Hoover Treated Wood Products, Inc.
154 Wire Road
Thomson, GA 30824

Attn: Christopher K. Athari
(706) 755-5350

RESEARCH REPORT: RR 25150
(CSI 06070)

REEVALUATION DUE
DATE: December 1, 2024
Issued Date: May 1, 2022
Code: 2020 LABC

GENERAL APPROVAL – Renewal and Clerical Modification - PYRO-GUARD® Fire-Retardant-Treated Wood.

DETAILS

PYRO-GUARD® Fire-Retardant-Treated (FRT) Wood is lumber and plywood that has been impregnated with the PYRO-GUARD® chemical by a pressure process to reduce combustibility. PYRO-GUARD® FRT Wood is kiln-dried after treatment to moisture contents of 19 percent for lumber and 15 percent for plywood, as required in Section 2303.2 of the 2020 LABC and Section R702.1.5.9 of 2020 LARC.

The products were evaluated for the following properties:

- Fire resistance
- Surface burning
- Structural Performance
- Hygroscopicity
- Thermal Barrier - Roof and Floor Applications
- Durability and Corrosion of Metals contacting Fire-Retardant-Treated (FRT) Lumber and Plywood

The following species of PYRO-GUARD® Fire-Retardant-Treated (FRT) treated lumber and plywood are covered under this report:

- Lumber: Alpine Fir, Balsam Fir, Black Spruce, Douglas Fir, Engelmann Spruce, Hem-Fir, Western Hemlock, Jack Pine, Lodgepole Pine, Ponderosa Pine, Red spruce, Southern Pine, Spruce-Pine-Fir (SPF), White Fir, White Spruce

- Plywood: Douglas Fir, Lauan, and Southern Pine

The PYRO-GUARD® Fire-Retardant-Treated (FRT) lumber and plywood are approved for use subject to the following conditions:

1. Materials and methods of installation shall comply with this report and the manufacturer‘s published instructions. In the event of a conflict between the installation instructions and this report, this report governs.

2. Where required by the building official, engineering calculations and details shall be provided. The calculations shall verify that the anchorage complies with the building code for the type of framing and condition of the supporting construction.

3. All design capacities for plywood shall be reduced to 90% of the allowable values per code when fire treated with PYRO-GUARD®. The span rating shall be as noted per Table 1 of the evaluation report.

4. Use of PYRO-GUARD® Fire-Retardant-Treated (FRT) lumber and plywood in non-vented roofing assemblies is prohibited

5. Evaluations on the wood species intended for assemblies whose end-use includes exposure to continuous elevated temperatures are beyond the scope of this report.

6. The engineering calculations are subject to the adjustment factors in Table 2 used for lumber of those species noted herein.

7. PYRO-GUARD® Fire-Retardant-Treated (FFT) Wood must not be used in contact with the ground or any application in which it will be permanently exposed to precipitation, direct or indirect wetting, condensation, or in an unvented roofing or roofing support assembly.

8. PYRO-GUARD® Fire-Retardant-Treated (FFT) plywood may be field cut or ripped in any direction.

9. PYRO-GUARD® Fire-Retardant-Treated (FFT) lumber must not be milled or ripped in the field. However, bevels, end cuts, joints, laps, and scarfs may be fabricated.

10. All fire retardant treated lumber and plywood used on exterior walls shall be protected by a weather barrier in accordance with Section 1403 and 2508.2.1 of the 2020 Los Angeles City Building Code.

11. Fasteners used in PYRO-GUARD® Fire-Retardant-Treated (FFT) lumber must be galvanized steel, stainless steel, silicon bronze or copper, in accordance with Section 2304.10.5 of 2020 LABC and R317.3 or 2020 LARC. Refer to Table 1 and 2 for adjustment factors for design and minimum fastener size.

12. PYRO-GUARD® Fire-Retardant-Treated (FFT) Wood is manufactured by Hoover treated Wood Products, Inc. under the UL LLC Listing/Classification and Follow-Up Service Program, which includes inspections in accordance with the quality elements of ICC-ES Acceptance Criteria for Quality Documentation, AC10. Hoover's manufacturing locations covered by this report are located in:

    - Bakersfield, CA
    - Detroit, MI
    - Milford, VA
    - Oxford, PA
    - Winston, OR
    - Pine Bluff, AR
    - Thomson, GA

13. PYRO-GUARD® Fire-Retardant-Treated (FFT) Wood described in this evaluation report is identified by a marking bearing. See final page of this general approval.
    - The report holder 's name, Hoover treated Wood Products, Inc.
    - The plant identification
    - The UL Listing/Classification Mark
    - The evaluation report number UL ER7002-01

DISCUSSION

The clerical modification is to capture the revised identification marking of the product.

