2021

AWPA Book of Standards

American Wood Protection Association

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Cover Photo: Preservative treated wood utility poles are a reliable and effective part of our electric and telecommunications infrastructure. This pole line runs alongside the Ellicott Highway (Colorado Route 94) east of Colorado Springs with a view of Pike's Peak in the background at an elevation of 14,115 feet (4,302 meters) above sea level. **Photo credit:** Randy Gross of Poles, Inc.

IMPORTANT NOTICE

The information provided in this document is directed solely to professionals who have the appropriate degree of experience to understand and interpret its contents in accordance with generally accepted procedures or other professional standards and applicable regulations. No recommendation as to specific products or vendors is made or implied. Improper application of some of the products and chemicals mentioned in AWPA Standards could be hazardous to health or safety. For directions regarding proper application and safe handling of treated wood products, the user should comply with provisions of the applicable CONSUMER INFORMATION SHEET and/or SAFETY DATA SHEET which pertains to the treated wood product under consideration. These documents should be available through the source from which you received your treated wood product.

Those who are involved in the production and testing of treated wood products should comply with directions found upon pesticide labels and/or Safety Data Sheets which pertain to the pesticide or chemical under consideration. Copies of these documents should be on file at each location at which wood is treated or tested and should be available for inspection by employees or other interested parties. Various Federal, State, Provincial, and Local regulations may govern the use of products or processes standardized by AWPA. The existence of an AWPA Standard for a product or process does not imply that it is lawfully permitted for use in all potential applications. AWPA Standards are not to be regarded as legal or other professional advice.

These standards may be revised, reaffirmed, or withdrawn at any time, pursuant to AWPA's Technical Committee Regulations. In addition, the user's attention is called to the possibility that compliance with these standards may require the use of an invention covered by patent rights. By publication of these standards, no position is taken with respect to whether the use of an invention covered by patent rights will be required, and if any such use is required, no position is taken regarding the validity of this claim or any patent rights in connection therewith.

In the judgment of the membership of the American Wood Protection Association, AWPA Standards represent the preferred wood preservation specifications, processes, penetration and retention in the present state of research and technical knowledge. AWPA Standards are voluntary and provided for informational purposes only. AWPA has no control over the processes used to employ these standards or possible variations in materials, application, and manner of use. AWPA assumes no responsibility for results of use or performance of products represented as meeting or conforming to these Standards. AWPA is not responsible for, and expressly disclaims all liability for, damages of any kind arising out of use, reference to, reliance on, or performance of any information contained herein. No representation or warranty is made that the information is technically accurate or sufficient or conforms to any statute, governmental rule or regulation, and further, no representation or warranty is made of merchantability or fitness for any particular purpose or against infringement of intellectual property rights. AWPA shall not be liable, beyond the amount of any sum received in payment by AWPA for this document with respect to any claim, and in no event shall AWPA be liable for lost profits or other incidental or consequential damages. AWPA expressly advises that any and all use of or reliance upon the information provided in this document is at the risk of the user.

ISSN 1534-195X

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Recently Withdrawn AWPA Standards

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A2-15: Standard Methods for Analysis of Waterborne Preservatives and Fire Retardant Formulations

A3-15: Standard Methods for Determining Penetration of Preservatives and Fire Retardants

A5-15: Standard Methods for Analysis of Oil-Borne Preservatives

A32-10: Standard Method for Measuring Losses of Inorganic Preservatives from Treated Wood

A38-04: Standard Method for Determination of PXTS in Treated Wood by HPLC with UV Detection

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Notes:

AWPA "C Standards" (e.g., C1, C2, C9, etc.) were last updated during the Fall 2002 Standardization Cycle and final editions were printed in the 2003 and 2004 AWPA Books of Standards. All specifications for treated wood products from the C Standards are now found in the AWPA Use Category System Standards U1 and T1. If you are a specifier, you may simply change all of your C Standard references to AWPA Standard U1. If you are a manufacturer of treated wood products, you will need to refer to Standard T1 for the treating requirements to enable you to determine conformance to Standard U1. If references to the C Standards are still needed, individual standards may be purchased online at www.awpa.com or by contacting AWPA to purchase older editions of the Book of Standards.

