JASPER WOOD

HOOVER

JASPER WOOD PRODUCTS

PYRO-GUARD® CERTIFICATION

TO WHOM IT MAY CONCERN:

This is to certify that the lumber and/or plywood bearing the ***PYRO-GUARD®*** stamp of **JASPER WOOD PRODUCTS, LLC.** and Underwriters Laboratories, Inc., has been pressure impregnated in accordance with conditions outlined in Military Specification MIL-L-19140E. The treatment has a 25 or less flamespread when tested in accordance with the ASTM E-84 "standard Method of Testing for Surface Burning Characteristics of building Materials" and the test duration is extended from the standard 10 minutes to 30 minutes, there was no increase on the fire hazard classification.

Sold To: **WHITE-WOOD FOREST PRODUCTS**
130 Plymouth Street
Winnipeg, Manitoba R2X 2Z1

DISTRIBUTED BY
WHITE-WOOD FOREST PRODUCTS
204-982-9444

By: _____ Date: _____

Overview

Pyro-Guard is pressure-impregnated, interior fire-retardant treated lumber and plywood for enclosed structural applications.

Uses

Pyro-Guard is recommended for enclosed structural applications such as:

- Plywood roof sheathing
- Roof trusses
- Rafters
- Floor joists
- Mezzanines
- Shelving
- Load-bearing walls
- Floor sheathing
- Partition walls
- Studs
- Interior beams
- Blocking
- Steps
- Stairways
- Platforms
- Stages
- Plywood subfloors
- Wall sheathing
- Telecomm/electrical panels

Pyro-Guard has been strength-tested after prolonged exposure to elevated temperatures and moisture to verify its strength characteristics when used in roof systems and other recommended applications.

Pyro-Guard plywood span ratings and lumber design value adjustments are based on strength testing after prolonged exposure to high temperatures experienced in roof applications.

Pyro-Guard is used for interior structural applications such as ceiling and floor joists.

Pyro-Guard fire-retardant treated wood is produced in 5 strategically located company-owned facilities and is distributed by an extensive nationwide network of stocking distributors.

Exterior Fire-X® retardant treated wood is recommended for exterior exposures and other applications exposed to dampness, high humidity or wetting.

E-mail Hoover's Technical Service Department or request sales information.

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Advantages

- Construction with Pyro-Guard treated wood requires no special tools or skills.
- Pyro-Guard trusses and roof decks often qualify a masonry wall building as "non-combustible" for insurance purposes.
- Pyro-Guard can often be substituted for non-combustible materials without affecting building classification.
- Use of Pyro-Guard wood partitions instead of untreated partitions often allows for an increase in square footage and lower insurance rates.
- The use of Pyro-Guard wood roof decking is usually accepted in lieu of parapet walls in multi-family dwellings.
- Even when sprinklers are mandatory, the use of Pyro-Guard can further reduce fire insurance rates.
- Pyro-Guard is commonly accepted by building codes for partition walls, store fronts, fixtures and roof construction in shopping centers.

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Fire Performance

Pyro-Guard is pressure impregnated deep into the wood to provide permanent protection, unlike coatings, which only provide superficial protection.

When Pyro-Guard treated wood is exposed to fire, non-combustible gas and water vapor are produced, and a layer of protective char forms, which hinders combustion and insulates the wood against further damage.

Pyro-Guard interior fire-retardant treated wood has a low rate of fuel contribution and heat release, and it maintains structural integrity longer than other building materials such as steel. Consequently, fire damages and repair costs are minimized, resulting in reduced insurance rates.

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Smoke Toxicity

Pyro-Guard has successfully passed a stringent combustion toxicity test. Smoke produced by Pyro-Guard treated wood was no more toxic than smoke produced by untreated wood.

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Code Compliance

Pyro-Guard was the first FRTW (fire-retardant treated wood) to be issued a Code Compliance Report based on high temperature testing for roof sheathing and framing uses.

ICC Evaluation Service

ICC-ESR-1791 has been issued for Pyro-Guard by the International Code Council, confirming compliance with National, Uniform and Standard building codes.

ICC-ESR-1791 contains conditions of use and strength adjustments for roof sheathing, roof framing and other applications.

