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ICC-ES Evaluation Report

ESR-3834

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This report is subject to renewal 07/2019.

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
SECTION: 06 05 73.13—PRESERVATIVE WOOD TREATMENT

REPORT HOLDER:

KOP-COAT, INC.

3040 WILLIAM PITT WAY
PITTSBURGH, PENNSYLVANIA 15238

EVALUATION SUBJECT:

TRU-CORE® PTI PRESERVATIVE-TREATED WOOD



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A Subsidiary of the International Code Council®

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 05 73.13—Preservative Wood Treatment

REPORT HOLDER:

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EVALUATION SUBJECT:

TRU-CORE® PTI PRESERVATIVE-TREATED WOOD

ADDITIONAL LISTEE:

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POST OFFICE BOX 100
HILLSBORO, OREGON 97123
(503) 648-4156
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1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2015 *International Building Code*® (IBC)
- 2015 *International Residential Code*® (IRC)

Properties evaluated:

- Preservative-treated wood
- Decay resistance
- Termite resistance
- Corrosion
- Structural

1.2 Evaluation to the following green standards:

- 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attributes verified:

- See Section 3.1

2.0 USES

Tru-Core® PTI preservative-treated wood products, as noted in Section 3.3 of this report, are used for wood

members in above ground applications that are required by the code to be protected against decay and termites, including Formosans. Tru-Core® PTI preservative-treated wood products are also used for joist and beams, UC4A applications when they are difficult to maintain, repair or replace and are critical to the performance and safety of the entire system/construction.

3.0 DESCRIPTION

3.1 General:

Tru-Core® PTI preservative-treated wood products are recognized for use in above ground applications and to resist attack by fungal decay and subterranean termites.

Tru-Core® PTI wood preservatives are produced by Kop-Coat, Inc., and are used by the wood-preservative treatment facilities listed in Table 3 of this report to preservative-treat wood products, in accordance with the Quality Control Manual for Kop-Coat Tru-Core® PTI.

The attributes of the Tru-Core® PTI wood preservatives have been verified as conforming to the provisions of (i) ICC 700-2015 and ICC 700-2012 Sections 602.1.6 and 11.602.1.6; and (ii) ICC 700-2008 Section 602.8. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These standards often provide supplemental information as guidance. See Section 4.2 for limitations on termite-resistance use.

3.2 Preservative System:

Tru-Core® PTI wood preservatives are comprised of propiconazole-tebuconazole-imidacloprid P-T-I supplied to the treatment facility as a water based concentrate for use in the pressure-treatment of wood products.

3.3 Wood Species:

Tru-Core® PTI preservative-treated wood may consist of the following preservative-treated materials:

- a. Sawn lumber products of the following species: mixed Southern pine, Radiata pine, Red pine, German Scots pine, Ponderosa pine, Incised Hem-fir, non-incised Hem-fir, Incised Douglas-fir, non-incised Douglas-fir and Redwood.
- b. Timber products consisting of posts and columns with dimensions greater than 2 inches nominal in width and thickness for "Above Ground Only" use of the following species: mixed Southern pine, Radiata pine, Red pine, German Scots pine, Ponderosa pine,

Incised Hem-fir, non-incised Hem-fir, Incised Douglas-fir, non-incised Douglas-fir and Redwood.

- c. Plywood of the following species and grade classifications: Southern yellow pine Grade V-600 or V-611, Coastal Douglas-fir Grade Group 1 of Group 2.
- d. Structural Glued Laminated Timber of the following species; Southern Yellow Pine, Douglas Fir, Alaska Yellow Cedar, Inland Fir (Intermountain East of Cascade Summit).
- e. Laminated Veneer Lumber (LVL) and Parallel Strand Lumber (PSL) of the following species: Southern Yellow Pine and Douglas Fir. LVL and PSL products treated with Tru-Core® PTI must also be recognized in an ICC-ES Evaluation Report covering physical and structural properties.

Minimum preservative retention levels are provided in Table 1 of this evaluation report.

4.0 INSTALLATION

4.1 General:

Tru-Core® PTI preservative-treated wood is installed as preservative-treated lumber, timber and plywood in accordance with the requirements of the applicable code.

Kop-Coat, Inc., and industry published installation instructions for wood and pressure-treated wood, and this report, must be strictly adhered to, and a copy of the instructions must be available at all times on the jobsite during installation.

The instructions within this report govern if there are any conflicts between Kop-Coat, Inc. instructions and this report.

4.2 Applications:

Tru-Core® PTI preservative-treated wood products may be used in locations where wood is permitted and/or in locations required by the code to be fungal decay or termite-resistant. The treated wood products are limited to use in above ground applications in all building types and occupancies where permitted by the applicable code. Typical applications are described in Table 2.

