislation states in part, *"the building official shall make, or cause to be made, the necessary tests and investigations; or the building official shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in Section 104.2.3"*, all of IBC Section 104, and IBC Section 105.3.

12.9 Design loads shall be determined in accordance with the regulations adopted by the jurisdiction in which the project is to be constructed and/or by the building designer (i.e., owner or RDP).

12.10 The actual design, suitability, and use of this report for any particular building, is the responsibility of the owner or the authorized agent of the owner.

13 Identification

13.1 FRX Fire Protection Wood Treatment (FRX FRTW), as listed in **Section 1.1**, is identified by a label on the board or packaging material bearing the manufacturer name, product name, this report number, and other information to confirm code compliance.

13.2 Additional technical information can be found at www.techwoodtreatments.com.

14 Review Schedule

14.1 This report is subject to periodic review and revision. For the latest version, visit www.drjcertification.org.

14.2 For information on the status of this report, please contact DrJ Certification.

Appendix A. Impregnation Testing

1. Chemical impregnation in treated wood by the proprietary application process and procedures recommended for FRX Fire Protection Wood Treatment by Chemical Technologies Holding Corporation.
   1.1. FRX Fire Protection Wood Treatment is a factory-treated wood protection that uses a proprietary formulation of Disodium Octaborate Tetrahydrate (DOT), biocides for mold abatement, and fire-retardant additives to permanently impregnate members by zero to low-pressure chemical delivery.
   1.2. The results of the proprietary application process and procedures are found in Figure 1, below.
   1.3. The photos show the penetration of borate and phosphorous chemicals into regular framing lumber tested at two-week and four-week periods after initial treatment.
   1.4. Both two-part tracing reagents cause color dye reactions showing the chemicals penetration depth of $^{3}/_{16}$" – $^{9}/_{32}$" with both boron and phosphorus chemicals.
   1.5. This demonstrates that FRX Fire Protection Wood Treatment provides permanent protection to all surfaces of the wood product.

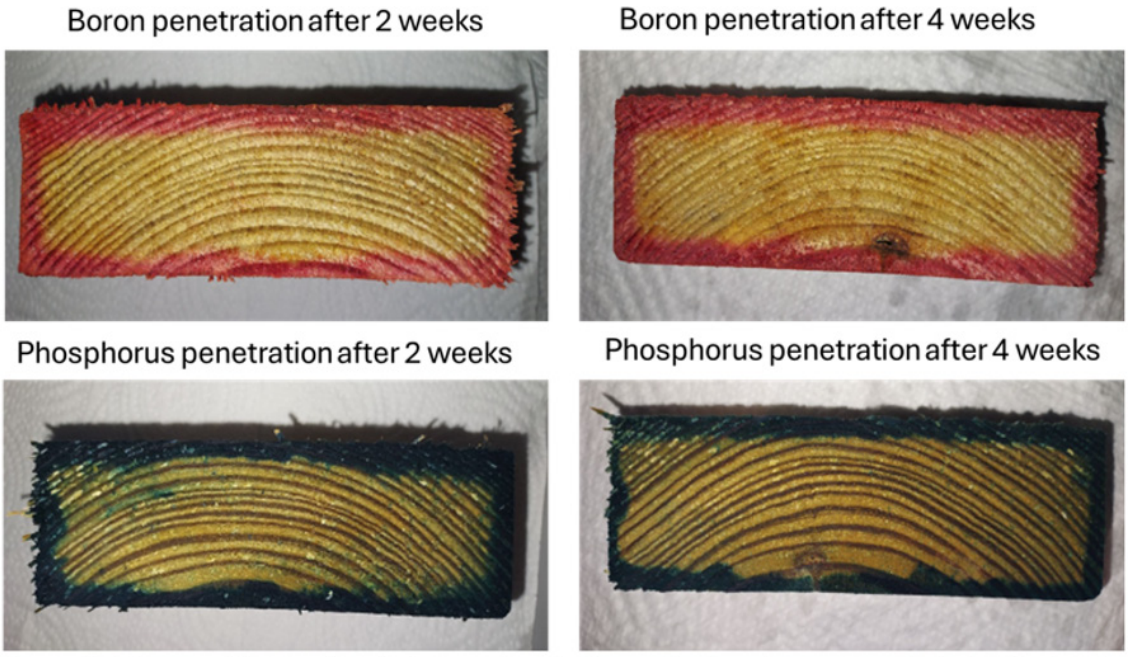

Figure 1. Dye reaction method shows chemical penetration in wood substrate. Red color indicates borate penetration, while dark blue color indicates phosphates penetration following AWPA A3-05 Standard Methods for Determining Penetration of Preservatives and Fire Retardants.

