

ICC-ES Evaluation Report

ESR-3038*

Reissued April 1, 2011

This report is subject to renewal April 1, 2013.

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

REPORT HOLDER:

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EVALUATION SUBJECT:**PACBOR® PRESERVATIVE-TREATED WOOD****1.0 EVALUATION SCOPE****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:

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

2.0 USES

PACBOR® preservative-treated wood products are used in aboveground applications that are required by code to be protected against decay and termites.

3.0 DESCRIPTION**3.1 General:**

PACBOR® preservative-treated wood products are recognized for use in aboveground applications and to resist attack by fungal decay and subterranean termites, including Formosan termites.

PACBOR® preservative-treated wood uses Preservabalance concentrate that is produced by Preservabalance, Inc., of Eloy, Arizona. The concentrate is used by the wood-preserving treatment facilities listed in Table 3, to preservative-treat wood members in accordance with the Pacific Wood Preserving Quality Control Manual.

3.2 Preservative System:

Preservabalance concentrate is a disodium octaborate tetrahydrate (DOT) wood-preservative treatment for chemically treating wood members.

3.3 Materials:

The following wood products may be treated with PACBOR® brand wood preservative:

- a. Dimensional lumber and timbers of the following species: mixed Southern pine, Radiata pine, red pine, ponderosa pine, hem-fir, coastal Douglas fir, and spruce-pine-fir.
- b. Plywood having veneers consisting of Southern pine or Douglas fir.

Minimum preservative retention levels must be as shown in Table 1.

4.0 DESIGN AND INSTALLATION**4.1 General:**

PACBOR® preservative-treated wood is installed as preservative-treated lumber, timbers and plywood in accordance with the requirements of the applicable code.

Pacific Wood Preserving 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 the Pacific Wood Preserving instructions and this report.

4.2 Applications:

PACBOR® preservative-treated wood products may be used in locations where wood is permitted and/or in locations required by the code to be resistant to fungal decay or termites, in all building types and occupancies as defined by the applicable code. The treated wood members are recognized in this report for use in aboveground applications where they are continuously protected from liquid water. PACBOR® preservative-treated wood 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 PACBOR® preservative-treated wood products must be in accordance with Section 2304.9.5 of

***Revised April 2012**

the IBC and Section R317.3 of the IRC, except that aluminum fasteners and mild steel fasteners are also permitted when used for interior applications.

4.4 Protection from Water:

The borate preservative in PACBOR® preservative-treated wood is water soluble, and the treated wood must be protected from liquid water.

PACBOR® preservative-treated 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. *

4.5 Structural:

4.5.1 Duration of Load: The maximum load duration factor allowed for PACBOR® treated wood products used for structural members is 1.6, in accordance with Section 2.3.2 of the American Forest & Paper Association (AF&PA) National Design Specification for Wood Construction (NDS).

4.5.2 Incising Factor: When the treated wood products 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 PACBOR® 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.
- 5.2 Surface treatment of field cuts must be in accordance with the recommendations of Pacific Wood Preserving.
- 5.3 The PACBOR® preservative-treated wood products are limited to the wood species noted in Section 3.3 and minimum retention levels noted in Table 1.
- 5.4 Treated lumber and plywood used for protection against Formosan termites must be labeled/identified for this use as described in Section 7.0.
- 5.5 Treatment of wood products is at the facilities of the treaters noted in Table 3, under a quality control program with inspections by Timber Products Inspection Inc. (AA-664 and AA-696) or Southern Pine Inspection Bureau (AA-680).

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with Appendix J [Disodium Octaborate Tetrahydrate (DOT) Wood Preservative Systems (Formerly AC62)] of the ICC-ES Acceptance Criteria for Proprietary Wood Preservative Systems—Common Requirements for Treatment Process, Test Methods and Performance (AC326), dated February 2012.
- 6.2 Quality control documentation in accordance with Section 5.0 of AC326 with AWWA M22 compliance.

7.0 IDENTIFICATION

PACBOR® preservative-treated lumber, timber and plywood must be stamped with the name of the inspection agency (Timber Products Inspection Inc. or Southern Pine Inspection Bureau); the product name

(PACBOR®); the Pacific Wood Preserving name or initials (PWP); the treatment company name and plant location (refer to Table 3); the name of the preservative components; the intended end use application (see Table 2); the treating date; minimum retention; and the evaluation report number (ESR-3038). Sample labels are shown in Figures 1 through 4.

Products treated for protection against Formosan termites must be labeled as shown in Figures 1 and 3.

