Guidance for Uses of Chromated Copper Arsenate (CCA) AWPA Commodity Standards (numeric order)

6-16-04

gray areas/out = cannot treat with CCA
white areas/in = can treat with CCA
*Year Edition Only (shown in instances where use is allowed)

AWPA Standard (Edition)*	Name	Approved Use as of 12/31/03	Minimum Retention (pcf) see Definitions	Comments	Example
C2 (2001)	Lumber, Timbers, Bridge Ties and Mine Ties, Preservative Treatment by Pressure Processes [subset of uses included on label] All above ground, soil and fresh water uses for these sawn timber products are not permitted unless covered by a listed standard				
	Lumber and timber for above ground, soil & fresh water use	No	0.25 above ground; 0.40 soil & fresh water		retaining walls - **out** (1)
	Lumber and timber for salt water use only	Yes	0.60	See C18	See C18
	Bridge ties and mine ties (all)	No	0.25 above ground; 0.40 soil & fresh water; 2.50 salt water		Bridge ties and mine ties - **out**

C3 (2001)	Piles - Preservative Treatment by Pressure Processes	Yes	0.80 land & fresh water piles; foundation piles; marine piles are 2.50, 1.50 for outer zone and 1.50, 0.875 for inner zone		land & fresh water piles - **in** foundation & marine piles - **in**
C4 (2001)	Poles - Preservative Treatment by Pressure Processes	Yes	0.60 outer zone; 0.30 inner zone when required	Poles ≥ 16 feet	poles - **in**
C5	Fence Posts - Preservative Treatment by Pressure Processes	No	0.40	Posts < 16 feet and are round, half round or 1/4 round.	Fence posts (residential, other, all but agricultural) - **out** (see C16)
C9 (2001)	Plywood - Preservative Treatment by Pressure Processes	Yes	0.25 above ground; 0.40 soil or water use; 2.50 coastal waters (2)	in contact with soil (plywood) not in contact with soil (plywood)	plywood storage sheds, garages - **in** flatbed trailers - **in**
C14 (2001)	Wood for Highway Construction - Preservative Treatment by Pressure Processes **The Agency interprets this to include lumber for roller coaster construction.* Highway construction standards: As defined	Yes	Varies according to the use, e.g., 2.50 for structural lumber & timbers in salt water use to 0.25 for handrails & guardrails not in contact		Beams, timbers for highways; posts for highway signs - **in** lumber for roller coasters - **in** * Decking for highway bridges; Guardrail posts - **in**

	by the American Association of State Highway and Transportation Officials (AASHTO), these are the more than 100 voluntary guidelines and specifications that cover administration and economics, bridges and structures, construction and right-of-way, design and traffic, highway transport and safety, maintenance, materials, and planning and environment.		with ground or water		Vehicular bridges and/or guardrails on golf courses meeting highway construction standards - **in** Pedestrian bridges and/or guardrails on golf courses - **out**
C15	Wood for Commercial-Residential Construction, Preservative Treatment by Pressure Processes	No	Varies from 0.25 to 0.60 depending on uses	Includes studs, roof decking, decking exposed to weather, flooring, sawn posts and columns supporting decks; posts, square fence, light fencing slats, pickets; landscape ties (sawn on all 4 sides)	steps for trailer homes - **out** wood wedges to support trailer homes - **out** horse trailer, cattle trailer, trailers constructed of dimensional lumber - **out** skirtboards - **out** sill plates - **out** roofing curves-**out** furring strips - **out**

C16 (2001)	Wood Used on Farms - Preservative Treatment by Pressure Processes [subset of uses included on label]				Examples: poles & posts used for barns, horse stables, hay storage buildings - **in**
	Poles and Posts as Round Structural Members	Yes	0.60		round poles and posts - **in** round farm fence rails - **in**
	Poles and Posts, sawn Four Sides as Structural Members	Yes	0.60	Deck is not a structural member.	Poles and posts, sawn four sides; must be a structural member - **in**
	Posts, Fence and rails	Yes	0.40	Round, half-round, and quarter-round	Farm fence posts - **in**
	Lumber, Plywood, Millwork, Grape Stakes	No	0.25 or 0.40, depending on the use		grapes stakes - **out** tomato stakes - **out** lattices - **out** farm fencing (e.g., planks, 1"x6"x16') - **out**
C17	Playground Equipment Treated with Inorganic Preservatives - Preservative Treatment by Pressure Processes	No	0.40 for sawn material and round material		playground equipment - **out**

