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ICC-ES Evaluation Report

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

SECTION: 06 05 83—SHOP-APPLIED WOOD COATINGS

REPORT HOLDER:

KOP-COAT, INC.

EVALUATION SUBJECT:

TRU-CORE® TYPE I WOOD PROTECTION SYSTEM



“2014 Recipient of Prestigious Western States Seismic Policy Council (WSSPC) Award in Excellence”



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REPORT HOLDER:

KOP-COAT, INC.

EVALUATION SUBJECT:

TRU-CORE® TYPE I WOOD PROTECTION SYSTEM

ADDITIONAL LISTEE:

HONOLULU WOOD TREATING LLC (HWT)

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2012 and 2009 *International Building Code*® (IBC)
- 2012 and 2009 *International Residential Code*® (IRC)
- Other Codes (see Section 8.0)

Properties evaluated:

- Decay resistance above ground
- 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® Type I Wood Protection System is used to treat wood products used in aboveground applications that are required by code to be protected against decay and termites.

3.0 DESCRIPTION

3.1 General:

TRU-CORE® Type I Wood Protection System is recognized for use in aboveground applications and to resist attack by fungal decay and subterranean termites, including Formosan termites.

TRU-CORE® Type I Wood Protection System uses DOT and Permethrin containing formulations supplied by Kop-Coat, Inc. and used by the wood treatment facility listed in Table 3, to coat wood members in accordance with the Kop Coat Inc., TRU-CORE® Type I Wood Protection System Quality Control Manual.

The attributes of the TRU-CORE® Type I Wood Protection System 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 5.7 for limitations on termite-resistance use.

3.2 Preservative System:

TRU-CORE® Type I Wood Protection System is a disodium octaborate tetrahydrate (DOT) and Permethrin treatment system for coating wood members.

3.3 Materials:

The following wood products may be treated with the TRU-CORE® Type I Wood Protection System:

- a. Dimensional lumber, framing, trusses, sill plates and timbers of the following species: mixed Southern pine, hem-fir, spruce-pine-fir and Douglas fir.
- b. Plywood complying with US DOC PS-1 consisting of Southern pine and Douglas fir or OSB complying with U.S. DOC PS-2, consisting of Southern pine or aspen.
- c. Laminated veneer lumber (LVL)
- d. Parallel strand lumber (PSL)
- e. Laminated strand lumber (LSL)
- f. Laminated beams
- g. Prefabricated Wood I-Joists with LVL flange of Southern pine or Douglas fir or solid flange of Southern pine, spruce-pine-fir, or other softwoods and OSB webs of Southern pine or aspen or plywood webs of Southern pine or Douglas fir.
- h. Millwork, trim and siding

Minimum borate and Permethrin concentration levels must be as shown in Table 1.

4.0 DESIGN AND INSTALLATION

4.1 General:

TRU-CORE® Type I Wood Protection System treated wood is installed in locations required to have preservative-treated lumber, timbers, OSB and other wood products listed in Section 3.3 in accordance with the requirements of the applicable code.

Kop-Coat, Inc. installation instructions, 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 the Kop-Coat, Inc. instructions and this report.

4.2 Applications:

TRU-CORE® Type I Wood Protection System wood products may be used in locations where wood is permitted and/or in locations where wood is required by the code to be fungal decay or termite resistant in all building types and occupancies, as defined by the applicable code. The treated wood members are recognized for use in aboveground applications where they are continuously protected from liquid water. Wood treated with TRU-CORE® Type I Wood Protection System may be used as sill-plates over concrete slabs and foundations in accordance with the applicable code. Typical applications are listed in Table 2.

Locations requiring preservative-treated wood for decay or termite resistance are described in Section 2304.11 of the IBC, and Sections R317 and R318 of the IRC.

4.3 Fasteners:

Fasteners used with TRU-CORE® Type I Wood Protection System wood products must be in accordance with Section 2304.9.5 of the IBC and Section R317.3 of the IRC, except that aluminum fasteners are also permitted when wood products are used in interior applications.