Locations requiring preservative-treated wood for fungal decay or termite resistance are described in Section 2304.12 of the 2015 IBC and Sections R317 and R318 of the 2015 IRC.

4.3 Fasteners:

Fasteners used with Tru-Core® PTI preservative-treated wood products must be in accordance with Section 2304.10.5 of the 2015 IBC and Section R317.3 of the 2015 IRC, except that aluminum fasteners are also permitted and mild steel fasteners are limited to non-wetted uses.

4.4 Structural:

4.4.1 Duration of Load: The maximum load duration factor allowed for Tru-Core® PTI preservative-treated wood products used for structural members is 1.6 in accordance with Section 2.3 of the American Wood Council (AWC), National Design Specification for Wood Construction (NDS).

4.4.2 Incising Factor: When treated wood products listed in Section 3.3a and 3.3b of this report have been incised, the reference design values must be multiplied by the incising factor, C_i , in accordance with Section 4.3.8 of the NDS.

5.0 CONDITIONS OF USE

The Tru-Core® PTI preservative-treated wood described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** Use of the preservative-treated wood is limited to the types of applications noted in Section 4.2 of this report.
- 5.2** Surface treatment of field cuts must be in accordance with the recommendations of Kop-Coat Company.
- 5.3** Tru-Core® PTI preservative-treated wood products are limited to the wood species noted in Section 3.3 and the minimum retention noted in Table 1.
- 5.4** Treatment of wood products is at the facilities of the treaters noted in Table 3, under a quality-control program with inspections by ICC-ES and Timber Products Inspection Inc. (AA-664 and AA-696).
- 5.5** The following physically above ground applications are required to be treated to ground contact (AWPA Use Category 4A) requirements:
 - 5.5.1** Components which are difficult to maintain, repair or replace and are critical to the performance and safety of the entire system/construction. Examples would be typical deck or dock joists or beams.
 - 5.5.2** Components subject to hazards comparable to ground contact due to climate, artificial or natural processes or construction which include the following:
 - 5.5.2.1** When there is a reasonable expectation that soil, vegetation, leaf litter or other debris may build up and remain in contact with treated wood.
 - 5.5.2.2** When the construction itself, other structures or anticipated vegetation growth will not allow air to circulate underneath the construction and between decking boards.
 - 5.5.2.3** When treated wood is installed less than six inches above the ground (final grade after landscaping) and supported on permeable building materials such as treated wood or concrete.
 - 5.5.2.4** When treated wood is in direct contact with non-durable untreated wood or any older construction with any evidence of decay.
 - 5.5.2.5** When treated wood is wetted on a frequent or recurrent basis such as on a freshwater floating dock or by a watering system.
 - 5.5.2.6** When treated wood is used in tropical climates.

6.0 EVIDENCE SUBMITTED

- 6.1** Data in accordance with the ICC-ES Acceptance Criteria for Proprietary Wood Preservative Systems—Common Requirements for Treatment Process, Test Methods and Performance (AC326), Approved October 2015, Section 4.9 Evaluation Procedure for Proprietary AWPA Standardized U1 Wood Preservative Systems.
- 6.2** Quality control documentation in accordance with Section 5.0 of AC326 and in compliance with AWPA M22 and AWPA M23.

7.0 IDENTIFICATION

Tru-Core® PTI preservative-treated wood products must be labeled with the product name (Tru-Core®) or logo (see Figure 1); the treatment company name and plant location

(refer to Table 3); the name of the preservative components or designation (PTI); the intended end use;

and the evaluation report number (ESR-3834). A sample label is shown in Figure 1.

TABLE 1—MINIMUM PRESERVATIVE RETENTION REQUIREMENTS FOR TRU-CORE® PTI WOOD PRODUCTS BY END USE

END USE	MINIMUM TOTAL RETENTION, pcf (kg/m ³)	MINIMUM COMPONENTS RETENTION, pcf (kg/m ³)		
		Propiconazole pcf (kg/m ³)	Tebuconazole pcf (kg/m ³)	Imidacloprid pcf (kg/m ³)
Above ground UC1, UC2, UC3A, UC3B	0.018 (0.29)	0.0070 (0.11)	0.0070 (0.11)	0.00070 (0.011)
UC4A ²	0.021 (0.33)	0.0081 (0.13)	0.0081 (0.13)	0.00081 (0.013)

¹Retention is expressed in pounds of preservative per cubic foot (kilograms per cubic meter) of preservative actives.

²Tru-Core PTI UC4A retentions are not used for ground contact, except for applications described in Section 5.5 of this evaluation report.

