

फेन्थोएट एमल्सिफिएबल कॉन्सन्ट्रेट
(ईसी) — विशिष्टि
(पहला पुनरीक्षण)

Phenthoate Emulsifiable Concentrate
(EC) — Specification
(First Revision)

ICS 65.100.10

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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Pesticides Sectional Committee had been approved by the Food and Agriculture Division Council.

Phenthoate emulsifiable concentrate (EC) is largely used in the control of insect pests of agricultural importance. It is generally manufactured to contain 50 percent (*m/m*) of phenthoate.

This standard was published in 1976. In this revision, the standard has been brought out in the latest style and format of the Indian Standards as well as references to Indian Standards wherever applicable have been updated. It also incorporates two amendments issued to the previous version of this standard.

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.

Indian Standard

PHENTHOATE EMULSIFIABLE CONCENTRATE (EC) — SPECIFICATION

(*First Revision*)

1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for phenthoate emulsifiable concentrate (EC).

2 REFERENCES

The standards given below 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 edition of these standards:

<i>IS No.</i>	<i>Title</i>
IS 1070 : 2023	Reagent grade water — Specification (<i>fourth revision</i>)
IS 1448 (Part 20) : 2024/ISO 13736 : 2021	Petroleum and its products — Test methods: Part 20 Determination of flash point — Abel closed-cup method (<i>fourth revision</i>)
IS 6940 : 1982	Methods of test for pesticides and their formulations (<i>first revision</i>)
IS 8190 (Part 2) : 1988	Requirements for packing of pesticides: Part 2 Liquid pesticides (<i>second revision</i>)
IS 8293 : 2024	Phenthoate, technical — Specification (<i>first revision</i>)
IS 10627 : 1983	Methods for sampling of pesticidal formulations

3 REQUIREMENTS**3.1 Constituents**

The material shall consist of phenthoate, technical, dissolved in suitable solvent(s), together with emulsifying agent(s) and with or without stabilizer(s). It shall conform to IS 8293.

3.2 Physical

The material shall comply with the following physical requirements.

3.2.1 Description

The material shall be in the form of clear, stable and homogeneous liquid, free from foreign matter.

3.2.2 Cold Test

No turbidity or separation of solid and/or oily matter shall occur when the material is subjected to the cold test at 10 °C as prescribed in IS 6940 or any other lower temperature as agreed to between the purchaser and the vendor. For the purpose of this test, introduction of seeding crystal is not necessary.

3.2.3 Flash Point (Abel)

When determined by the method prescribed in IS 1448 (Part 20), the flash point of the material shall be above 24.5 °C.

3.2.4 Emulsion Stability

The creaming or the sediment, if any, shall not in either case exceed 2.0 ml at the top or bottom of the 100 ml cylinder, when tested by one of the methods prescribed in IS 6940. There shall also be no oil separation.

3.3 Chemical

The material shall comply with the chemical requirements given in [3.3.1](#) and [3.3.2](#).

3.3.1 Phenthoate Content

When determined by the method prescribed in IS 8293, the observed phenthoate content, percent (*m/m*), of any of the samples shall not differ from the nominal value by more than the percent tolerance

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applied to the declared nominal value as given below:

<i>Sl No.</i>	<i>Nominal Value, percent</i>	<i>Tolerance Limit, percent</i>	
(1)	(2)	(3)	
i)	Up to 9	+ 10 - 5	} of the nominal value
ii)	Above 9 and below 50	± 5	
iii)	50 and above	+ 5 - 3	

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

3.3.2 Acidity or Alkalinity

When determined by the method prescribed in IS 6940, the acidity (as H₂SO₄) shall be not more than 0.5 percent by mass; and alkalinity (as NaOH) shall not exceed 0.1 percent by mass.

4 PACKING

The material shall be packed in clean and dry containers made of mild steel or tinplate properly and suitably lacquered from inside. Aluminium containers may also be used. The containers shall also comply with the general requirements as stipulated in IS 8190 (Part 2).

5 MARKING

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

- Name of the material;
- Name and address of the manufacturer;
- Batch number;
- Date of manufacture;

- Date of expiry;
- Net quantity;
- Nominal phenthoate content, percent (m/m);
- Cautionary notice as worded in the *Insecticides Act, 1968* and rules framed thereunder; and
- 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

When freshly manufactured material in bulk quantity is offered for inspection, representative samples of the material shall be drawn and tested as prescribed in IS 10627 within 90 days of its manufacture. When the material is offered for inspection after 90 days of its manufacture, sampling shall be done as prescribed in IS 10627. However, the criteria for conformity of the material when tested, shall be the limits of tolerances, as applicable over the declared nominal value and given under [3.3.1](#).

7 TESTS

Tests shall be carried out by the appropriate methods referred to in [3.2.2](#) to [3.2.4](#), [3.3.1](#) and [3.3.2](#).

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.

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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