



Standard Test Method for Field Evaluation of Wood Preservatives in Round Post-Size Specimens¹

This standard is issued under the fixed designation D 2278; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This test method covers the determination of the relative effectiveness of wood preservatives in round posts set in the ground in field plots. Two tests are described, one for small (3 to 5 in. (80 to 130 mm) in diameter) sapwood posts which is the preferred test if major interest lies in testing the preservative when fairly evenly distributed throughout the piece, and the second for large posts (7 to 10 in. (180 to 250 mm) in diameter) which is preferred when the preservative is tested under conditions of gradient retention and distribution normally encountered in commercial operations.

1.2 The requirements for preparation of the material for testing and the test procedures appear as follows:

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1.3 The values stated in inch-pound units are to be regarded as the standard. The SI equivalents of inch-pound units may be approximate.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

D 1413 Test Method for Wood Preservatives by Laboratory Soil-Block Cultures

D 1758 Test Method of Evaluating Wood Preservatives by Field Tests with Stakes

2.2 Other Standards:³

AWPA Standard T1 Use Category System: Processing and Treatment

3. Summary of Test Method

3.1 Commercial-size round wood posts are impregnated with an appropriate series of retentions of a preservative and are handled in accordance with specified procedures prior to exposure in the field. They are then exposed in the ground to the action of weather, wood-destroying fungi, and insects in one or more selected field plots. Periodic inspections are carried out on each post to determine immediate condition and end of service life. The computed average service life for each group is used to express results at termination of the test. The general pattern of preservative performance in posts may be indicated within 5 to 10 years; however, the test of a given retention group of any preservative is not terminated until at least 60 % of the treated specimens have failed.

4. Test Plot

4.1 *Number and Climatic Location*—Decay test plots can be established over a wider climatic range than can subterranean termite test plots. When information on decay is of primary importance, a plot can be established in a temperate climate where termite attack is not serious. When termite as well as decay control is of interest, the plot shall be located in a relatively warm and moist area where subterranean termites are known to be a hazard. The choice of location is optional, but the investigator shall record which type of plot is involved. The location of test plots within a reasonable distance of a weather bureau station is encouraged.

4.2 *General Requirements*—The specific area selected for the plot shall be of essentially uniform soil character, level, moist but well drained land, remote from industrial contamination and large enough to accommodate all anticipated expansion for at least 25 years. It should be protected by fire lanes and should be fenced to prevent access of animals and discourage pilferage of posts. In a plot used essentially or

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American Wood Preservers Association (AWPA), 100 Chase Park South, Suite 116 Birmingham, AL 35244-1851 USA.