

DESIGN SPECIFICATION GUIDE FOR CHEMONITE® (ACZA) PRESSURE TREATED COASTAL DOUGLAS-FIR PILING

1.0 ROUND TIMBER PILING

All piling shall be Coastal Douglas-fir in accordance with the latest revision of **ASTM D25**. **Friction piles** (ASTM D25 Table 1) are specified with a minimum circumference of ____ (as measured in inches) 3 feet from the butt end. End-bearing piles (ASTM D25 Table 2) are specified with a minimum circumference of ____ (as measured in inches) at the tip.

2.0 PRESSURE TREATMENT

Coastal Douglas-fir piling shall be pressure-treated with Chemonite® **ACZA** in accordance with the latest revision of the American Wood Protection Association (**AWPA**) Standard **T1** (Processing and Treatment), and Section E: Round Timber Piles or Section G: Marine (Salt Water) Applications. In sensitive aquatic environments the Western Wood Preservers Institute (**WWPI**) Best Management Practices (**BMPs**) can be specified. [Minimum retention requirements to be specified - see 2.1]

Piling shall be branded in accordance with **AWPA** Standard **M6** (Brands Used on Forest Products). Handling, storage and field treatment shall be in accordance with **AWPA** Standard **M4** (Care of Pressure-Treated Wood Products).

2.1 MINIMUM RETENTION REQUIREMENT

2.2 Foundation, Land or Fresh Water Use: Piling shall be full length pressure-treated with **ACZA** to a minimum retention of 1.0 pcf of wood by assay in accordance with the latest revision of **AWPA** Standard **T1** and Section E.

2.3 Marine Use: Dependent upon the severity of the marine-borer hazards found in U.S. Coastal Waters, varying levels of preservative or a combination of preservatives may be used to protect against various marine organisms. See **AWPA U1** map, figures 1 & 2 for marine-borer hazards in U.S. Coastal Waters.

Note: Lower preservative retention for ACZA – (UC5A) 1.50 pcf by assay - is permitted for Marine Piling used in areas from New Jersey northward on the East Coast of the United States and North of San Francisco Bay on the West Coast.

In areas where Teredo and Limnoria tripunctata attack is expected or known and where Pholad attack is not prevalent:

Piling shall be full length pressure-treated with **ACZA** to a minimum net retention of **2.50** pcf of wood by assay (**UC5B**) in accordance with **AWPA** Standard **T1** and Section G.

In areas where Sphaeroma terebrans, Limnoria tripunctata, Teredo or Pholad attack are expected or known, dual treatment of ACZA and Coal Tar Creosote provides the maximum protection known at present:

Piling shall be full length dual-treated by the pressure process in accordance with the latest revision of **AWPA** Standard **T1** and Section G. Results of the first treatment with **ACZA** (**AWPA** Standard **P5**) shall be a minimum net retention of **1.0 pcf** of wood by assay. Results of the second treatment with Coal Tar Creosote (**AWPA** Standard **P1/P13**) shall be a minimum net retention of 20 pcf of wood by assay.

3.0 Inspection and Certification. The piling supplier shall furnish a Certificate of Treatment stating compliance with **AWPA** Standards for pressure treatment of timber piles. The purchaser of treated piling shall have the right to employ an independent inspection service to inspect all treated piling per **AWPA** Standard **M2** (Inspection of Treated Wood Products) or the **BMP** Quality Assurance Program. The independent inspector shall have the authority to reject any piling not conforming to these specifications.

QUICK REFERENCE> COASTAL DOUGLAS-FIR PILING PER **ASTM D25** (LATEST REVISION), FULL LENGTH PRESSURE- TREATED WITH CHEMONITE® **ACZA** IN ACCORDANCE WITH THE LATEST REVISIONS OF **AWPA** STANDARDS **P5** AND **T1**. RESULTS OF TREATMENT SHALL BE NOT LESS THAN A MINIMUM NET RETENTION OF ____ POUNDS PER CUBIC FOOT (PCF) OF WOOD BY ASSAY IN ACCORDANCE WITH **AWPA** STANDARD **T1**, SECTION E: ROUND TIMBER PILES OR SECTION G: MARINE (SALT WATER) APPLICATION. TREATING CERTIFICATE TO BE ISSUED OR SPECIFY INDEPENDENT INSPECTION AGENCY for **AWPA** or **BMP** CERTIFICATION.



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GUIDELINES FOR MARINE AND FRESH WATER USES

Specifications should name the species, grade, intended use and applicable treatment standard.

Specification Table - Salt water use

INTENDED USE PRODUCT	CHEMONITE RETENTION		USE CATEGORY	COMMODITY SPECIFICATION
	AWPA - pcf	AWPA - Kg/m ³		
Round piling - severe exposure	2.50	40.0	5B, 5C	G
(Dual treatment)	1.00 ACZA plus 20.0 creosote	16.0 ACZA plus 320.0 creosote	5B,5C	G
Round piling – northern waters*	1.50	24.0	5A	G
Lumber, timbers and plywood subject to tides or waves	2.50	40.0	5A,5B,5C	G
Structural lumber in salt water	2.50	40.0	5A,5B,5C	
(Dual treatment)	1.50 ACZA plus 20.0 creosote	16.0 ACZA plus 320.0 creosote	5B,5C	G
Members subject to splash and/or ground contact	0.60	9.60	4B,4C	A
Members not subject to splash and/or ground contact	0.40	6.40	4A	A

*The lower retention for ACZA is for marine piling used in areas from New Jersey northward on the East Coast of the United States and north of San Francisco Bay on the West Coast.

Specification Table - Fresh water use

INTENDED USE PRODUCT	CHEMONITE RETENTION		USE CATEGORY	COMMODITY SPECIFICATION
	AWPA - pcf	AWPA - Kg/m ³		
Land, fresh water and foundation piling	1.00	16.0	4C	E
Poles	0.60	9.6	4B	D
Posts	0.40	6.4	4A	B
Lumber, timbers and plywood in water or ground contact	0.40	6.4	4A	A
Lumber, timbers and plywood not in water or ground contact	0.25	4.0	2	A

Field Handling Recommendations

Construction: Borers, termites and decay can attack treated wood when the heavily treated outer layer is removed. It is recommended that all structures be prefabricated before treatment. Minimize problems by specifying framing and boring before treatment whenever possible. Bracing with round timber piles rather than sawn timbers is recommended below high tide. All untreated wood exposed by cutting or drilling should be adequately field treated.

Fasteners: Around water, avoid corrosion by specifying all timber products be properly air seasoned or kiln dried prior to installation. Always use hot-dipped galvanized or stainless steel hardware.

Worker Safety: Chemonite treated wood can be stored, handled and worked like untreated wood. As with any wood, wear gloves to avoid splinters, wear eye protection and a dust mask when sawing, drilling and sanding. Wash hands before eating or smoking. Dispose of cut ends in a sanitary landfill. Treated wood should not be burned in open fires or in stoves, fireplaces or residential boilers. Treated wood from commercial or industrial use may be burned only in commercial or industrial incinerators or boilers in accordance with state and federal regulations.

