



Standard Specification for Fluor-Chrome-Arsenate-Phenol¹

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1. Scope

1.1 This specification covers fluor-chrome-arsenate-phenol in dry form, or in solutions for use in the preservative treatment of wood.

2. Referenced Documents

2.1 *ASTM Standards:*

D 1035 Test Methods for Chemical Analysis of Fluor-Chrome-Arsenate-Phenol²

3. Composition and Properties

3.1 The active ingredients in fluor-chrome-arsenate-phenol preservative shall have the following composition:

| | |
|--|----|
| Fluoride, as F, % | 22 |
| Hexavalent chromium, as CrO ₃ , % | 37 |
| Arsenic, as As ₂ O ₅ , % | 25 |
| Dinitrophenol, ^A % | 16 |

^A An equal amount of sodium pentachlorophenate may be used in place of dinitrophenol provided the pH of the treating solution is in excess of 7.0.

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.

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This specification is essentially the same as the Standards for Fluor-Chrome-Arsenate-Phenol (FCAP) in Section 5 of the American Wood-Preservers' Association Standards for Water-Borne Preservatives P5-78. Acknowledgment is made to the American Wood-Preservers' Association for its development of the subject matter covered in this standard.

² *Annual Book of ASTM Standards*, Vol 04.10.

3.2 The analytical composition of the active ingredients in the solid preservative or treating solution shall be between the following limits:

| | min | max |
|--|-----|-----|
| Fluoride, as F, % | 20 | 24 |
| Hexavalent chromium, as CrO ₃ , % | 33 | 41 |
| Arsenic, as As ₂ O ₅ , % | 22 | 28 |
| Dinitrophenol, % | 14 | 18 |

3.3 The solid 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:

Fluorides—for example, sodium or potassium fluoride
Hexavalent chromium—for example, sodium or potassium chromate or dichromate
Pentavalent arsenic—for example, sodium arsenate
Dinitrophenol—dinitrophenol

3.4 Sodium or potassium hydroxide may be used to adjust the pH, and a solution of the preservative shall be essentially free of insoluble matter. The commercial preservative shall be labeled as to its total content of active ingredients listed in 3.1.

3.5 The pH of a treating solution shall be not less than 5.5 nor more than 7.8. These pH values are preferably measured at an oxide concentration in the treating solution of 15 to 22 g/L and at a temperature of 20 to 30°C. If a treating solution has a pH outside the stated limits, and that after adjusting the pH, it conforms to the specified limits, the solution shall be considered to conform to the standard.

3.6 The material shall be analyzed in accordance with Methods D 1035.

4. Keywords

4.1 fluor-chrome-arsenate-phenol

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