

Attachment 1

Alternatives List for Arsenic-Treated Wood Acceptable Materials by Use Adopted September 10, 2003

(List will be updated periodically to allow for the inclusion of new materials.)

Results of Criteria Screening

Treatment	Result
CuN	Acceptable for some uses. See table below.
Cu8	Not acceptable.
Creosote	Not acceptable.
PCP	Not acceptable.
ACA	Not acceptable. Exception for salt water immersion.
ACC	Not acceptable.
ACQ	Acceptable for some uses. See table below.
ACZA	Not acceptable. Exception for salt water immersion.
CA-B	Acceptable for some uses. See table below.
CBA	Acceptable for some uses. See table below.
CCA	Not acceptable. Exception for salt water immersion.
CC	Acceptable for some uses. See table below.
DOT, borates	Acceptable for some uses. See table below.
CDDC	Not acceptable.
ZnN	Acceptable for some uses. See table below

The treatments that passed the screening criteria for at least some uses were then cross-checked with the AWPA standards. Those for which standards exist are listed in the table below as acceptable materials.

Summary of Acceptable Materials by Use

(List will be updated periodically to allow for the inclusion of new materials.)

DESCRIPTION OF USE	UCS (AWPA Use Classifications)	C (AWPA Standard)	Acceptable Materials (must also be allowed by building code for specific intended use)
BEAMS & TIMBERS (GLUE LAM.)			
Dry environment, above ground	1,2	C28	CuN ¹
Damp environment, above ground	3B	C28	CuN ¹
Ground contact	4A	C28	CuN ¹
Highway construction	4B, 4C	C14	ACQ ^{2,3}
BUILDING CONSTRUCTION MATERIAL			
Floor plate	2, 3B	C2, 15, 31	ACQ ³ , CA-B, CBA, CC, DOT or other borates
Flooring, residential			
Damp environment	3B	C2	ACQ ³ , CA-B, CBA, CC
Dry environment	1, 2	C2, 31	DOT or other borates

Framing, interior	1, 2	C2, 15, 31	DOT or other borates
Joists			
Interior, above ground	1, 2	C2, 15, 31	DOT or other borates
Exterior, above ground	3B	C2, 15	ACQ ³ , CA-B, CBA, CC
Soil contact	4A	C2, 15	ACQ ³ , CA-B, CBA
Lumber			
Above ground	3B	C2	CuN ¹ , ACQ ³ , CA-B, CBA, ZnN ¹
Ground contact	4A	C2	CuN ¹ , ACQ ³ , CA-B, CBA
Tree stakes	4A	C2	CuN, ACQ ³ , CA-B, CBA
Fresh water use	4A	C2	Plastic-coated lumber ⁴ , CuN, ACQ ³
No ground contact, protected from liquid water	2	C31	DOT or other borates
Permanent wood foundation (lumber or plywood)	4B	C22	None
Plywood			
Sub-floor, damp above ground	2	C9	ACQ ³ , CA-B, CBA, CC
Exterior, above ground	3B	C9	ACQ ³ , CA-B, CBA, CC
Ground contact	4A	C9	ACQ ³ , CA-B, CBA, CC
Fresh water use	4A	C9	None
No ground contact, protected from liquid water	2	C31	DOT or other borates
Poles, building			
Round	4A, 4B	C4, 16	ACQ
Sawn	4A, 4B	C2, 16	CuN ¹ , ACQ ³ , CA-B, CBA, CC, DOT or other borates
Studs	3B	C2, 15	DOT or other borates
DECKING			
Highway bridge	4B	C2, 14	CuN, ACQ ³
Above ground			
Not over or near water	3B	C2, 15	CuN, ACQ ³ , CA-B, CBA,
Over or near water	3B	C2, 15	Plastic-coated wood ⁴ , CuN, ACQ, ZnN
Ground contact	4B	C2, 15	CuN, ACQ ³ , CA-B, CBA
FENCES			
Pickets, slats, trim	3A, 3B	C2, 15	CuN, ACQ ³ , CA-B, CBA
Posts, sawn	4A	C2, 15	ACC, ACQ ³ , CA-B
Posts, round	4A	C5	CuN, ACQ ³ , CA-B, CC
HIGHWAY MATERIAL			
Lumber and timbers for bridges, structural members, cribbing, and culverts	4B	C2, 14	CuN, ACQ ³
Structural lumber and timbers			
In salt water use	5A, 5B, 5C	C3, C14	See note 5
Piles, foundation, land use	4C	C3, 14	No acceptable non-arsenic materials available
Piles, foundation, fresh water use	4C	C3, 14	No acceptable non-arsenic materials available

Piling in salt water use	5A, 5B, 5C	C3, 14	See note 5
Posts: round, half-round, quarter round	4A	C5, 14	CuN, ACQ ³
Posts: sawn	4A	C2, 14	CuN, ACQ ³ , CA-B, CBA
Handrails and guardrails	3B	C2, 14	CuN, ACQ ³ , CA-B, CBA
Posts, guardrail			
Round	4A	C2, 14	CuN, ACQ ³
Sawn	4A	C2, 14	CuN, ACQ ³ , CA-B, CBA
MARINE LUMBER & TIMBERS			
Fresh water	4A	C2	Plastic-coated wood ⁴ , CuN, ACQ ³ , CA-B
Brackish water or salt water	5A, 5B, 5C	C2, 18	Plastic-coated wood ⁴
PILES			
Foundation (round)	4C	C3	No acceptable non-arsenic materials available
Land use (round)	4C	C3	CuN
Fresh water use (round)	4C	C3	Plastic-coated piles, CuN
Marine (round) in salt or brackish water	5A, 5B, 5C	C3, 18	See note 5
Marine, dual treatment (round)	5A, 5B, 5C	C3, 18	See note 5
Sawn timber piles	4B	C24	See note 5
UTILITY POLES			
Sited in soil	4A, 4B	C4	CuN, ACQ ³
Sited in impervious surface	4A, 4B	C4	CuN (butt-treatment preferred)

Notes:

1. CuN and ZnN allowed for indoor use only as pressure-treated wood. Other applications are not registered for indoor use.
2. Only standardized if treated before lamination.
3. Select either ACQ-B or ACQ-D as appropriate based on AWPA standards.
4. Non-PVC plastic only. Lumber should not be treated with arsenic.
5. Non-wood materials are preferred. When pressure treated wood is required, an exemption exists for saltwater immersion environments for structures such as pilings and piers until a viable alternative is available.

List of Abbreviations

AAC	Alkyl ammonium compound
ACA	Ammoniacal copper arsenate
ACC	Acid copper chromate
ACQ	Ammoniacal (or amine) copper quat (see below)
	ACQ-B: Ammoniacal copper quat
	ACQ-D: Amine copper quat
ACZA	Ammoniacal copper zinc arsenate
AWPA	American Wood Preservers' Association
CA-B	Copper azole
CBA	Copper boron azole
CC	Copper citrate (or ammoniacal copper citrate)
CCA	Chromated copper arsenate

CDDC Copper bis(dimethyldithiocarbamate)
CuN Copper naphthenate
Cu8 Copper-8-quinolinolate
DOT Disodium octaborate tetrahydrate
PCP Pentachlorophenol
ZnN Zinc naphthenate