

# ICC-ES Evaluation Report

**ESR-4472**

Reissued February 2024

*This report also contains:*

- LABC Supplement

Subject to renewal February 2026

-CBC Supplement

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<b>DIVISION: 06 00 00— WOOD, PLASTICS AND COMPOSITES</b>  <b>Section: 06 05 73.33— Preservative Wood Treatment</b>	<b>REPORT HOLDER:</b> <b>PERFORMANCE FORMULATION SOLUTIONS, LLC</b>  <b>ADDITIONAL LISTEE:</b> <b>ROYAL PACIFIC INDUSTRIES</b>	<b>EVALUATION SUBJECT:</b> <b>PRESERVETECH™ HW</b>	
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## 1.0 EVALUATION SCOPE

### Compliance with the following codes:

- 2021, 2018, 2015, 2012 and 2009 [International Building Code® \(IBC\)](#)
- 2021, 2018, 2015, 2012 and 2009 [International Residential Code \(IRC\)](#)
- Other Codes (see Section 8.0)

For evaluation for compliance with codes adopted by [Los Angeles Department of Building and Safety \(LADBS\)](#), see [ESR-4472 LABC and LARC Supplement](#).

### Properties evaluated:

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

## 2.0 USES

PRESERVETECH™ HW wood is used for wood members in above ground interior applications that are required by the code to be protected against decay and termites.

## 3.0 DESCRIPTION

### 3.1 General:

PRESERVETECH HW™ products are recognized for use in above ground applications and to resist attack by fungal decay and subterranean termites, including Formosan termites.

PRESERVETECH™ HW brand wood preservatives are produced by Performance Formulation Solutions, LLC, and are used by the wood-preserving plant listed in this report as an additional listee to preservative-treat wood products in accordance with the PRESERVETECH™ HW Quality Control Manual.

### 3.2 Preservative System:

PRESERVETECH HW wood preservatives are propiconazole-tebuconazole-imidacloprid (PTI) preservative-systems used for treating wood members. The active fungicides and termiticide in PRESERVETECH™ HW

wood preservative are propiconazole, tebuconazole and imidacloprid in a ration of 10:10:1. These compounds are emulsified in water using a proprietary blend of dispersants.

### 3.3 Material:

The following wood products may be treated with PRESERVETECH™ HW:

- a. Dimension lumber, framing, trusses, sill plates and timbers of the following species: southern pine, mixed southern pine, ponderosa pine, red pine, radiata pine, redwood, western red cedar, Caribbean pine, Douglas fir, western hemlock and hem-fir.
- b. Plywood complying with US DOC PS-1 consisting of southern pine and Douglas fir and OSB complying with US DOC PS-2, consisting of southern pine and Douglas fir.
- c. Laminated veneer lumber (LVL)
- d. Prefabricated Wood I-Joists

Minimum preservative retention levels are provided in [Table 1](#) of this report.

## 4.0 INSTALLATION

### 4.1 General:

PRESERVETECH™ HW lumber is installed in locations required to have preservative-treated lumber, timbers, plywood, OSB and other wood products listed in Section 3.3 in accordance with the requirements of the applicable code.

Performance Formulation Solutions, LLC, 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 Performance Formulation Solutions, LLC instructions and this report.

### 4.2 Application:

Performance Formulation Solutions, LLC 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 have been evaluated for use in above ground applications where they are continuously protected from liquid water. Typical applications are described in [Table 2](#).

Locations requiring preservative-treated wood for decay or termite resistance are described in 2021, 2018 and 2015 IBC Section 2304.12 (2012 and 2009 IBC Section 2304.11) of the IBC, and Sections R317 and R318 of the IRC.

### 4.3 Fasteners:

Fasteners used with PRESERVETECH™ HW wood products must be in accordance with Section 2304.10.6 of the 2021 IBC [Section 2304.10.5 of the 2018 and 2015 IBC (Section 2304.9.5 of the 2012 and 2009 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 Structural—Duration of Load, C<sub>D</sub>:

The maximum load duration factor allowed for PRESERVETECH™ HW 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).

## 5.0 CONDITIONS OF USE:

The PRESERVETECH™ HW 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 Performance Formulation Solutions, LLC and AWPA M-4.
- 5.3 The PRESERVETECH™ HW 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 manufacturers of prefabricated wood I-Joists must approve the use of PRESERVETECH™ HW for use with their products.
- 5.6 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 (editorially revised January 2021).

## 7.0 IDENTIFICATION

- 7.1 PRESERVETECH™ HW lumber and plywood must be labeled with the name of the inspection agency (Timber Products Inspection or Southern Pine Inspection Bureau); the product name (PRESERVETECH™ HW) or logo (see [Figure 1](#)); the treatment company name and plant location; the name of the preservative components or designation (PTI); minimum retention; the intended end use; and the evaluation report number (ESR-4472). A sample label is shown in [Figure 1](#) of this report.
- 7.2 The report holder's contact information is the following:

**PERFORMANCE FORMULATION SOLUTIONS, LLC**  
3465 GRIBBLE ROAD  
MATTHEWS, NORTH CAROLINA 28104  
(980) 253-8880  
[www.ufpretailsolutions.com/performance-formulation-solutions](http://www.ufpretailsolutions.com/performance-formulation-solutions)
- 7.3 The additional listee's contact information is the following:

**ROYAL PACIFIC INDUSTRIES**  
28770 DIKE ROAD  
RAINER, OREGON 97048

## 8.0 OTHER CODES

In addition to the codes referenced in Section 1.0, the products 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)

The PRESERVETECH™ HW preservative-treated lumber and plywood 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 2000, 2003 and 2006 IBC, Sections R323, R324 of the 2000 IRC, Sections R319 and R320 of the 2003 IRC, Sections R319 and R320 of the 2006 IRC.

