



PRESERVE SPEC

Guidance for properly specifying and using preserved wood products

Preserved Wood and the 2024 International Building Code

The International Building Code (IBC) provides minimum design requirements for buildings other than one- and two-family residential structures. The IBC is a model code that serves as the basis for building codes followed in most U.S. code jurisdictions. Local jurisdictions can, and often do, make changes to provisions in the IBC and/or choose to adopt some but not all Sections. Jurisdictions also commonly adopt code provisions unique to the locality which are not in the IBC. Knowing and understanding the code provisions in force locally is critical, as those provisions will always take precedent.

The IBC recognizes the effectiveness of preservative-treated wood in certain applications where the wood may be exposed to a risk of deterioration. The following are key references to treated wood from the **International Building Code, 2024 edition**.

Chapter 23 - Wood

Section 2303 Standards of Quality

2303.1.9 Preservative-treated wood

Lumber, timber, plywood, piles and poles supporting permanent structures required by Section 2304.12 to be preservative treated shall conform to AWPA U1 and M4. Lumber and plywood used in wood foundation systems shall conform to Chapter 18.

2303.1.9.1 Identification

Wood required by Section 2304.12 to be preservative treated shall bear the quality mark of an inspection agency that maintains continuing supervision, testing and inspection over the quality of the preservative-treated wood. Inspection agencies for preservative-treated wood shall be listed by an accreditation body that complies with the requirements of the American Lumber Standards Treated Wood Program, or equivalent. The quality mark shall be on a stamp or label affixed to the preservative-treated wood, and shall include the following information:

1. Identification of treating manufacturer.
2. Type of preservative used.
3. Minimum preservative retention (pcf).
4. End use for which the product is treated.
5. AWPA standard to which the product was treated.
6. Identity of the accredited inspection agency.

2303.1.9.2 Moisture content

Where preservative-treated wood is used in enclosed locations where drying in service cannot readily occur, such wood shall be at a moisture content of 19 percent or less before being covered with insulation, interior wall finish, floor covering or other materials.

Section 2304 General Construction Requirements

2304.10.6 Fasteners and connectors in contact with for preservative-treated and fire-retardant-treated wood

Fasteners, including nuts and washers, and connectors in contact with preservative-treated and fire-retardant-treated

wood shall be in accordance with Sections 2304.10.6.1 through 2304.10.6.4. The coating weights for zinc-coated fasteners shall be in accordance with ASTM A153. Stainless steel fasteners shall be in accordance with the material requirements of ASTM F1667.

2304.10.6.1 Fasteners and connectors for preservative-treated wood

Fasteners, including nuts and washers, in contact with preservative-treated wood shall be of hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. Fasteners other than nails, staples, timber rivets, wood screws and lag screws shall be permitted to be of mechanically deposited zinc coated steel with coating weights in accordance with ASTM B695, Class 55 minimum. Connectors that are used in exterior applications and in contact with preservative-treated wood shall have coating types and weights in accordance with the treated wood or connector manufacturer's recommendations. In the absence of manufacturer's recommendations, a minimum of ASTM A653, Type G185 zinc-coated galvanized steel, or equivalent, shall be used.

Exception: Plain carbon steel fasteners, including nuts and washers, in SBX/DOT and zinc borate preservative-treated wood in an interior, dry environment shall be permitted.

2304.10.6.2 Fastenings for wood foundations

Fastenings, including nuts and washers, for wood foundations shall be as required in AWC PWF.

2304.12 Protection against decay and termites

Wood shall be protected from decay and termites in accordance with the applicable provisions of Sections 2304.12.1 through 2304.12.7.

2304.12.1 Locations requiring water-borne preservatives or naturally durable wood

Wood used above ground in the locations specified in Sections 2304.12.1.1 through 2304.12.1.5, 2304.12.3 and 2304.12.5 shall be naturally durable wood or preservative-treated wood using waterborne preservatives, in accordance with AWPA U1 for above-ground use.

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2304.12.1.1 Joists, girders and subfloor

Wood joists or wood structural floors that are closer than 18 inches (457 mm) or wood girders that are closer than 12 inches (305 mm) to the exposed ground in crawl spaces or unexcavated areas located within the perimeter of the building foundation shall be of naturally durable or preservative-treated wood.