4.4 Protection from Water:

The borate preservative in TRU-CORE® Type I Wood Protection System wood is water-soluble and the coated wood must be protected from liquid water, where permanently installed.

TRU-CORE® Type I Wood Protection System wood used in weather-protected exterior applications must be continuously protected from direct wetting with a minimum of one coat of primer and two coats of finish paint or clad with a water impermeable material including for example vinyl and fiberglass.

4.5 Structural—Duration of Load:

The maximum load duration factor allowed for TRU-CORE® Type I Wood Protection System wood products used for structural members is 1.6, in accordance with Section 2.3 of the American Forest & Paper Association (AF&PA) National Design Specification for Wood Construction (NDS).

5.0 CONDITIONS OF USE

The TRU-CORE® Type I Wood Protection System 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.

5.2 Surface treatment of field cuts and bored holes must be in accordance with the recommendations of Kop-coat, Inc. and AWPMA M4.

5.3 The TRU-CORE® Type I Wood Protection System wood products are limited to the wood products noted in Section 3.3 and the minimum application rate as noted in Table 1.

5.4 Treated materials used for protection against Formosan termites must be labeled/identified for this use as described in Section 7.0.

5.5 The TRU-CORE® Type I Wood Protection System must only be factory-applied by applicators trained by the report holder, in a manner complying with all applicable state and federal regulations.

5.6 The TRU-CORE® Type I Wood Protection System treated products must be protected from continuous wetting during shipping and storage.

5.7 The manufacturers of prefabricated wood I-Joists must approve the use of TRU-CORE® Type I Wood Protection System for use with their products.

5.8 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.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Liquid Borate Fungal Decay and Termite-resistant Treatment Applied to Wood Members (AC433), dated June 2012.

7.0 IDENTIFICATION

7.1 TRU-CORE® Type I Wood Protection System treated lumber, timber, plywood, OSB and other wood products listed in Section 3.3 must be stamped or end tagged with the product name (TRU-CORE® Type I); the Kop-Coat, Inc. name; the treatment company name and plant location (refer to Table 3); the name of the preservative component (DOT and Permethrin); the intended end use application (see Table 2); and the evaluation report number (ESR-3539). Bulk shipments directly from the manufacturing plant to a jobsite may have only one label per unit of material. A sample label is shown in Figure 1.

Products treated for protection against Formosan termites must be labeled as shown in Figure 2.

7.2 The report holder's contact information is the following:

KOP-COAT, INC.
3040 WILLIAM PITT WAY
PITTSBURGH, PENNSYLVANIA 15238
(412) 227-2426
www.kop-coat.com
ippd@kop-coat.com

7.3 The Additional Listee's contact information is the following:

HONOLULU WOOD TREATING LLC (HWT)
91-291 HANUA STREET
KAPOLEI, HAWAII 96707

8.0 OTHER CODES

In addition to the codes referenced in Section 1.0, the products described in this report were evaluated for compliance with the requirements of the following legacy codes and earlier editions of the International Codes:

■ 2006, 2003 and 2000 *International Building Code*® (IBC)

- 2006, 2003 and 2000 *International Residential Code*[®] (IRC)
- 1997 *Uniform Building Code*[™] (UBC)
- BOCA[®] *National Building Code*/1999 (BNBC)
- 1999 *Standard Building Code*[®] (SBC)

The TRU-CORE[®] Type I Wood Protection System wood products described in this report comply with, or are suitable alternatives to what is specified in, the codes listed above, subject to the provisions of Sections 8.1 through 8.6.

8.1 Uses:

See Section 2.0.

8.2 Description:

See Section 3.0.