Pyro-Guard meets the flame spread requirement of all building codes which is 25 or less, as determined by Underwriters Laboratories in the extended 30 minute duration of ASTM E-84, "Standard Test Method for Surface Burning Characteristics of Building Materials." Each piece of treated wood bears the Underwriters Laboratories Classification mark identifying it as being produced under its Classification and Follow Up Services.

Pyro-Guard is often approved as a substitute for non-combustible materials in applications such as wall studs and roof systems.

Pyro-Guard should not be confused with fire-retardant surface coatings, because test requirements and code definitions are entirely different for each. Pyro-Guard is pressure impregnated and carries a flamespread rating derived by Underwriters Laboratories in the 30 minute ASTM E-84 flamespread test, while coatings are sprayed, brushed or rolled on the surface and flame tested for only 10 minutes. Fire retardant coated wood is superficially protected at best, and it does not meet code requirements for structural uses.

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Warranty

Hoover Treated Wood Products warrants Pyro-Guard fire-retardant treated wood against defects in manufacture where the product is properly installed up to a maximum of 20 years. This warranty entitles the holder to repair or replacement of defective material, including the reasonable cost of labor and materials.

Hoover Treated Wood Products warrants that its Pyro-Guard interior fire-retardant treated wood is manufactured under Underwriters Laboratories Inc. independent third-party Follow Up

Inspection Service and that it meets or exceeds the following code requirements for interior fire retardant treated wood:

- Military Specification MIL-L-19140
- Standard Building Code
- New York City MEA Division
- National Building Code
- International Building Code
- Uniform Building Code
- International Residential Code
- Insurance Services Office

Further, Pyro-Guard treated wood products will meet or exceed the relevant ASTM Standards (E-84, D 3201) for interior fire retardant lumber and plywood.

Pyro-Guard treated wood is warranted for interior applications involving dry conditions of use, where it is protected during construction and applied and used in accordance with Hoover Treated Wood Products' specifications. Use of Pyro-Guard treated wood where it is exposed to weather, dampness or wetting; or where it is in direct contact with concrete or masonry that is in contact with the ground or directly exposed to the weather; or as roof sheathing without proper ventilation for moisture control; are conditions constituting improper design, installation and/or maintenance and invalidates the terms of this warranty.

No other warranty, express or implied, including warranties of merchantability or fitness, shall apply.

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Appearance

The natural wood color and texture remains intact with Pyro-Guard. Raised grain may occur, especially on sanded plywood, and this is easily removed by sanding. Marks may be left by drying sticks on both sides of lumber and plywood. If these are undesirable, Pyro-Guard can be ordered with stick marks on one side only.

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Engineering Calculations with Pyro-Guard

Pyro-Guard was the first FRTW with plywood roof span ratings and lumber strength adjustments based on strength testing after prolonged exposure to elevated temperatures and moisture.

Furthermore, Pyro-Guard was the first FRTW to be issued a Code Compliance Report which includes evaluation of elevated temperature strength testing.

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Strength

Pyro-Guard was the first interior fire-retardant treatment with plywood roof span ratings and lumber strength adjustments based on high temperature testing. Plywood was strength-tested after exposure to 170 degrees F, and lumber was strength-tested after exposure to 150 degrees F according to ASTM 5516 and ASTM 5664. As a result, Pyro-Guard can be used with confidence in all recommended structural applications, including plywood roof sheathing and roof trusses.

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Finishing Pyro-Guard Fire Retardant Treated Wood

Pyro-Guard interior fire-retardant treated wood can be finished or painted. As with untreated wood, the wood must be dry and clean before finishing.

Pyro-Guard fire retardant treated wood, like any other type of wood, should only be finished after the structure is enclosed and mechanical equipment is placed in service. This allows the moisture content in the wood to stabilize at an acceptable level.

Coating systems should first be tested on sample material and exposed to actual use conditions to determine if the desired effect can be obtained.

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Decay and Termite Resistance

Treatment with Pyro-Guard provides excellent resistance to decay and termites. Keep in mind, however, that interior fire-retardant treated wood is not recommended for use in damp or wet conditions, or in contact with concrete slabs or soil.