Issue Date: August 22, 2025
Subject to Renewal: October 1, 2026

CBC and CRC Supplement to Report Number 2303-18

REPORT HOLDER: Chemical Technologies Holding Corporation

1 Evaluation Subject

1.1 FRX Fire Protection Wood Treatment (FRX FRTW)

2 Purpose and Scope

2.1 Purpose

2.1.1 The purpose of this Report Supplement is to show FRX Fire Protection Wood Treatment, recognized in Report Number 2303-18 has also been evaluated for compliance with the codes listed below.

2.2 *Applicable Code Editions*

2.2.1 *CBC—19, 22: California Building Code (Title 24, Part 2)*

2.2.2 *CRC—19, 22: California Residential Code (Title 24, Part 2.5)*

3 Conclusions

3.1 FRX Fire Protection Wood Treatment, described in Report Number 2303-18, complies with the CBC and CRC and is subject to the conditions of use described in this supplement.

3.2 Where there are variations between the IBC and IRC and the CBC and CRC applicable to this report, they are listed here:

3.2.1 CBC Section 104.6 replaces IBC Section 104.4.

3.2.2 CBC Section 104.11 replaces IBC Section 104.2.3 and Section 104.2.3.2.

3.2.3 CBC Section 1707.1 replaces IBC Section 1707.1.

3.2.4 CBC Section 2303.2.2 replaces IBC Section 2303.2.3.

3.2.5 CBC Section 2306.3 replaces IBC Section 2306.3.

3.2.6 CRC Section R104.6 replaces IBC Section R104.4.

3.2.7 CRC Section R104.11 replaces IRC Section R104.2.2.

3.2.8 CRC Section R301.1.3 replaces IRC Section R301.1.3.

3.2.9 CRC Section R317.1.1 replaces IRC Section R304.1.1.

3.2.10 CRC Section R317.3 replaces IRC Section R304.3.

3.2.11 CRC Section R318.1.2 replaces IRC Section R305.1.2.

4 Conditions of Use

4.1 FRX Fire Protection Wood Treatment, described in Report Number 2303-18, must comply with all of the following conditions:

4.1.1 All applicable sections in Report Number 2303-18.

4.1.2 The design, installation, and inspections are in accordance with additional requirements of CBC and CRC, as applicable.

Notes

1 For more information, visit drjcertification.org or call us at 608-310-6748.

2 Capitalized terms and responsibilities are defined pursuant to the applicable building code, applicable reference standards, the latest edition of TPI 1, the NDS, AISI S202, US professional engineering law, Canadian building code, Canada professional engineering law, Qualtim External Appendix A: Definitions/Commentary, Qualtim External Appendix B: Project/Deliverables, Qualtim External Appendix C: Intellectual Property and Trade Secrets, definitions created within Design Drawings and/or definitions within Reference Sheets. Beyond this, terms not defined shall have ordinarily accepted meanings as the context implies. Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

3 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1702

4 Alternative Materials, Design and Methods of Construction and Equipment: The provisions of any regulation code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by a regulation. Please review https://www.justice.gov/atr/mission and https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#104.2.3

5 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1706.2:~:text=the%20design%20strengths%20and%20permissible%20stresses%20shall%20be%20established%20by%20tests

6 The design strengths and permissible stresses of any structural material shall conform to the specifications and methods of design of accepted engineering practice. https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1706.1:~:text=Conformance%20to%20Standards-,The%20design%20strengths%20and%20permissible%20stresses,-of%20any%20structural

7 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1:~:text=the%20building%20official%20shall%20make%2C%20or%20cause%20to%20be%20made%2C%20the%20necessary%20tests%20and%20investigations%3B%20or%20the%20building%20official%20shall%20accept%20duly%20authenticated%20reports%20from%20approved%20agencies%20in%20respect%20to%20the%20quality%20and%20manner%20of%20use%20of%20new%20materials%20or%20assemblies%20as%20provided%20for%20in%20Section%20104.2.3.

8 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1703.4.2

9 https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#approved_agency

10 https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#approved_source

11 https://www.law.cornell.edu/uscode/text/18/1832 (b) Any organization that commits any offense described in subsection (a) shall be fined not more than the greater of $5,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided. The federal government and each state have a public records act. To follow DTSA and comply state public records and trade secret legislation requires approval through ANAB ISO/IEC 17065 accredited certification bodies or approved sources. For more information, please review this website: Intellectual Property and Trade Secrets.