C18 (2001)	Standard for Pressure Treated Material in Marine Construction Wood for Marine Construction for Salt Water Use (also includes brackish water) (immersion and/or subject to saltwater (or brackish water) splash [(subject to saltwater (or brackish water) splash" means any member of a marine structure which is positioned above mean high tide but is subject to frequent wetting from wave action]), [Pilings (sheet, round and square), timbers, and Plywood; walers, framing, Stringers and Cross Bracing (2"x8" and/or 3"x6" and larger nominal dimensions and treated to a minimum of 0.60 pcf) (C18) *Subject to Salt Water (or brackish water) Splash: Any member of a marine structure which is positioned above mean high tide, but is subject to frequent wetting from wave action or wind, which supports intermittent degradation by marine organisms.	Yes	2.50 for most uses; 0.40 and 0.60 for wood not highly exposed* to salt water; 0.25 for fish ladders, lobster traps, oyster farming timbers *Not highly exposed to salt water: Any member which is not subject to submersion in salt water (or brackish water) (i.e., above mean high tide)	Includes lumber, timber & plywood in salt water; members out of saltwater but subject to saltwater (or brackish water) splash	freshwater uses - **do not apply** pilings - **in** fish ladders - **in** lobster traps - **in** oyster farming timbers - **in** Decking, railings, boardwalks - **out** Pilings & crossbracing - **in** (see specific language in lefthand column)

C22 (2001)	Lumber and Plywood for Permanent Wood Foundations - Preservative Treatment by Pressure Processes	Yes	0.60 for lumber and plywood		Softwood lumber & plywood for use in residential & light commercial wood foundations - **in**
C23 (2001)	Round Poles and Posts Used in Building Construction, Preservative Treatment by Pressure Processes	Yes	0.60		Round building poles & posts - **in**
C24 (2001)	Sawn Timber Used to Support Residential and Commercial Structures	Yes	0.60	Piles are upright.	sawn structural timbers (piles) - **in**
C25 (2001)	Sawn Crossarms - Preservative Treatment by Pressure or Thermal Processes	Yes	0.40		Sawn crossarms - **in**
C28 (2001)	Standard for Preservative Treatment by Pressure Processes of Structural Glued Laminated Members and Laminations Before Gluing* **The Agency interprets this to include nail laminated members (nails/mechanical fasteners may be used as laminate in combination with, or in lieu of, glue)*	Yes	0.25 for above ground; 0.40 for soil contact		Structural glued laminated members - **in** Nail laminated members - **in**
C30 (2002)	Lumber, Timbers and Plywood for Cooling Towers - Preservative Treatment by Pressure Processes	Approved Use as of 12/03 and 2/04 label revisions	not applicable	See 2002 Edition of AWPA Standards	Cooling tower use only - **in**

C33 (2001)	Standard for Preservative Treatment of Structural Composite Lumber by Pressure Processes	Yes	0.25 for above ground; 0.40 for soil contact		Highway material - **in** Structural composite lumber - **in**
C34 (2001)	Shakes and Shingles - Preservative Treatment by Pressure Processes	Yes	0.40		Shakes & shingles - **in** Siding, commercial/ residential/ agricultural - **in** Tile batts - **in**

1. Information only (not part of allowed uses): 2003 Edition, AWPA Standards, U1-03 Use Category System, Section 3: Guide to Treated Wood). [Back]

2. All of these minimum retention standards apply to the treatment of plywood, not dimensional lumber. [Back]

Definitions:

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Brackish Water Immersion: A level of treatment of wood products intended for use in, or in contact with, brackish water. As established by the American Wood-Preservers' Association, that level is 2.5 pounds of retained preservative per cubic foot of wood. This is the same level as required for salt water immersion.

Dimension or dimensional: Lumber that is from 2" up to, but not including, 5" thick, and that is 2 or more inches in width. Dimension also is classified as framing, joists, plants, and rafters.

Framing: Lumber used for structural members in a house or other building.

Glued laminated (Glulam): A process in which individual pieces of lumber or veneer are bonded together with an adhesive, or with a combination of adhesives and mechanical fasteners, to make a single piece, with the grain of each piece running parallel to the grain of each of the other pieces.

Glue Nailed: A combination of gluing and nailing plywood joints and connections for the stiffest possible construction.

Highway Construction Standards: As defined by the American Association of State Highway and Transportation Officials (AASHTO), these are the more than 100 voluntary guidelines and specifications that cover administration and economics, bridges and structures, construction and right-of-way, design and traffic, highway transport and safety, maintenance, materials, and planning and environment.

