ICC-ES Evaluation Report

ESR-2240

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Subject to renewal May 2028

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES **Section: 06 05 73.33—Preservative Wood Treatment**	**REPORT HOLDER:** **KOPPERS PERFORMANCE CHEMICALS** **ADDITIONAL LISTEES:** **UNIVERSAL FOREST PRODUCTS EASTERN DIVISION**	**EVALUATION SUBJECT:** **MICROPRO®/LIFEWOOD® PRESERVATIVE-TREATED WOOD**	

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2024, 2021, 2018, 2015, 2012 and 2009 *International Building Code®* (IBC)
- 2024, 2021, 2018, 2015, 2012 and 2009 *International Residential Code® (IRC)*
- 2013 *Abu Dhabi International Building Code* (ADIBC)†

†The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

- Other Codes (see Section 8.0)

Properties evaluated:

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

2.0 USES

Koppers Performance Chemicals MicroPro®/LifeWood® preservative-treated wood is used in applications that are required by the code to be protected against decay and termites.

3.0 DESCRIPTION

3.1 General:

MicroPro®/LifeWood® preservative-treated wood products have been evaluated for use in aboveground, ground-contact (general use and critical structural), and freshwater-contact applications and to resist attack by fungal decay, and subterranean termites, including Formosan termites.

The preservatives to treat MicroPro®/LifeWood® are produced by Koppers Performance Chemicals and are used by the wood-preserving treatment facilities listed in Table 3 of this report to preservative-treat wood products in accordance with the Koppers Performance Chemicals, Standard MCA quality control documentation.

3.2 Preservative System:

MicroPro®/LifeWood®, brand wood is treated with a copper and azole preservative system. The preservative includes specified ingredients of micronized copper and tebuconazole. The actives for MicroPro®/LifeWood® are micronized copper expressed as copper metal (Cu) to azole (tebuconazole) in the wood preservative is in a ratio of 25:1 with tolerances as specified in the proprietary quality control documentation.

3.3 Materials:

MicroPro®/LifeWood® preservative-treated wood materials may consist of the following:

a. Dimensional lumber and timbers of the following species consisting of primarily sapwood: southern pine, mixed southern pine, radiata pine, Caribbean pine, red pine, Ponderosa pine, and German Scots pine.

b. Dimensional lumber and timbers of the following species consisting primarily of heartwood: incised hem-fir and incised Douglas-fir.

c. Lumber, of nominal size of 2-by-8 or less, for decking and specialty use of the species listed in (a) and (b) above.

d. Southern pine and Douglas fir plywood.

e. Round and sawn posts and building poles of Southern pine, Ponderosa pine, red pine and incised hem-fir.

Minimum preservative retention levels must comply with the values shown in Table 1 of this evaluation report.

4.0 INSTALLATION

4.1 General:

MicroPro®/LifeWood® preservative-treated wood is installed as preservative-treated lumber and timbers in accordance with the requirements of the applicable code.

Koppers Performance Chemicals 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 Koppers Performance Chemicals, instructions and this report.

4.2 Applications:

MicroPro®/LifeWood® 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 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 2024, 2021, 2018 and 2015 IBC (Section 2304.11 of the 2012 and 2009 IBC) and Sections R304, R305 and R402.1.2 of the 2024 IRC (Sections R317, R318 and R402.1.2 of the 2021, 2018, 2015, 2012 and 2009 IRC).

4.3 Fasteners:

Fasteners used with MicroPro®/LifeWood® preservative-treated wood products must be in accordance with Section 2304.10.6 of the 2024 and 2021 IBC [Section 2304.10.4 of the 2018 and 2015 IBC (Section 2304.9.5 of the 2012 and 2009 IBC)] and Section R304.3 of the 2024 IRC (Section R317.3 of the 2021, 2018, 2015, 2012 and 2009 IRC), except that aluminum fasteners are also permitted. In addition, carbon steel fasteners may be used for UC1 and UC2 interior, aboveground, weather-protected applications such as sill plates, interior framing and interior trusses.

4.4 Structural:

4.4.1 Duration of Load: The maximum load duration factor allowed for MicroPro®/LifeWood® 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 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 MicroPro®/LifeWood® preservative-treated wood products described in this report comply with, or are suitable alternatives 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 Koppers Performance Chemicals.