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

The PACBOR® preservative-treated 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 5.1 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 and R324 of the 2000 IRC; Sections R319 and R320 of the 2003 and 2006 IRC; Section 2304 of the SBC; Section 2311 of the BNBC; and Section 2306 of the UBC.

Fasteners used with PACBOR® preservative-treated wood 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; Section 2306.3 of the SBC; Section 2311.3.3 of the BNBC; and Section 2304.3 of the UBC; except that aluminum fasteners and mild steel fasteners are also permitted when used for 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 PRESERVATIVE RETENTION REQUIREMENTS
FOR PACBOR® PRESERVATIVE-TREATED WOOD PRODUCTS BY END USE**

END USE	MINIMUM TOTAL ACTIVES ¹ RETENTION, pcf (kg/m ³) B ₂ O ₃
Aboveground applications UC1, UC2, and UC3A not subject to contact with liquid water; species listed in Section 3.3	0.17 (2.72); not suitable for exposure to Formosan termites
	0.28 (4.49); suitable for exposure to Formosan termites

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

TABLE 2—TYPICAL APPLICATIONS FOR PACBOR® PRESERVATIVE-TREATED 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 and sill plates
Exterior construction, above ground, coated & rapid water runoff	UC3A	Refer to Section 4.4 Exterior - coated millwork, siding and trim

TABLE 3—WOOD PRESERVATIVE TREATMENT LOCATIONS

WOOD PRESERVATIVE TREATMENT LOCATIONS	
Pacific Wood Preserving of Bakersfield, Inc.	Bakersfield, CA
Arizona Pacific Wood Preserving	Eloy, AZ
Selma Treating of Nevada dba Nevada Wood Preserving	Silver Springs, NV
Pacific Wood Preserving of Oregon	Sheridan, OR

<p>END USE - ABOVE GROUND ONLY FORMOSAN SUBTERRANEAN TERMITE</p>  <p>PACBOR®</p> <p>Plant Location</p> <p>SEE OTHER SIDE FOR IMPORTANT INFORMATION</p>	<p>09</p> <p>ABOVE GROUND Use Only</p> <p>Formosan Subterranean Termite</p> <p>Inspected by: XXX Inspection Agency AA-XXX</p> <p>AWPA UC1, UC2 ESR-3038</p> <p>0.28 PCF</p> <p>Lumber & Plywood Above Ground And Continuously Protected From Liquid Water</p> <p>Preservative System</p>	<p>10</p>
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FIGURE 1—SAMPLE PRODUCT LABEL—AWPA UC1, UC 2, FORMOSAN TERMITES

<p>END USE - ABOVE GROUND ONLY</p>  <p>PACBOR®</p> <p>Plant Location</p> <p>SEE OTHER SIDE FOR IMPORTANT INFORMATION</p>	<p>09</p> <p>ABOVE GROUND Use Only</p> <p>Inspected by: XXX Inspection Agency AA-XXX</p> <p>AWPA UC1, UC2 ESR-3038</p> <p>0.17 PCF</p> <p>Lumber & Plywood Above Ground And Continuously Protected From Liquid Water</p> <p>Preservative System</p>	<p>10</p>
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FIGURE 2—SAMPLE PRODUCT LABEL—APWA UC1, UC2


<p>END USE - ABOVE GROUND ONLY FORMOSAN SUBTERRANEAN TERMITE</p>  <p>PACBOR®</p> <p>Plant Location</p> <p>SEE OTHER SIDE FOR IMPORTANT INFORMATION</p>	<p>10</p> <p>ABOVE GROUND Use Only</p> <p>Formosan Subterranean Termite</p> <p>Inspected by: XXX Inspection Agency AA-XXX</p> <p>AWPA UC1, UC2, 3A ESR-3038</p> <p>0.28 PCF</p> <p>Lumber & Plywood Above Ground And Continuously Protected From Liquid Water</p> <p>Preservative System</p>	<p>11</p>
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FIGURE 3—SAMPLE PRODUCT LABEL—AWPA UC1, UC2, UC3A FORMOSAN TERMITES


<p>END USE - ABOVE GROUND ONLY</p>  <p>PACBOR®</p> <p>Plant Location</p> <p>SEE OTHER SIDE FOR IMPORTANT INFORMATION</p>	<p>10</p> <p>ABOVE GROUND Use Only</p> <p>Inspected by: XXX Inspection Agency AA-XXX</p> <p>AWPA UC1, UC2, 3A ESR-3038</p> <p>0.17 PCF</p> <p>Lumber & Plywood Above Ground And Continuously Protected From Liquid Water</p> <p>Preservative System</p>	<p>11</p>
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FIGURE 4—SAMPLE PRODUCT LABEL—APWA UC1, UC2, UC3A