



Standard Specification for Copper Dimethyldithiocarbamate¹

This standard is issued under the fixed designation D 5653; 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 The values stated in SI units are to be regarded as the standard.

2. Referenced Documents

2.1 AWWA Standards:

AWPA A 9 Analysis of Treated Wood and Treating Solutions by X-Ray Spectroscopy²

AWPA A 25 Method of Analysis of Copper Dimethyldithiocarbamate (CDDC) Treated Wood by Colorimetry²

3. Composition and Properties

3.1 Copper dimethyldithiocarbamate (CDDC), formed in the wood, shall be a reaction product resulting from the dual treatment of two separate treating solutions, the first treating solution containing bivalent copper ethanolamine (2-aminoethanol) and the second treating solution containing sodium dimethyldithiocarbamate.

3.2 The analytical composition of the components present in the two treating solutions shall be maintained at concentrations that will result in the treated wood retaining average weight ratios of components varying within the limits specified in Table 1.

3.3 The treating solution used for the first treatment of the dual treatment shall contain bivalent copper derived from

TABLE 1 Specification for Copper Dimethyldithiocarbamate Formed by Dual Treatment (CDDC)

Weight Ratio—Sodium Dimethyldithiocarbamate: Copper	
Minimum	Maximum
2.5	5.0

copper ethanolamine complex dissolved in water. The weight ratio of ethanolamine to bivalent copper in the copper ethanolamine treating solution shall be a minimum of 1.70 and the resulting complex shall be completely water soluble at 5°C.

3.4 The bivalent copper source may be cupric hydroxide, cupric oxide, basic cupric carbonate, or other copper sources other than cupric salts of mineral acids. The purity shall be in excess of 95 % on an anhydrous basis.

3.5 The treating solution used for the second treatment of the dual treatment shall contain sodium dimethyldithiocarbamate dissolved in water. Sodium dimethyldithiocarbamate shall be derived from material in excess of 95 % purity on an anhydrous basis.

3.6 The commercial preservative components for each of the treatments shall be labeled as to their total content of active ingredients.

4. Chemical Analysis

4.1 The preservative component elements shall be analyzed in accordance with test methods in AWWA Standard A 9. The copper dimethyldithiocarbamate chelate in the treated wood shall be analyzed in accordance with test methods in AWWA A 25.

5. Keywords

5.1 copper dimethyldithiocarbamate; wood preservative

¹ This specification is under the jurisdiction of ASTM Committee D-7 on Wood and is the direct responsibility of Subcommittee D07.06 on Treatments for Wood Products.

Current edition approved Jan. 15, 1995. Published March 1995.

² Available from American Wood Preservers' Association, PO Box 286, Woodstock, MD 21163.

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