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Ventilation, Moisture and Heat

Adequate air flow must be provided in wood roof systems to prevent moisture buildup in the wood. It is the sole responsibility of the building owner or his agent (builder, architect, engineer, etc.) to insure that ventilation is provided to at least the level required by the appropriate building code.

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Job Site Storage

As with untreated wood, it is important to keep Pyro-Guard material dry by covering the top of the bundle, storing the material under shelter, elevating the bundle from ground contact, and allowing for air circulation around the wood. Roof sheathing should be covered as soon as practical after installation. If wetted during construction, allow to dry before enclosure or covering with roofing material.

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Hygroscopicity and Corrosiveness

The hygroscopicity (moisture absorbency per ASTM 3201) and corrosiveness of Pyro-Guard fire-retardant treated wood is far lower than the maximum allowed by industry and governmental standards. Even though testing indicates that carbon steel fasteners can be compatible with Pyro-Guard, galvanized fasteners are recommended.

Pyro-Guard is safe to use with galvanized truss plates, duct work, plumbing, conduit and copper. It contains no halides, sulfates or ammonium phosphates.

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Third-Party Monitoring of Kiln Drying After Treatment

All building codes require fire-retardant treated wood to be dried after treatment. Kiln drying restores stiffness and strength, increases dimensional stability and reduces shipping weight.

Kiln drying of Pyro-Guard is monitored by Timber Products Inspection Inc. to assure conformance to Production Standard 2200. This unique standard was developed by Hoover to assure that treating and re-drying methods are consistent with those used to produce materials tested for long-term strength properties. This monitoring program is in addition to UL Follow-Up Service which assures fire performance.

Such quality control is possible because Pyro-Guard is produced in company-owned treating plants and by a select group of licensees, allowing complete control of all facets of production.

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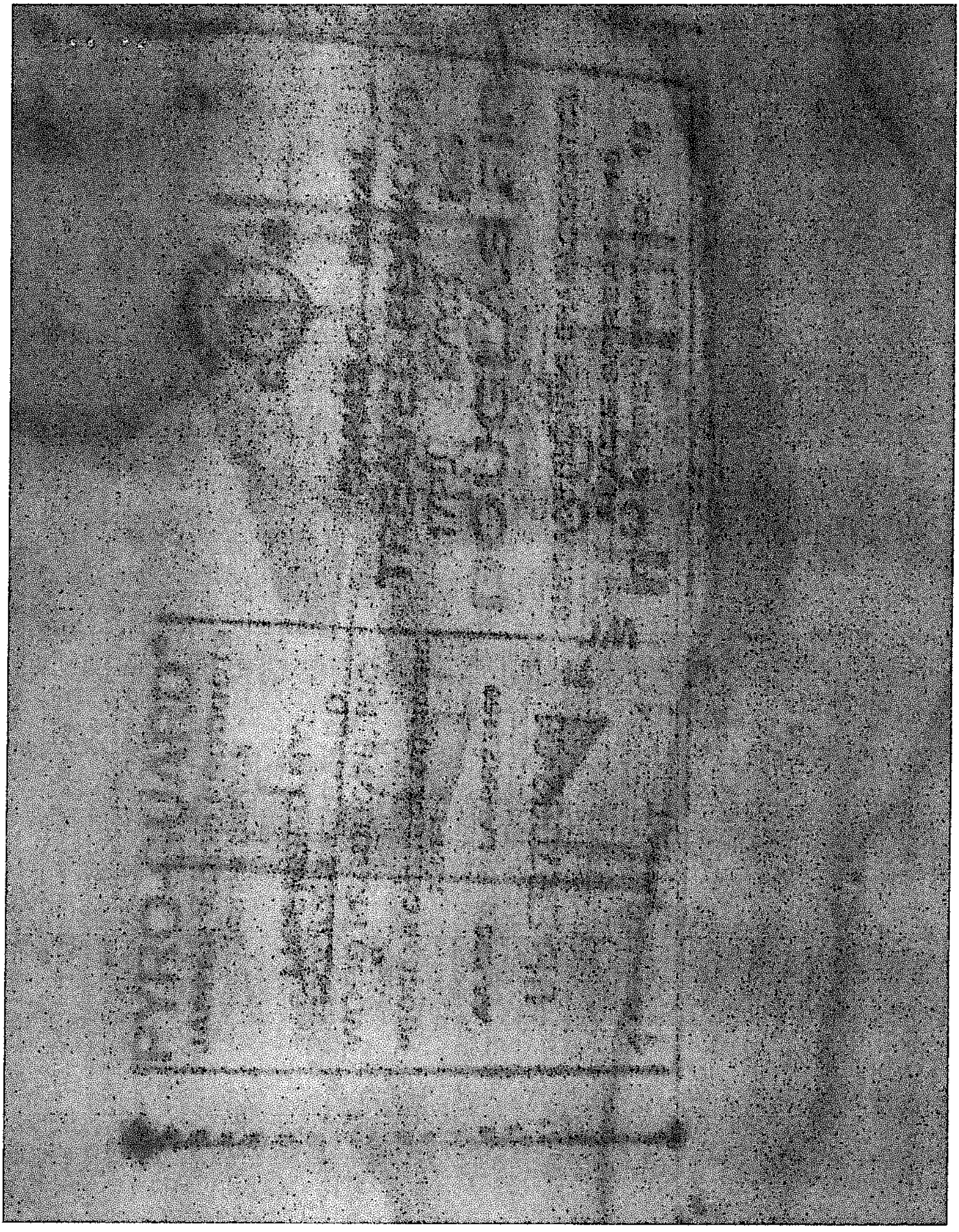
Limitations

