

RECOMMENDED RETENTIONS

AWPA Pressure Treatment Retentions-Western Species Only

USE	AWPA ¹ Standard	WATERBORNE PRESERVATIVES				
		Creosote ²	Penta- chloropheno ³	Copper Naphthenate	ACZA ⁴	CCA ⁵
Above ground use						
Lumber, Timber	C2	8	.40	.040	.25	.25 ¹¹
Plywood	C9	8	.40	NL ¹⁰	.25	.25
Ground contact or fresh water use						
Lumber, Timber	C2	10	.50	.040	.40	.40 ¹¹
Plywood	C9	10	.50	NL	.40	.40
Marine use						
Out of water no subject to splash	C2, C18	10	10	NL	.40	.40 ¹¹
Out of water and subject to splash	C2, C18	12	12	NL	.60	.60 ¹¹
In saltwater						
Single Treatment	C2, C18	25	NR ¹²	NL	2.50	2.50 ¹¹
Dual Treatment	C2, C18	20 ¹⁹	NR	NL	1.50	1.50 ¹¹
Bridges-important structural members	C2, C14	12	.60	.075	.60	.60 ¹¹
Permanent Wood Foundations: Kiln-dried after treatment						
Lumber	C22	NR	NR	NL	.60	.60 ¹¹
Plywood	C22	NR	NR	NL	.60	.60
GLUED LAMINATED BEAMS						
Above Ground Use	C28	8	.40	NL	NL	NL
Ground or fresh water contact	C28	10	.50	NL	NL	NL
POLES						
Agricultural-Round ⁴	C16	17.5-16	.38-.60	NL ¹⁰	.60	.60 ¹¹
Agricultural-Sawn ⁴	C16	12	.60	.075	.60	.60
Construction-Round ⁴	C23	12	.60	NL	.60	.60 ¹¹
Construction-Sawn ⁴	C24	12	.60	NL	.80	.80 ¹¹
Utility-electric/telephone/lighting	C4	9-16	.30-.80	.075-.150	.60	.60
PILING						
Foundation use-Round	C3	12-17	.60-.85	NL	.80-1.00	.80-1.00
Foundation use-Sawn	C24	12	.60	NL	.80	NR ¹³
Freshwater use	C3	12-17	.60-.85	NL	.80-1.00	.80-1.00
Salt water use						
Moderate borer hazard ¹⁵	C18	20	NR	NL	NR	NR
Severe borer hazard ¹⁵	C18	NR	NR	NL	2.5	2.5 ¹¹
Dual treatment ¹⁶	C18	20 ¹⁹	NR	NL	1.0	1.0
POSTS						
Construction-Round	C5	6	.30	.055	.40	.40
Construction-Sawn	C15	10	.50	NL	.40	.40
Agricultural-Round	C16	7.5-16	.38-.60	.055	.60	.60
Agricultural-Sawn	C16	10-12	.50-.60	.060	.60	.60
Guard Rail (including blocks)						
Round	C14	10	.50	.069	.50	.50
Sawn four sides	C14	12	.60	.072	.60 ⁸	.60

WATERBORNE PRESERVATIVES

ACQ ⁶	CC ⁷	Assay ⁸ Zone	Quality Assurance Procedure ⁹
.25	.25	0-.60"	ALSC
.25	NL	NA ¹¹	ALSC
.40	.40	0-.60"	ALSC
.40	NL	NA ¹¹	ALSC
.40	NL	0-.60"	ALSC
.60	NL	0-.60"	ALSC
NL	NL	0-.60"	ALSC
NL	NL	0-.60"	ALSC
.60	NL	0-.60"	ALSC
NL	NL	0-.60"	ALSC
NL	NL	NA	ALSC
NL	NL	0-.60"	ALSC
NL	NL	0-.60"	ALSC
.60	.60	DF.25-1.00"	
.60	.60	0-.60"	
NL	NL	DF.25-1.00"	
NL	NL	0-.60"	
.60	.60	DF.25-1.00"	
NL	NL	0-1.00"	ALSC
NL	NL	0-1.00"	ALSC
NL	NL	0-1.00"	ALSC
NL	NL	0-2.00"	ALSC
NL	NL	0-1.00"	ALSC
NL	NL	0-1.00"	ALSC
.40	.40	0-1.00"	ALSC
.40	NL	0-.60"	ALSC
.60	NL	0-1.00"	ALSC
.60	NL	0-.60"	ALSC
NL	NL	0-1.00"	ALSC
NL	NL	0-.60"	ALSC

FOOT NOTES

- (1) American Wood Preserves Association specifications are the principal wood treating standards used throughout the United States. By assay procedure-pounds per cubic foot. Retention varies with species. See referenced AWP Standard.
- (2) Creosote-coaltar creosote. Color: black
- (3) Pentachlorophenol may be dissolved with several solvents. The solvents specified in AWP P-9 are:
Type A-Oil. Color: light brown to black.
Type C-Light Hydrocarbon solvent with auxiliary solvent. Color: essentially clear
Use Type C where conditions require cleanliness and ability for staining.
- (4) Ammonical Copper Zinc Arsenate. Color: shades of green, and black.
- (5) Chromated Copper Arsenate. Color: shades of green.
- (6) Ammonical Copper Quat. Color: shades of green and brown.
- (7) Copper Citrate. Color: shades of green and brown.
- (8) Assay procedure involves laboratory analysis of borings removed from the treated wood. Assay zone is the portion of the boring to be analyzed. Measurement shown for assay zone are expressed in inches from the surface of the product; i.e. 0-.60" means the treatment zone to be analyzed is .60" from the outer surface of the product. Retention varies with species; see referenced AWP Standard.
- (9) American Lumber Standards Committee
An overview agency that accredits inspection agencies to insure that their inspection activities conform to the provisions of the appropriate AWP Standard for pressure treated wood being produced under the ALSC Program. When treated materials meet these requirements, they will be identified as such as an inspection agency's quality mark approved by ALSC. The program does not include fire-retardant-treated products.
- (10) Not listed in AWP Standards.
- (11) It is generally recognized that Douglas fir is extremely difficult to treat with CCA to penetration and retention requirements, even when incised. Coastal Douglas fir, from a few geographical areas, has been found suitable for treatment with CCA. Douglas fir treated with CCA is not recommended for permanent Wood Foundations.
Penetration requirements for Western Species:
lumber: under 5" thick .40" min. - over 5" thick .50" min.
plywood: 40% of veneer penetrated.
poles: .75" min and 85% sapwood up to 1.6"
piles: 1" min. and 85% of sapwood-marine use.
.75" min and 85% of sapwood-foundation use.
- (12) Not acceptable.
- (13) Not recommended in AWP Standards.
- (14) Building Poles- special uses - to be used where replacement of poles would be difficult and where exceptional durability is required. Involves requirement for very deep penetration, i.e. 1/2 the radius up to 2 1/2 inches.
- (15) See Section 2 for definitions of moderate and severe borer hazard.
- (16) Dual treatment for marine use involves two separate preservatives; a waterborne preservative followed by a creosote treatment.
- (17) Federal Specifications TT-W-571 is the government specification applicable to pressure treated products
- (18) States specifications may differ, allowing 0.40 retention.
- (19) Requires second treatment of waterborne preservatives.