12 https://www.nspe.org/resources/issues-and-advocacy/professional-policies-and-position-statements/regulation-professional AND https://apassociation.org/list-of-engineering-boards-in-each-state-archive/

13 https://www.cbitest.com/accreditation/

14 https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#104.1:~:text=directed%20to%20enforce%20the%20provisions%20of%20this%20code

15 https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#104.2.3 AND https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#105.3.1

16 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1

17 https://iaf.nu/en/about-iaf-mla/#:~:text=Once%20an%20accreditation%20body%20is%20a%20signatory%20of%20the%20IAF%20MLA%2C%20it%20is%20required%20to%20recognise%20certificates%20and%20validation%20and%20verification%20statements%20issued%20by%20conformity%20assessment%20bodies%20accredited%20by%20all%20other%20signatories%20of%20the%20IAF%20MLA%2C%20with%20the%20appropriate%20scope

18 True for all ANAB accredited product evaluation agencies and all International Trade Agreements.

19 https://www.justice.gov/crt/deprivation-rights-under-color-law AND https://www.justice.gov/atr/mission

20 Unless otherwise noted, the links referenced herein use un-amended versions of the 2024 International Code Council (ICC) 2024 International Code Council (ICC) model codes as foundation references. Mississippi versions of the IBC 2024 and the IRC 2024 are un-amended. This material, product, design, service and/or method of construction also complies with the 2000-2012 versions of the referenced codes and the standards referenced therein. As pertinent to this technical and code compliance evaluation, CBI and/or DrJ staff have reviewed any state or local regulatory amendments to assure this report is in compliance.

21 See Adoptions by Publisher for the latest adoption of a non-amended or amended model code by the local jurisdiction. https://up.codes/codes/general

22 See Adoptions by Publisher for the latest adoption of a non-amended or amended model code by state. https://up.codes/codes/general

23 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3282/subpart-A/section-3282.14

24 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280

25 All references to the CBC and CRC are the same as the 2024 IBC and 2024 IRC unless otherwise noted in the California Supplement at the end of this report.

26 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#p-3280.2(Listed%20or%20certified); https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#listed AND https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#labeled

27 2021 IRC Section R317.1.1

28 2021 IRC Section R318.1.2

29 2021 IRC Section R317.3

30 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1703.4

31 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#:~:text=All%20construction%20methods%20shall%20be%20in%20conformance%20with%20accepted%20engineering%20practices%20to%20insure%20durable%2C%20livable%2C%20and%20safe%20housing%20and%20shall%20demonstrate%20acceptable%20workmanship%20reflecting%20journeyman%20quality%20of%20work%20of%20the%20various%20trades

[32] https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#:~:text=The%20strength%20and%20rigidity%20of%20the%20component%20parts%20and/or%20the%20integrated%20structure%20shall%20be%20determined%20by%20engineering%20analysis%20or%20by%20suitable%20load%20tests%20to%20simulate%20the%20actual%20loads%20and%20conditions%20of%20application%20that%20occur

[33] Qualification is performed by a legislatively defined Accreditation Body. ANSI National Accreditation Board (ANAB) is the largest independent accreditation body in North America and provides services in more than 75 countries. DrJ is an ANAB accredited product certification body.

[34] https://anabpd.ansi.org/Accreditation/product-certification/AllDirectoryDetails?prgID=1&orgID=2125&statusID=4#:~:text=Bill%20Payment%20Date-,Accredited%20Scopes,-13%20ENVIRONMENT.%20HEALTH

[35] See Code of Federal Regulations (CFR) Title 24 Subtitle B Chapter XX Part 3280 for definition: https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280

[36] 2021 IBC Section 104.11

[37] 2021 IRC Section R104.11

[38] 2018: https://up.codes/viewer/wyoming/ifc-2018/chapter/1/scope-and-administration#104.9 AND 2021: https://up.codes/viewer/wyoming/ibc-2021/chapter/1/scope-and-administration#104.11

[39] Approved is an adjective that modifies the noun after it. For example, Approved Agency means that the Agency is accepted officially as being suitable in a particular situation. This example conforms to IBC/IRC/IFC Section 201.4 (https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#201.4) where the building code authorizes sentences to have an ordinarily accepted meaning such as the context implies.

[40] https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1

[41] Multilateral approval is true for all ANAB accredited product evaluation agencies and all International Trade Agreements.