Pyro-Guard is recommended for enclosed interior applications not exposed to the weather, dampness, high humidity or wetting. When codes require exterior fire retardant treated wood for these exposures, Exterior Fire-X is available.

Pyro-Guard should not be used in damp spaces or in direct contact with concrete or masonry that is in contact with the ground. Pyro-Guard is allowed for use in contact with concrete or masonry that is above grade and is not susceptible to wetting or dampness.

If allowed by code, bottom plates for concrete on grade may be preservative pressure treated lumber. Alternately a vapor barrier may be used with Pyro-Guard, or Exterior Fire-X fire-retardant treated wood may be used in contact with damp concrete or masonry.



HOOVER TREATED WOOD PRODUCTS, INC

TECHNICAL NOTE

FOR ADDITIONAL INFORMATION: www.frtw.com or 1-800-TEC-WOOD (832-9663)

SPECIFICATIONS

PYRO-GUARD® Interior Fire-Retardant-Treated Wood

PART 1 - General Product Information

A. Lumber, plywood, and Engineered Wood Products (EWP) bearing the **PYRO-GUARD®** mark has a flame spread rating of 25 or less (Class A) when tested in accordance with ASTM E84, "Standard Test Method for Surface Burning Characteristics of Building Materials." **PYRO-GUARD®** fire-retardant-treated wood shows no evidence of significant progressive combustion when the test is extended for an additional 20-minute period. In addition, the flame front does not progress more than 10½ feet beyond the centerline of the burners at any time during the test. The flame spread and smoke developed index for each species and product are classified by Underwriters Laboratories Inc. (UL).

B. **PYRO-GUARD®** fire-retardant-treated wood is manufactured under the independent third-party inspection of Underwriters Laboratories Inc. (UL) Follow-Up Service and each piece shall bear the UL classified mark indicating the extended 30 minute ASTM E84 test.

C. **PYRO-GUARD®** shall be kiln dried after treatment (KDAT). The kiln drying process is monitored by Underwriters Laboratories, Inc. (UL) and the UL mark shall appear on the label.

D. **PYRO-GUARD®** shall be produced in accordance with UL Evaluation Report ER7002-01 (UL ER7002-01), latest version.

E. **PYRO-GUARD®** meets the performance requirements of AWPA U1, Commodity Specification H for Use Category UCFA and AWPA C20/C27 (Type A, HT).

F. **PYRO-GUARD®** is listed on the Department of Defense (DoD) Qualified Products List (QPL) and meets the requirements of MIL-L-19140-E as a Type 1 fire-retardant treatment for lumber and plywood.

PART 2 - Fire-Retardant Treatment

A. Treatment shall be **PYRO-GUARD®** manufactured by Hoover Treated Wood Products, Inc.

B. **PYRO-GUARD®** is an interior "Type A" fire-retardant with individual surface burning characteristics for the species and products listed under UL Certifications.