5.3 The MicroPro®/LifeWood® preservative-treated wood products are limited to the wood species noted in Section 3.3 and the minimum retention levels 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) or Southern Pine Inspection Bureau, Inc. (AA-680).

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, without a vapor barrier separation.

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 that is fixed and not adjustable.

5.5.2.6 When treated wood is used in tropical climates.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with Appendix A, Copper-Azole Wood-Preservative Treatment Systems, of the ICC-ES Acceptance Criteria for Proprietary Wood Preservative Systems-Common Requirements for Treatment Process, Test Methods and Performance [AC326 (24)], dated April 2026.

6.2 Quality control documentation in accordance with Section 5.0 of AC326 with AWPA M22 and AWPA M23 compliance.

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-2240) along with the name, registered trademark, or registered logo of the report holder [and/or listee] must be included in the product label.

7.2 In addition, MicroPro®/LifeWood® preservative-treated wood products must be labeled in accordance with AC326, the name of the inspection agency (Timber Products Inspection Inc. or Southern Pine Inspection Bureau, Inc.); the product name (MicroPro®/LifeWood®) or logo (see Figure 1); the treatment company name and plant location (refer to Table 3); the names of the preservative components; the intended end use; and the evaluation report number (ESR-2240). A sample label is shown as Figure 1. For optional sample label information, refer to Section 6.8.1 of AC326.

7.3 The report holders contact information is the following:

KOPPERS PERFORMANCE CHEMICALS
635 HIGHWAY 74 SOUTH
PEACHTREE CITY, GEORGIA 30269
(770) 233-4200
www.kopperspc.com

7.4 The additional listees' contact information is the following:

UNIVERSAL FOREST PRODUCTS
EASTERN DIVISION
2801 EAST BELTLINE, N.E.
GRAND RAPIDS, MICHIGAN 49525
(616) 364-6161

7.5 The Manufacturing Locations for Listees are noted in Table 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, 2003 and 2000 *International Building Code*® (IBC)
- 2006, 2003 and 2000 *International Residential Code*® (IRC)

The MicroPro®/LifeWood® 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 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 and R324 of the 2000 IRC, Sections R319 and R320 of the 2003 and 2006 IRC.

Fasteners used with MicroPro®/LifeWood® 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, except that aluminum fasteners are also permitted. In addition, carbon steel fasteners may be used for UC1 and UC2 interior, aboveground, weather protected applications such as sill plates, interior framing and interior trusses.

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 MICROPRO®/LIFEWOOD® WOOD PRODUCTS BY END USE

MICROPRO®/LIFEWOOD® (MCA)	
END USE	**MINIMUM TOTAL RETENTION[1, 2], pcf (kg/m³)**
Above ground	0.060 (1.0)
Ground contact—General Use	0.15 (2.4)
Ground contact—Critical Structural	0.23 (3.7)
Ground contact—Extreme Duty	0.33 (5.3)

[1]Retention is expressed in pounds of preservative per cubic foot (kilograms per cubic meter) of preservative actives.
[2]Minimum active component retentions of Cu and azole are noted in the Koppers Performance Chemicals, Inc., Standard MCA quality-control documentation.

TABLE 2—TYPICAL APPLICATIONS FOR MICROPRO®/LIFEWOOD® WOOD PRODUCTS[1]

SERVICE CONDITIONS	USE ENVIORNMENT	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[3] ABOVE GROUND Protected	Exterior - coated millwork, siding and trim
Exterior construction, above ground, uncoated and poor water run-off 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[3] ABOVE GROUND Exposed	Decking, railings, joists and beams for decks and freshwater docks[1], fence pickets, uncoated millwork
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[3] GROUND CONTACT General Use	Sawn fence, deck, and guardrail posts, cantilevered members extending beyond the building envelope, joists, ledger boards, and beams for decks and freshwater docks[1]
Ground contact or Fresh Water Critical components or difficult replacement	Exposed to all weather cycles, including continuous or prolonged wetting, high decay potential includes salt water splash	UC4B GROUND CONTACT Heavy Duty	Permanent wood foundations, sawn building structural support posts and poles, sawn and round building poles, retaining walls, wood used in salt water splash zones
Ground Contact or Fresh Water Critical structural components	Exposed to all weather cycles, including continuous or prolonged wetting, server environments extreme decay potential	UC4C GROUND CONTACT Extreme Duty	Land & Freshwater piling, and foundation piling

[1]Joists 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.
[2]Refer to the AWPA 2022 Book of Standards, Standard U-1 Table 2-1 for a complete description of use category designations and typical applications.
[3]AWPA Commodity Specification A: Sawn Products only.