TABLE 2—TYPICAL APPLICATIONS FOR TRU-CORE® PTI WOOD PRODUCT

SERVICE CONDITIONS	USE ENVIRONMENT	AWPA USE CATEGORY ²	TYPICAL APPLICATIONS
Interior construction, above ground, dry	Continuously protected from weather or other sources of moisture	UC1 INTERIOR DRY	Interior construction - millwork and furnishings
Interior construction, above ground, damp	Protected from weather, but may be subject to sources of moisture	UC2 INTERIOR DAMP	Interior construction - interior beams, timbers, flooring millwork and sill plates
Exterior construction, above ground, coated and rapid water runoff	Exposed to all weather cycles, including intermittent wetting	UC3A ABOVE GROUND Protected	Exterior - coated millwork, siding and trim
Exterior construction, above ground, uncoated and poor water runoff Excludes above ground applications with ground contact type hazards (see Section 5.5)	Exposed to all weather cycles including intermittent wetting but with sufficient air circulation so wood can readily dry	UC3B ABOVE GROUND Exposed	Decking, joists and beams for decks and freshwater docks ¹ , railings, fence pickets, uncoated millwork. Timber posts and columns with dimensions greater than 2 inches nominal in width and thickness
Ground contact or Fresh Water Non-critical components Includes above ground applications with ground contact type hazards or that are critical or hard to replace	Exposed to all weather cycles, including continuous or prolonged wetting	UC4A GROUND CONTACT General Use	Joists and beams for decks and freshwater docks ¹

¹Joists and beams shall be treated to requirements for UC4A when they are difficult to maintain, repair or replace and are critical to the performance and safety of the entire system/construction.

²Refer to the AWPA 2016 Book of Standards, Standard U-1 Table 2-1 for a complete description of use category designations and typical applications.

TABLE 3—WOOD PRESERVATIVE TREATMENT LOCATION

LISTEE	WOOD PRESERVATIVE TREATMENT LOCATION
Permapost Products Company	4066 SE Tualatin Valley Highway, Hillsboro, OR

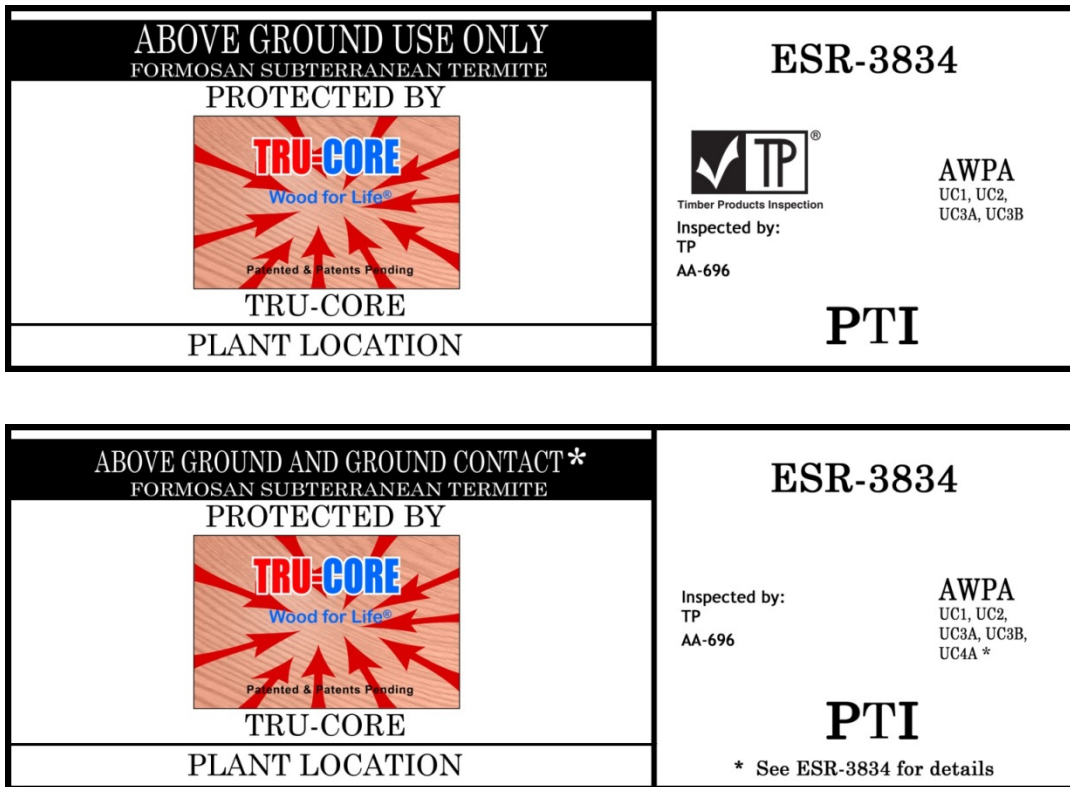


FIGURE 1—SAMPLE PRODUCT LABELS