
Standard Specification for Preservatives and Pressure Treatment Processes for Timber

AASHTO Designation: M 133-12 (2020)

Technical Subcommittee: 4c, Markings and Coatings

Release: Group 2 (June)



**American Association of State Highway and Transportation Officials
555 12th Street NW, Suite 1000
Washington, D.C. 20004**

Preservatives and Pressure Treatment Processes for Timber

AASHTO Designation: M 133-12 (2020)



Technical Subcommittee: 4c, Markings and Coatings

Release: Group 2 (June)

1. SCOPE

- 1.1. This specification covers the wood preservatives, the preservative treatment processes, the results of treatment, the inspection and testing of preservatives and of treatment, and the identification of properly treated timber.

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
- M 168, Wood Products
 - T 72, Saybolt Viscosity
- 2.2. *ASTM Standards:*
- D93, Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester
 - D287, Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)
 - D453-94(2000)^{e1}, Standard Test Method for Tar Acids in Creosote-Coal Tar Solutions (withdrawn 2006; no replacement)
- 2.3. *American Wood Protection Association Standards:*¹
- A1, Standard Methods for Analysis of Creosote and Oil-Type Preservatives
 - A2, Standard Methods for Analysis of Waterborne Preservatives and Fire-Retardant Formulations
 - A3, Standard Methods for Determining Penetration of Preservatives and Fire Retardants
 - A4, Standard Methods for Sampling Wood Preservatives
 - A5, Standard Methods for Analysis of Oil-Borne Preservatives
 - A6, Standard Method for the Determination of Retention of Oil-Type Preservatives from Small Samples
 - A7, Standard for Wet Ashing Procedures for Preparing Wood for Chemical Analysis
 - A9, Standard Method for Analysis of Treated Wood and Treating Solutions by X-ray Spectroscopy
 - A12, Wood Densities for Preservative Retention Calculations
 - A13, Standard Method of Analysis for Acid Number of Naphthenic Acids in Copper Naphthenate

- A14, Standard Method for Determination of Water-Extractable Copper in Copper Naphthenate
- A18, Standard for Determination of Quaternary Ammonium Compounds in Wood by 2-Phase Titration
- A21, Standard Method for Analysis of Wood and Wood Treating Solutions by Inductively Coupled Plasma Emission Spectrometry
- A28, Standard Method for Determination of Propiconazole and Tebuconazole in Wood, in Waterborne Formulations and in Treating Solutions by HPLC
- A30, Standard Method for the Determination of 4,5 Dichloro-2-N-Octyl-4-Isothiazolin-3-one (DCOI) in Wood by High Performance Liquid Chromatography (HPLC)
- A31, Standard Methods for the Analysis of Solutions and Wood for Azoles by Gas Chromatography (GC)
- A37, Standard for Determination of Quaternary Ammonium Compounds in Wood and Wood Treating Solutions by Potentiometric Titration Using Sodium Tetraphenylborate
- A43, Standard Method for Analysis of Imidacloprid in Wood and Waterborne Formulations
- A46, Standard Method for Determining MCS Stabilizer Concentration in EL2 Treatment Solution Samples by Turbidity Measurement
- A47, Standard Method for Determination of MCS Stabilizer Concentration in EL2 Treated Wood and Wood Treatment Solutions
- A48, Standard Method for Analysis of Propiconazole, Tebuconazole and Imidacloprid in Treated Wood Products by High Performance Liquid Chromatography
- A49, Standard for Determination of Heartwood in Pines and Douglas-fir (new—replacing info in section of current M2)
- M2, Standard for Inspection of Treated Products Treated with Preservatives
- M3, Standard Quality Control Procedures for Wood Preserving Plants
- M4, Standard for the Care of Preservative-Treated Wood Products
- M6, Brands Used on Preservative Treated Materials
- P1/P13, Standard for Creosote Preservative
- P2, Standard for Creosote Solution
- P3, Standard for Creosote-Petroleum Solution
- P4, Standard for Petroleum Oil for Blending with Creosote
- P9, Standards for Solvents and Formulations for Organic Preservative Systems
- P21, Standard for Acid Copper Chromate (ACC)
- P22, Standard for Ammoniacal Copper Zinc Arsenate (ACZA)
- P23, Standard for Chromated Copper Arsenate Type C (CCA)
- P27, Standard for Alkaline Copper Quat Type B (ACQ-B)
- P28, Standard for Alkaline Copper Quat Type C (ACQ-C)
- P29, Standard for Alkaline Copper Quat Type D (ACQ-D)
- P32, Standard for Copper Azole Type B (CA-B)
- P35, Standard for Pentachlorophenol (PCP)
- P36, Standard for Copper Naphthenate (CuN)
- P45, Standard for Propiconazole Tebuconazole Imidacloprid (PTI)
- P47, Standard for DCOI/Imidacloprid/Stabilizer, Waterborne (EL2)
- P48, Standard for Copper Azole Type C (CA-C)
- U1, Use Category System: User Specification for Treated Wood