TABLE 3—WOOD PRESERVATIVE TREATMENT LOCATIONS

LISTEES	WOOD PRESERVATIVE TREATMENT LOCATIONS
Universal Forest Products Eastern Division, Inc.	Janesville, WI

TABLE 4—LISTEES AND PRIVATE BRAND NAMES FOR MICROPRO®/LIFEWOOD®

PRESERVATIVE-TREATED WOOD COMPANY	PRIVATE BRAND NAME
Koppers Performance Chemicals, Inc.	**LifeWood®**
Universal Forest Products Eastern Division, Inc.	ProWood Micro CA and WeatherShield®

[1]The private brand name is as noted for the report holder, Koppers Performance Chemicals, Inc.

MicroPro® LifeWood® Sample Labels

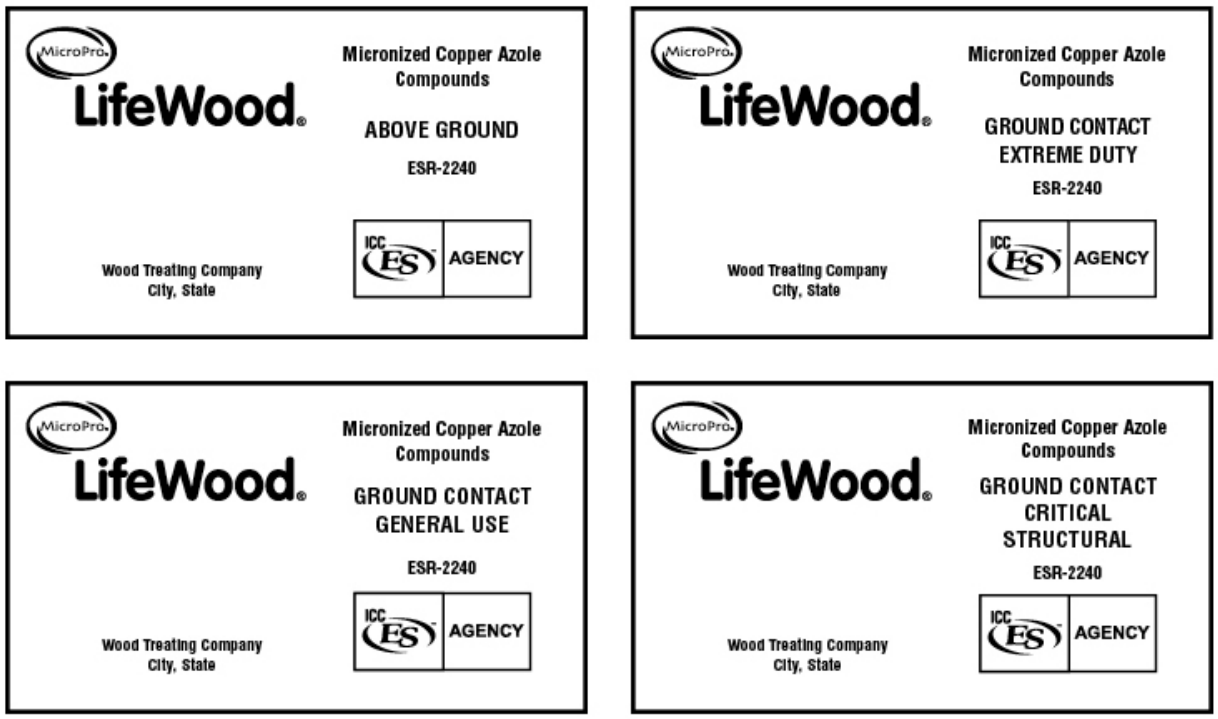

FIGURE 1—SAMPLE PRODUCT LABELS (RETENTION OPTIONAL)