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*भारतीय मानक मसौदा*

**काँपर ऑक्सीक्लोराइड वॉटर डिस्परसिबल पाउडर कॉन्सन्ट्रैट —**

**विशिष्टि**

*(आइ एस 1507 का तीसरा पुनरीक्षण)*

*Draft Indian Standard*

**COPPER OXYCHLORIDE WATER DISPERSIBLE POWDER  
CONCENTRATE — SPECIFICATION**

*(Third Revision of IS 1507)*

**ICS No. 65.100.30**

Pesticides Sectional Committee, FAD 01

Last Date of Comments:

**FOREWORD**

*(Formal clauses would be added later)*

Copper oxychloride water dispersible powder concentrate is largely used as fungicides for the control of plant diseases. It generally manufactured to contain 50 percent (*m/m*) of copper.

This standard was first published in 1959 and first revised in 1966. In the second revision issued in 1977, packing requirements issued by the Registration Committee of Central Insecticide Board (CIB), tolerances on copper content and its modified method of determination were incorporated.

In this revision, the standard has been brought out in the latest style and format of the Indian Standards, and references to Indian Standards wherever applicable have been updated.

In the preparation of this standard, due consideration has been given to the provisions of the *Insecticides Act, 1968* and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under these, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be

rounded off in accordance with IS 2 : 2022. 'Rules for rounding off numerical values (*second revision*)' This number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

## 1 SCOPE

This standard prescribes requirements and the methods of sampling and test for copper oxychloride water dispersible powder concentrate.

## 2 REFERENCES

The following Indian Standards contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
IS 1070 : 2023	Reagent grade water — Specification ( <i>fourth revision</i> )
IS 1486 : 202X	Copper oxychloride, technical – Specification ( <i>third revision</i> ) [Under preparation Doc: FAD 01(25460)WC]
IS 1506 : 202X	Copper oxychloride dusting powders – Specification ( <i>third revision</i> ) [Under preparation Doc: FAD 01(25459)WC]
IS 6940 : 1982	Methods of test for pesticides and their formulations ( <i>first revision</i> )
IS 8190 (Part 1) : 1988	Requirements for packing of pesticides: Part 1 Solid pesticides ( <i>second revision</i> )
IS 10627 : 1983	Methods for sampling of pesticidal formulations ( <i>first revision</i> )

## 3 REQUIREMENTS

### 3.1 Description

The material shall be in the form of free flowing homogeneous powder, devoid of hard lumps and of uniform green to greenish-blue in colour. It shall wet readily on mixing with water, providing a suspension suitable for use as a spray.

**3.2** Copper oxychloride, technical, employed in the manufacture of copper oxychloride water dispersible powder concentrate shall conform to IS 1486.

**3.3** The material shall also comply with the requirement given in Table 1.

**Table 1 Requirements of Copper Oxychloride Water Dispersible Powder Concentrate**

(Clause 3.3)

<b>Sl. No.</b>	<b>Characteristic</b>	<b>Requirements</b>	<b>Method of Test, Ref to</b>
(1)	(2)	(3)	(4)
i)	Copper content, percent by mass, <i>Max</i>	Nominal value as declared on the container ( <i>see 3.3.1</i> )	Annex A of IS 1506
ii)	Suspensibility, percent by mass, <i>Min</i> ( <i>see Note 1</i> )	80	IS 6940

iii)	pH of one percent aqueous solution	6.0 – 9.5	Annex A
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NOTE

1. The test shall be carried out on untreated sample.
2. In tea plantations, acidic material is used and for coffee plantations, alkaline material is used.

### 3.3.1 Copper Content

When determined by the method prescribed in Annex A of IS 1506, the observed copper content, percent (*m/m*) of any of the samples shall not differ from the declared nominal value by more than tolerance limits indicated underneath: –

<i>Nominal Value, percent</i>	<i>Tolerance limit, percent</i>	
Up to 9	+10 – 5	} of the nominal value
Above 9 and below 50	±5	
50 and above	+5 – 3	

The actual value of copper content shall be calculated to two decimal places and then rounded off to one decimal place before applying the tolerance.

## 4 PACKING

The material shall be packed according to IS 8190 (Part 1).

## 5 MARKING

**5.1** The containers shall be securely closed and shall bear legibly and indelibly the following information:

- a) Name of the material;
- b) Name and address of the manufacturer;
- c) Batch number;
- d) Date of manufacture;
- e) Date of expiry;
- f) Net quantity;
- g) Nominal copper content, percent (*m/m*);
- h) Cautionary notice as worded in the *Insecticides Act*, 1968, and Rules framed thereunder; and
- j) Any other information required under the *Legal Metrology (Packaged Commodities) Rules*, 2011.

### 5.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*,

2016 and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

## **6 SAMPLING**

Representative samples of the material shall be drawn as prescribed in IS 10627.

## **7 TESTS**

Tests shall be carried out by appropriate methods as referred in col (4) of Table 1.

## **8 QUALITY OF REAGENTS**

Unless specified otherwise, pure chemicals and distilled water (*see* IS 1070) shall be employed in tests.

NOTE – ‘Pure chemicals’ shall mean chemicals that do not contain impurities which affect the results of analysis.

**ANNEX A**  
[Table 1, Sl. No. (iii)]  
**pH of Aqueous Dispersion**

**A-1 APPARATUS**

**A-1.1 pH Meter** – equipped with glass electrode system

**A-1.2 Measuring Cylinder** – 100 ml capacity.

**A-2 REAGENT**

**A-2.1 Buffer** – pH 7.0.

**A-3 PROCEDURE**

Weigh 1 g of sample, transfer to a measuring cylinder containing about 50 ml distilled water. Make up to 100 ml, and shake vigorously for 1 min. Allow to settle and measure the pH of the supernatant liquid in a pH meter standardized against a buffer solution.