Lumber: A wood product manufactured from logs by sawing, resawing and, usually,

planing, with all four sides sawn. ("timber" is used in place of "lumber" in many countries).

Marine construction: Wood used for piling (sheet, round and square), Timbers, Walers, and Plywood and Framing, Stringers and Cross Bracing; wood for marine construction for salt water use (also includes brackish water) (immersion and/or subject to saltwater (or brackish water) splash ["subject to saltwater (or brackish water) splash" means any member of a marine structure which is positioned above mean high tide, but is subject to frequent wetting from wave action]), [Pilings (sheet, round and square), Timbers, and Plywood; Walers, Framing, Stringers and Cross Bracing (2"x8" and/or 3"x6" and larger dimensions and treated to a minimum of 0.60 pcf)

Marine framing: Pressure-treated dimension lumber intended for use in applications where the material will be in contact with salt water. Such lumber may be of any grade, but must be treated to a preservative level of 2.5 lbs. per cubic foot.

Minimum retention standard: Minimum retention standard for treating Southern Pine with CCA, unless otherwise indicated. See approved standards for minimum retentions for other species. The standards are given in pounds per cubic foot (pcf). The metric equivalents (kg/m^3) for these are: 0.25 pcf = 4.0 kg/m^3; 0.40 pcf = 6.4 kg/m^3; 0.60 pcf = 9.6 kg/m^3; 2.50 pcf = 40 kg/m^3.

Not highly exposed to salt water: Any member which is not subject to submersion in salt water (i.e., above mean high tide)

Permanent wood foundation (PWF): A foundation system in which treated wood products are used in place of concrete (PWF does not include sill plates, furring strips, or skirt boards). PWF improves heating and cooling capability and can be installed in weather conditions that would prevent pouring of a concrete foundation. It is a load-bearing lumber-framed foundation wall system sheathed with plywood. Southern Pine lumber used in a PWF is CCA-treated to a retention level of 0.60 lbs./cu.ft., in accordance with AWPA Standard C22. Variations of the PWF system include the construction of an under-floor plenum. A sealed, insulated cavity under the building is created for the uniform, efficient distribution of warm air in the winter and cool air in the summer from a centrally located unit. This building technique is often referred to as the Plen-Wood System.

Pile: (Piling): Round timbers or poles that are driven into the ground to support a load, as a foundation for structure, or as part of a dock or moorage. Sawn timbers are sometimes used as piling.

Plywood: A flat panel made up of a number of thin sheets, or veneers, of wood in which the grain direction of each ply, or layer, is at right angles to the one adjacent to it. The veneer sheets are united, under pressure, by a bonding agent.

Pole: A long, usually round piece of wood, often a small diameter log with the bark removed, used to carry utility wire or for other purposes; often treated with preservative.

Post: A piece of lumber, less than 16' in length, used in a vertical position to support a beam or other structural member in a building, or as part of a fence. Although 4x4s are often referred to as posts, most grading rules define a post as having dimensions of 5" or more in width, with the width not more than 2" greater than the thickness.

Post Frame Construction: A construction system using vertical members (posts, columns, poles, timbers or others) that may be embedded in the ground or surface-mounted to a concrete or masonry foundation to form the building's frame.

Retaining Wall: A structure designed to keep a bank of ground from collapsing or eroding.

Structural Composite Lumber: A family of engineered wood products that combine wood fiber and exterior-type adhesives to form lumber products of virtually any cross-sectional size. The wood fibers may be in the form of veneers, strand, or a combination thereof bonded together with wet-use structural adhesives.

Stringer: A horizontal timber used to support floor joists or other cross members. A stair stringer.

Subject to Salt Water Splash: Any member of a marine structure which is positioned above mean high tide, but is subject to frequent wetting from wave action or wind, which supports intermittent degradation by marine organisms.

Timber: A size classification of lumber that includes pieces that are at least five inches in their smallest dimension; also classified as beams, stringers, and girders.

Wale/waler: Planking placed horizontally across a structure to strengthen it. Horizontal bracing used to stiffen concrete form construction.

References:

National Frame Builders Association, Lawrence, Kansas, www.nfba.org/ EXIT disclaimer

Terms of the Trade, Random Length Publications, Inc., 2000 (adapted for use in this document).

The American Wood Preservers' Association, Selma, Alabama, www.awpa.com, 334-874-9800 EXIT disclaimer

www.southernpine.com EXIT disclaimer

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