The fasteners used with PRESERVETECH HW™ products must be in accordance with Section 2304.9.5 of the 2000, 2003 and 2006 IBC, Section R323.3 of the 2000 IRC, Section R319.3 of the 2003 and 2006 IRC, except that aluminum fasteners are also permitted.

### 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 RETENTION REQUIREMENTS FOR PRESERVETECH™ HW PRODUCTS**

SPECIES	MINIMUM ACTIVES, pcf (kg/m <sup>3</sup> ) <sup>1</sup>
	UC1, UC2
Southern Pine, mixed southern pine	0.018 (0.29)
Douglas fir	0.018 (0.29)

<sup>1</sup>Retention is expressed in pounds of preservative actives per cubic foot (kilograms per cubic meter)

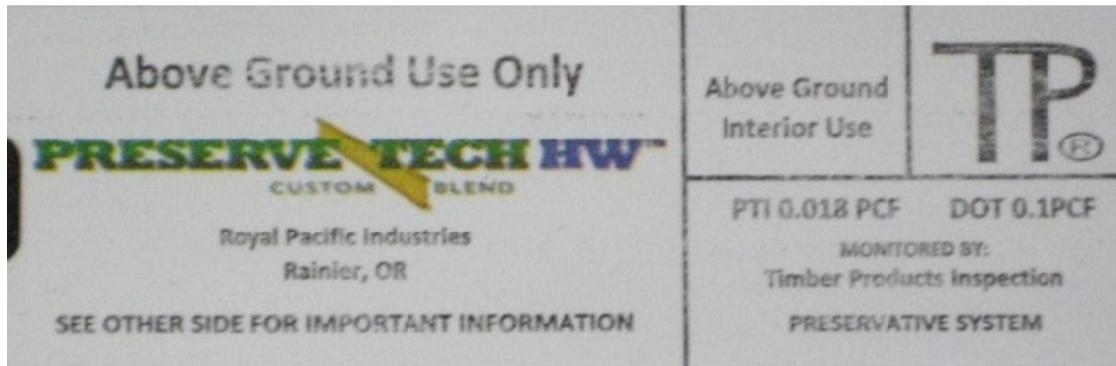
**TABLE 2—TYPICAL APPLICATIONS FOR PRESERVETECH™ HW WOOD PRODUCTS**

SERVICE CONDITIONS	USE ENVIRONMENT	AWPA USE CATEGORY <sup>1</sup>	TYPICAL APPLICATIONS
Interior construction, above ground, dry	Continuously protected from weather or other sources of moisture	UC1	Interior construction – millwork and furnishings
Interior construction above ground, damp	Protected from weather but may be subject to sources of moisture	UC2	Interior construction – interior beams, timbers, flooring, millwork, OSB, plywood, framing, trusses, LVL, PSL, LSL, I-Joists and sill plates.

<sup>1</sup>Refer to the AWPA 2020 book of Standards, Standard U-1 [Table 2](#) for a complete description of use category designations and typical applications

**TABLE 3—WOOD TREATMENT LOCATIONS**

LISTEE	WOOD PRESERVATIVE TREATMENT LOCATION
Royal Pacific Industries	Rainier, Oregon

**FIGURE 1—SAMPLE PRODUCT LABEL**

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**DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES**  
**Section: 06 05 73.33—Preservative Wood Treatment**

**REPORT HOLDER:****PERFORMANCE FORMULATION SOLUTIONS, LLC****EVALUATION SUBJECT:****PRESERVETECH™ HW****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that PRESERVETECH™ HW, described in ICC-ES evaluation report [ESR-4472](#), has also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

**Applicable code editions:**

- 2020 City of Los Angeles Building Code (LABC)
- 2020 City of Los Angeles Residential Code (LARC)

**2.0 CONCLUSIONS**

The PRESERVETECH™ HW, described in Sections 2.0 through 7.0 of the evaluation report [ESR-4472](#), complies with the LABC Chapter 23, and the LARC Chapter 3, and is subject to the conditions of use described in this supplement.

**3.0 CONDITIONS OF USE**

The PRESERVETECH™ HW described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-4472](#).
- The design, installation, conditions of use and identification of the PRESERVETECH™ H™ are in accordance with the 2018 *International Building Code®* (IBC) provisions noted in the evaluation report [ESR-4472](#).
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 23, as applicable.
- Under the LARC, an engineered design in accordance with LARC Section R301.1.3 must be submitted.

This supplement expires concurrently with the evaluation report, reissued February 2024.

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**DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES****Section: 06 05 73.33—Preservative Wood Treatment****REPORT HOLDER:****PERFORMANCE FORMULATION SOLUTIONS, LLC****EVALUATION SUBJECT:****PRESERVETECH™ HW****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that PRESERVETECH™ HW wood, described in ICC-ES evaluation report ESR-4472, has also been evaluated for compliance with the code(s) noted below.

**Applicable code edition(s):**

- 2019 California Building Code (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2019 California Residential Code (CRC)

**2.0 CONCLUSIONS****2.1 CBC:**

The PRESERVETECH™ HW wood, described in Sections 2.0 through 7.0 of the evaluation report ESR-4472, complies with CBC Chapter 23, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapter 23, as applicable.

**2.1.1 OSHPD:**

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

**2.1.2 DSA:**

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

**2.2 CRC:**

The PRESERVETECH™ HW wood, described in Sections 2.0 through 7.0 of the evaluation report ESR-4472, complies with CRC Chapter 8, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Chapter 3, as applicable.

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