



Standard Specification for Chromated Copper Arsenate¹

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This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers chromated copper arsenate formulations expressed on the oxide basis, either in solid, paste, or solution form for use in the preservative treatment of wood.

2. Referenced Documents

2.1 ASTM Standards:

D 1628 Test Methods for Chemical Analysis of Chromated Copper Arsenate²

2.2 Other Standard:

AWPA P5 Standards for Waterborne Preservatives³

3. Composition and Properties

3.1 Chromated copper arsenate preservative formulations shall have the composition, calculated as the oxides of chromium, copper, and arsenic, as shown in Table 1. The physical form may be a dry solid, semi-liquid paste, or solution.

3.2 The composition of each preservative, or the preservative present in a treating solution, may vary within the limits of composition shown in Table 2.

TABLE 1 Requirements for Chromated Copper Arsenate (CCA)

Composition	Type A	Type B	Type C
Hexavalent chromium, calculated as CrO ₃ , %	65.5	35.3	47.5
Bivalent copper, calculated as CuO, %	18.1	19.6	18.5
Pentavalent arsenic, calculated as As ₂ O ₅ , %	16.4	45.1	34.0

TABLE 2 Limits of Composition

Composition	Type A		Type B		Type C	
	min	max	min	max	min	max
Hexavalent chromium, calculated as CrO ₃ , %	59.4	69.3	33.0	38.0	44.5	50.5
Bivalent copper, calculated as CuO, %	16.0	20.9	18.0	22.0	17.0	21.0
Pentavalent arsenic, calculated as As ₂ O ₅ , %	14.7	19.7	42.0	48.0	30.0	38.0

3.3 The preservative or treating solution shall be made up of water-soluble compounds, selected from the following groups, each in excess of 95 % purity on an anhydrous basis:

Hexavalent chromium—for example, potassium or sodium dichromate, chromium trioxide

Bivalent copper—for example, copper sulfate, basic copper carbonate, cupric oxide or hydroxide

Pentavalent arsenic—for example, arsenic pentoxide, arsenic acid, sodium arsenate or pyroarsenate

3.4 The preservative shall be labeled as to its total content of active ingredients as specified in Table 1.

4. Chemical Analysis

4.1 The materials shall be analyzed in accordance with Test Methods D 1628.

5. Keywords

5.1 chromated copper arsenate

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This specification is identical in substance with the Standards for Acid Copper Chromate (ACC) in Sections 4, 5, and 6 of the American Wood-Preservers' Association Standards for Water-Borne Preservatives (P5-96). Acknowledgment is made to the American Wood-Preservers' Association for its development of the subject matter covered in this specification.

² Annual Book of ASTM Standards, Vol 04.10.

³ Available from American Wood-Preservers' Association, 3246 Fall Creek Highway, Suite 190, Granbury, TX 76049.

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