The report is in compliance with the 2020 Los Angeles City Building Code.

The approval is based on tests in accordance with the ICC-ES Acceptance Criteria for Fire-retardant-treated Wood (AC66), dated June 2015.

For Fire Resistance: PYRO-GUARD® Fire-Retardant-Treated (FRT) wood has been evaluated for fire resistance in accordance with Section 703.2 of the 2015 and 2012 IBC, Section R302.1 of the 2015 and 2012 IRC, and ANSI/UL 263 (ASTM E119-15) when used as a part of UL Fire Resistance Designs V314 and V332. Refer to section 8.4 of this report for the UL Certification of PYRO-GUARD® Fire-Retardant-Treated (FRT) Wood for fire resistance assembly designs.

For Surface Burning: PYRO-GUARD® Fire-Retardant-Treated (FRT) Wood covered under this report has a flame spread index of 25 or less and a smoke developed index of 450 or less, when tested in accordance with ANSI/UL 723 (ASTM E84) and did not show any evidence of significant progressive combustion when the test was continued for an additional 20-minute period. The flame front did not progress more than 10 ½ feet beyond the centerline of the burners at any time during the test. See Section 2303.2 of the 2015 IBC and the 2012 IBC, and Section R802.1.5 of the 2015 IBC and Section R802.1.3 of the 2012 IRC. Refer to Section 8.5 for the UL Certification of PYRO-GUARD® Fire-Retardant-Treated (FRT) Wood for surface burning characteristics

For Hygroscopicity: PYRO-GUARD® Fire-Retardant-Treated (FRT) Wood has a moisture content of less than 28 percent when tested in accordance with ASTM D3201 at 92 percent relative humidity, as specified in Section 2303.2.7 of the 2015 and 2012 IBC, Section R802.1.5.9 of the 2015 IRC, and Section R802.1.3.7 of the 2012 IRC.

For Thermal Barrier:
Roofing: PYRO-GUARD® Fire-Retardant-Treated (FRT) plywood for use in roofing assemblies has been evaluated in accordance with ANSI/UL 790 (ASTM E108) and by Section 1505.1 of the 2015 and 2012 IBC, Section Page 4 of 10 R902.1 of the 2015 and 2012 IRC. In addition, PYRO-GUARD® Fire-Retardant-Treated (FRT) plywood has been evaluated in accordance with ANSI/UL 1897 and Section 1504.3.1 of the 2015 and 2012 IBC. Refer to sections 8.6 and 8.7 of this report for the UL Certification of PYRO-GUARD® Fire-RetardantTreated (FRT) Wood for roofing applications. Minimum 15/32 inch thick PYRO-GUARD® Fire-Retardant-Treated (FRT) plywood may be used as a thermal barrier to protect foam plastic insulation as described in Section 2603.4.1.5 of the 2015 and 2012 IBC, R316.5.2 of the 2015 and 2012 IRC.. Refer to Table 1 for load span limitations.

Flooring: Minimum 15/32 inch thick PYRO-GUARD® Fire-Retardant-Treated (FRT) plywood may be used as a thermal barrier to protect foam plastic insulation as described in Section 2603.4.1.14 of the 2015 and 2012 IBC, and Section R316.5.13 of the 2015 and 2012 IRC when the foam plastic insulation is exposed to the interior of the building. Refer to Table 1 for load span limitations.

For Durability and Corrosion of Metals contacting Fire-Retardant-Treated (FRT) Lumber and Plywood:
Corrosion rates for aluminum, carbon steel, copper, galvanized steel, and red brass components in contact with PYRO-GUARD® Fire-Retardant-Treated (FRT) Wood are not enhanced by the PYROGUARD® chemical treatment when used in assemblies when the manufacturer's instructions are followed.

This general approval will remain effective provided the Evaluation Report is maintained valid and unrevised with the issuing organization. Any revisions to the report must be submitted to this Department, with appropriate fee, for review in order to continue the approval of the revised report.

This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this approval have been met in the project in which it is to be used.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

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EUGENE BARBEAU, Chief
Engineering Research Section
201 N. Figueroa St, Room 880
Los Angeles, CA 90012
Phone – 213 -202-9812
Email – engineering-research@lacity.org

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RR25150
TLB2200073
R05/13/2022
1403/2302.8/2304.10.5

Attachment 1: Table 1 and 2

IDENTIFICATION

PYRO-GUARD® Fire-Retardant-Treated (FRT) Wood described in this evaluation report is identified by a marking bearing:

- The report holder's name, Hoover Treated Wood Products, Inc.
- The UL Listing/Classification Mark
- The plant identification
- The evaluation report number UL ER7002-01

The validity of the evaluation report is contingent upon this identification appearing on the product or product label or UL Listing/Classification Mark/Certification Mark.