AWPA "F Standards" (e.g., F1, F2, etc.) were withdrawn as AWPA Standards during the Fall 2008 Standardization Cycle and are now printed as "Factors" tables in the back of the AWPA Book of Standards.

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INTRODUCTION TO THE 2021 AWPA BOOK OF STANDARDS (INFORMATIVE)

About AWPA

The American Wood Protection Association is an international, non-profit, technical society founded in 1904 to provide a common forum for the exchange of technical information between industry, research and users of treated wood.

AWPA is the principal Standards-writing body for methods, preservatives, and other technologies which protect wood and wood-based products. Individuals with various areas of interest including consumers, end-users, government, academia, specifiers and producers meet on a regular basis to develop and maintain these Standards for preservatives and other protectants, treatments, testing methods, quality control and inspection procedures for treated wood products. AWPA relies on the expertise of and information voluntarily developed by technically qualified members.

AWPA Standards help enhance product quality and build the confidence of product end-users. These standards are recognized and used by most, if not all, specifiers of treated wood including electrical utility, marine, road and building construction, as well as by local, state and federal governments through the use of the major model building codes.

AWPA believes that an open, consensus process is necessary to ensure development of technically competent, credible standards. Membership in the Association is open to all interested individuals. The Standards development meetings are open to all persons whether they are members of the Association or not.

ANSI Accreditation

AWPA is an ANSI Accredited Standards Developer. This means that the procedures which govern our Standards development process (the Technical Committee Regulations) have been reviewed by the American National Standards Institute (ANSI) and are found to be in conformance with the ANSI Essential Requirements. This contains the elements of due process, consensus, public review, consideration of viewpoints, incorporation of proposed changes into a Standard, and a right to appeal by any participant. ANSI Accreditation does not imply that all AWPA documents are American National Standards, nor does it mean that ANSI writes or reviews the technical content of any AWPA Standards. Accreditation by ANSI demonstrates that AWPA's standards development process is open, consensus-based, and affords each participant with due process. For more information on ANSI or its Accreditation of Standards Developing Organizations, please visit www.ansi.org

Technical Committee Regulations

The AWPA Technical Committee Regulations, found in this *Book of Standards*, detail the operating procedures for the committees involved in standards development.

Guidance Documents

AWPA Guidance Documents contain specific guidelines for evaluating and/or standardizing new wood preservatives, fire retardants, millwork preservatives and preservative finishes. These guidelines have been developed and are used by the technical committees for the sole purpose of assisting individuals and organizations in proposing new or revised Standards to AWPA's Technical Committees for an impartial evaluation of new products brought to the Association.

Purpose of AWPA Standards

This *Book of Standards* is intended for use by the wood preserving industry as well as for guidance of the purchaser in specifying and obtaining adequately treated wood products. Generally, all wood products may be subjected to wood destroying organisms such as decay fungi, insects and marine borers in service. The purpose of these Standards is to ensure that wood products are treated with suitable preservatives and/or other protectants for reasons of safety, service and savings resulting from unnecessary and expensive replacements.

Organization and Use of AWPA Standards

In the AWPA *Book of Standards*, the different types of Standards are presented in a logical order. First, the Use Category System Standards are shown, followed by Preservative Standards. Next, Analytical, Miscellaneous, and Evaluation methods are presented. The letters "AWPA", the designation of its standards (e.g. U1, P25), Use Categories (e.g. UC3B, UC4A), and other AWPA nomenclature are trademarks of the American Wood Protection Association. When referring to or marking products using an AWPA Standard or associated nomenclature, that product must meet all applicable requirements of that Standard. Although these trademarks are owned by AWPA, a royalty-free license is granted to use them if, and only if, the product fully meets or exceeds the requirements of the applicable AWPA Standard.

Use Category System Standards (U1 and T1): The Use Category System Standards are the culmination of many years' efforts to simplify the specification of treated wood products. Under the previously used Commodity Standards (C Standards) the user would specify a different Standard for each type of product. With 36 different C Standards, there was a significant degree of error in product specifications. The Use