2304.12.1.2 Wood supported by exterior foundation walls

Wood framing members, including wood sheathing, that are in contact with exterior foundation walls and are less than 8 inches (203 mm) from exposed earth shall be of naturally durable or preservative-treated wood.

2304.12.1.3 Exterior walls below grade

Wood framing members and furring strips in direct contact with the interior of exterior masonry or concrete walls below grade shall be of naturally durable or preservative treated wood.

2304.12.1.4 Sleepers and sills

Sleepers and sills on a concrete or masonry slab that is in direct contact with earth shall be of naturally durable or preservative treated wood.

2304.12.1.5 Wood siding

Clearance between wood siding and earth on the exterior of a building shall not be less than 6 inches (152 mm) or less than 2 inches (51 mm) vertical from concrete steps, porch slabs, patio slabs and similar horizontal surfaces exposed to the weather except where siding, sheathing and wall framing are of naturally durable or preservative-treated wood.

2304.12.2 Other locations

Wood used in the locations specified in Sections 2304.12.2.1 through 2304.12.2.8 shall be naturally durable wood or preservative-treated wood in accordance with AWPA U1. Preservative-treated wood used in interior locations shall be protected with two coats of urethane, shellac, latex epoxy or varnish unless waterborne preservatives are used. Prior to application of the protective finish, the wood shall be dried in accordance with the manufacturer's recommendations.

2304.12.2.1 Girder ends

The ends of wood girders entering exterior masonry or concrete walls shall be provided with a 1/2-inch (12.7 mm) airspace on top, sides and end, unless naturally durable or preservative-treated wood is used.

2304.12.2.2 Posts or columns

Posts or columns supporting permanent structures and supported by a concrete or masonry slab or footing that is in direct contact with the earth shall be of naturally durable or preservative-treated wood.

Exception: Posts or columns that meet all the following:

1. Are not exposed to the weather or are protected by a roof, eave, overhang, or other covering if exposed to the weather.
2. Are supported by concrete piers or metal pedestals projected not less than 1 inch (25 mm) above the slab or deck and are separated from the concrete pier by an impervious moisture barrier.
3. Are located not less than 8 inches (203 mm) above exposed earth.

2304.12.2.3 Supporting members for permanent appurtenances

Naturally durable or preservative-treated wood shall be utilized for those portions of wood members that form the structural supports of buildings, balconies, porches or similar permanent building appurtenances where such members are exposed to the weather without adequate protection from a roof, eave, overhang or other covering to prevent moisture or water accumulation on the surface or at joints between members.

2304.12.2.4 Supporting members for permeable floors and roofs

Wood structural members that support moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, shall be of naturally durable or preservative-treated wood unless separated from such floors or roofs by an impervious moisture barrier. The impervious moisture barrier system protecting the structure supporting floors shall provide positive drainage of water that infiltrates the moisture-permeable floor topping.

2304.12.2.6 Wood in contact with the ground or fresh water

Wood used in contact with exposed earth shall be naturally durable for both decay and termite resistance or preservative treated in accordance with AWPA U1 for soil or fresh water use.

Exception: Untreated wood is permitted where such wood is continuously and entirely below the ground-water level or submerged in fresh water.

2304.12.2.6.1 Posts or columns

Posts and columns that are supporting permanent structures and embedded in concrete that is exposed to the weather or in direct contact with the earth shall be of preservative-treated wood.

2304.12.2.7 Termite protection

In geographical areas where hazard of termite damage is known to be very heavy, wood floor framing in the locations specified in Section 2304.12.1.1 and exposed framing of exterior decks or balconies shall be of naturally durable species (termite resistant) or preservative treated in accordance with AWPA U1 for the species, product preservative and end use or provided with approved methods of termite protection.

2304.12.2.8 Wood used in retaining walls and cribs

Wood installed in retaining or crib walls shall be preservative treated in accordance with AWPA U1 for soil and fresh water use.

2306.1 Allowable stress design

The design and construction of wood elements in structures using allowable stress design shall be in accordance with the following applicable standards:

2306.1.3 Treated wood stress adjustments

The allowable unit stresses for preservative-treated wood need not be adjusted for treatment but are subject to other adjustments.

[NOTE: For preservative-treated wood that has been incised, refer to the [National Design Specification® \(NDS®\) for Wood Construction](#), published by the American Wood Council. For information, see the WWPI PreserveTech paper, [Incising for preserved wood products.](#)]