C. Structural performance of **PYRO-GUARD®** fire-retardant-treated wood has been tested in accordance with ASTM D5664 for lumber and ASTM D5516 for plywood. Evaluation of plywood data is in accordance with ASTM D6305. Evaluation of lumber data is in accordance with ASTM D6841. The resulting design value and span rating adjustments are published in UL ER7002-01, which includes evaluation of high temperature (HT) strength testing for roof applications.

D. **PYRO-GUARD®** fire-retardant-treated wood is kiln dried after treatment (KDAT) to maximum moisture content of 19% for lumber and 15% for plywood.

E. **PYRO-GUARD®** does not contain VOC's, urea formaldehyde or formaldehyde, halogens, sulfates, chlorides, or ammonium phosphate.

F. Plywood treated with **PYRO-GUARD®** shall be manufactured under US Product Standards - PS 1 or PS 2. Panels shall have a minimum bond durability of Exposure 1.

G. Grade marked lumber treated with **PYRO-GUARD®** shall be in accordance with PS 20.

PART 3 - Execution

A. **PYRO-GUARD®** fire-retardant-treated wood used in structural applications shall be installed in accordance with the conditions and limitations listed in UL ER7002-01.

B. **PYRO-GUARD®** fire-retardant-treated wood shall be installed in compliance with the requirements of the applicable building codes and product recommendations.

C. **PYRO-GUARD®** shall not be installed in areas where, in service, it is exposed to precipitation, direct wetting, or condensation.

D. As with untreated wood, avoid exposure to precipitation during shipping, storage or installation. Apply a water resistive barrier or underlayment over dry sheathing as soon as practical to avoid precipitation on the panel. Panels that get wet should be allowed to dry before covering, or be replaced.

HOOVER TREATED WOOD PRODUCTS, INC.

TECHNICAL NOTE

FOR ADDITIONAL INFORMATION: **www.frtw.com 1-800-TEC-WOOD (832-9663)**

LEED and FSC Chain of Custody Information

Formaldehyde and VOC Content

Pyro-Guard fire retardant formulation does not contain formaldehyde. See Pyro-Guard Certification Section 2.01 E.

Water based preservative formulations – Dura-Guard (ACQ, MCA) and CCA used by Hoover Treated Wood Products Inc. do not contain formaldehyde.

Plywood treated with Pyro-Guard or the above preservatives will have a minimum exposure durability classification from the panel manufacturer of "Exposure 1". The referenced APA publication, "Formaldehyde in Structural Panels" documents that structural panels with this classification are manufactured with phenolic resin adhesives that do not contain urea-formaldehyde.

The formulation of Pyro-Guard and the above preservatives are inorganic do not contain Volatile Organic Compounds (VOCs). Wood is a natural organic material.

Recycled Content

Lumber and plywood used by Hoover Treated Wood Products are not from recycled sources, and as such contain 0% post-consumer and 0% post-industrial recycled content.

Manufacturing Locations

Hoover Treated Wood Products Inc. has factory treating operations in Thomson GA, Milford VA, Pine Bluff AR, Detroit MI, Oxford PA and Winston OR.

FSC Chain of Custody

Hoover Treated Wood Products Inc. has obtained a multi-site FSC Chain of Custody through SCS Global Services. Our certification number is SCS-COC-005470. Verification may be obtained at http://info.fsc.org or www.fsc-info.org

Treated lumber and plywood can be provided with an FSC chain of custody by **SPECIAL ORDER.**

For more information, please contact Hoover Treated Wood Products Inc. at www.frtw.com or 1-800.832.9663.

Reference: APA, the Engineered Wood Association, technical Report "Formaldehyde in Structural Panels", SPE-1040D, April 2002

NATRON WOOD
PRODUCTS

June 19, 2019

To Whom It May Concern:

This letter confirms that all Hoover Fire Retardant *Pyro-Guard* stock produced by Natron for White-Wood Forest Products on PO# 404679 is FSC certified (Certificate Code; SCS-COC-006704). I have attached a copy of the certificate. If you have any further questions just let me know.

Best Regards,

Craig Smith