8.3 Installation:

See Section 4.0, except for the following modifications:

Locations requiring preservative-treated wood for decay or termite resistance are described in Section 2304.11 of the 2006, 2003 and 2000 IBC, Sections R319 and R320 of

the 2006 and 2003 IRC, Sections R323 and R324 of the 2000 IRC, Section 2304 of the SBC, Section 2311 of the BNBC, and Section 2306 of the UBC.

Fasteners used with TRU-CORE[®] Type I Wood Protection System wood products must be in accordance with Section 2304.9.5 of the 2006, 2003 and 2000 IBC, Section R319.3 of the 2006 and 2003 and IRC, Section R323.3 of the 2000 IRC, Section 2306.3 of the SBC, Section 2311.3.3 of the BNBC, and Section 2304.3 of the UBC, except that aluminum fasteners are also permitted when the treated wood products are used in interior applications.

8.4 Conditions of Use:

See Section 5.0.

8.5 Evidence Submitted:

See Section 6.0.

8.6 Identification:

See Section 7.0.

TABLE 1—MINIMUM CONCENTRATION APPLICATION RATE REQUIREMENTS FOR TRU-CORE[®] TYPE I WOOD PROTECTION SYSTEM WOOD PRODUCTS BY END USE

END USE	MINIMUM APPLICATION RATE
	DOT ₁ - B ₂ O ₃ and Permethrin
Aboveground applications UC1, and UC2 not subject to contact with liquid water, and coated exterior aboveground applications with rapid water runoff UC3A for species and products listed in Section 3.3.	Minimum application rate shall provide a DOT loading of 4000 ppm BAE ₂ and 100 ppm Permethrin in the cross section with analytical presence of active ingredients within the center 50% of treated wood core in accordance with the approved Quality Control Manual. The concentration is suitable for exposure to Formosan termites.

Notes:

¹DOT – Disodium Octoborate Tetrahydrate


²BAE – Boric Acid Equivalent

TABLE 2—TYPICAL APPLICATIONS FOR TRU-CORE[®] TYPE I WOOD PROTECTION SYSTEM WOOD PRODUCTS

SERVICE CONDITIONS	AWPA USE CATEGORY	TYPICAL APPLICATIONS
Interior construction, above ground, dry	UC1	Interior construction - millwork and furnishings
Interior construction, above ground, damp	UC2	Interior construction - interior beams, timbers, flooring, millwork, OSB, plywood, framing, trusses, LVL, PSL, LSL, I-Joists and sill plates
Exterior construction, above ground, coated and rapid water runoff	UC3A	Refer to Section 4.4 Exterior - coated millwork, siding and trim

TABLE 3—WOOD TREATMENT LOCATION

LISTEE	WOOD PRESERVATIVE TREATMENT LOCATION
Honolulu Wood Treating LLC (HWT)	Kapolei, HI

<p>END USE - ABOVE GROUND ONLY FORMOSAN SUBTERRANEAN TERMITE</p>	<p>14</p> <p>ABOVE GROUND Interior Use Formosan Subterranean Termite</p> <p>15</p>
 <p>Plant Location</p>	<p>Monitored by: Timber Products Inspection AA-696</p> <p style="text-align: right;">ESR - 3539 ISO 21887 ** UC1, UC2, UC3.1</p> <p style="text-align: center;">BAE 4000 PPM* Permethrin 100 PPM*</p> <p style="text-align: center;">Preservative System</p>
<p>SEE OTHER SIDE FOR IMPORTANT INFORMATION</p>	

*** Minimum application rate shall provide a DOT loading of 4000 ppm BAE and 100 ppm Permethrin in the cross section with analytical presence of active ingredients within the center 50% of treated wood core in accordance with the approved Quality Control Manual. The concentration is suitable for exposure to Formosan termites.**

**** ISO 21887-2007: Durability of wood and wood-based products - Use classes**
This system of use classes is derived from basic principles used in several established durability standardization systems in various parts of the world.

FIGURE 1—SAMPLE PRODUCT LABEL—FORMOSAN TERMITES