

**ETHIOPIAN
STANDARD**

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First edition

**Specification for water soluble type wood
preservatives Copper-Chrome-Boron (CCB)
wood preservative**

ICS: 71.100.50

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Foreword

This Ethiopian Standard has been prepared under the direction of the Technical Committee for Bamboo and Bamboo products (TC 99) and published by the Ethiopian Standards Agency (ESA).

In preparing this standard reference has been made to IS 10013(Part II) "Specification for water soluble type wood preservatives (Part III):Copper-Chrome-Boron" (CCB) wood preservative", published by Bureau of Indian standards(BSI)

Acknowledgement is made to the Bureau of Indian Standards for the use of the said publication in preparing the standard.

Specification for water-soluble type preservatives Copper-Chrome-Boron (CCB) wood preservative

1. Scope

This Ethiopian standard covers the requirements for copper-chrome-boron-a water-soluble (fixed) type wood preservative specified for treatment of timber and other lignocellulosic materials.

This standard covers the composition of the preservative, quality of chemicals forming the composition, and sampling procedure for analysis.

2. Composition and properties of preservative

2.1 Copper-chrome-boron preservative formulation shall consist of the following active ingredients in nominal proportions by weight as shown below:

Boric acid	H_3BO_3	18
Copper sulphate	$CuSO_4 \cdot 5H_2O$	35
Sodium dichromate	$Na_2Cr_2O_7 \cdot 2H_2O$ or	47
Potassium dichromate	$K_2Cr_2O_7$	47

2.1.1 The percentage of any of the ingredients shall be not less than that shown below:

Boric acid	H_3BO_3	15.5
Copper sulphate	$CuSO_4 \cdot 5H_2O$	32.5
Sodium dichromate	$Na_2Cr_2O_7 \cdot 2H_2O$ or	44.5
Potassium dichromate	$K_2Cr_2O_7$	44.5

2.2 The preservative may be in a dry solid form, semi-liquid paste or solution.

2.3 In case of dry solid, the preservatives shall contain not less than 95 percent of the active ingredients mentioned under 2.1.

2.3.1 In all cases, the percentage of active ingredients, and amount of moisture shall be labeled on the container as well as descriptive literature of the product.

2.4 Each of the chemicals used for such formulation shall be not less than of 95 percent purity.

3. Sampling

3.1 Samples shall be taken from requisite number of drums out of the supply made at one particular time according to sampling procedure laid down in IS 4905:1968.

3.2 In case of solution or paste, the same shall be thoroughly mixed with a rod and at least 1 kg sample shall be taken for chemical analysis from each drum.

3.3 In case of dry powder form, a true representative sample of the preservative not less than 10 percent of the contents shall be taken for analysis.

3.4 At least 1 kg of the preservative shall be dissolved to obtain 15 percent solution of the preservative.

3.5 A small amount of the 15 percent solution may be drawn and diluted exactly to 5 percent for chemical analysis

4. Testing

4.1 The chemical analysis of the solution with respect to its various ingredients shall be carried out accordingly. The proportion of all chemicals shall comply with 2.1 and 2.1.1.

5. Marking

5.1 Each container shall be legibly marked with the following information:

- a) Manufacturers' name, or trade-mark, if any;
- b) Date of manufacture; and
- c) Percentage of dry active ingredients.

5.1.1 The container may also be marked with the ISI Certification Mark.

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ESA's objectives are:-

- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitate the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational Institutions, research institutes, government or ganizations, certification, inspection, and testing organizations, regulatory bodies, consumer association etc. The requirements and/or recommendations contained in Ethiopian Standards are consensus based that reflects the interest of the TC representatives and also of comments received from the public and other sources. Ethiopian Standards are approved by the National Standardization Council and are kept under continuous review after publication and updated regularly to take account of latest scientific and technological changes. Orders for all Ethiopian Standards, International Standard and ASTM standards, including electronic versions, should be addressed to the Documentation and Publication Team at the Head office and Branch (Liaisons) offices. A catalogue of Ethiopian Standards is also available freely and can be accessed in f rom our website.

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Standard Mark

