
फेन्थोएट ग्रैन्यूलस — विशिष्टि

(पहला पुनरीक्षण)

Phenthoate Granules —
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 granules are widely used in the control of agricultural pests. These are generally manufactured to contain 5 percent (*m/m*) of phenthoate.

This standard was first published in 1982. 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 one amendment issued to the previous version of this standards.

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 GRANULES — SPECIFICATION
(First Revision)

1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for phenthoate granules.

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 460 (Part 1) : 2020	Test sieves — Specification: Part 1 Wire cloth test sieves (<i>fourth revision</i>)
IS 1070 : 2023	Reagent grade water — Specification (<i>fourth revision</i>)
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 8293 : 2024	Phenthoate, technical — Specification (<i>first revision</i>)
IS 9666 : 2023	Blank granules — Specification (<i>first revision</i>)
IS 10627 : 1983	Methods for sampling of pesticidal formulations

3 REQUIREMENTS**3.1 Constituents**

3.1.1 The material shall consist of phenthoate technical, as the only active ingredient impregnated on suitable blank granules as carrier(s) together with binder(s), stabilizer(s) and/or other formulants. Phenthoate, technical shall conform to IS 8293.

3.1.2 Blank granules used in the formulation of this material shall conform to IS 9666.

3.2 Physical

The material shall comply with the physical requirements specified in [3.2.1](#) to [3.2.4](#).

3.2.1 Description

The product shall consist of dry, free flowing granules, free from visible extraneous matter and dust except for the amount specified (*see* [3.2.3](#)). It may contain added colouring matter.

3.2.2 Sieving Requirement

Not less than 97 percent by mass of the product shall pass through a test sieve having a mesh size of the upper declared limit and not more than 5 percent by mass of the product shall pass through a test sieve having a mesh size of lower declared limit when determined by the method described in IS 6940 [*see* [5.1\(a\)](#)].

The ratio of lower to upper limit of the sieve sizes declared under [3.2.2](#) shall not exceed 1 : 3.

3.2.3 Dust

When determined by the method described in IS 6940, not more than 1.0 percent by mass of the product shall pass through 75 micron IS sieve [*see* IS 460 (Part 1)].

3.2.4 Moisture Content

When determined by the method prescribed in IS 6940, the moisture content of the material shall not exceed 4.0 percent by mass.

3.3 Chemical

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

3.3.1 Phenthoate Content

When determined by the method prescribed in Annex A of IS 8293 and [7.2](#), 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 applied to

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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

When tested by the method prescribed in IS 6940, the acidity (as H₂SO₄) of the material shall be not more than 0.5 percent by mass.

4 PACKING

The material shall be packed according to the requirements given in IS 8190 (Part 1).

5 MARKING

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

- Name of the material, particle size, range and ratio (*see* [3.2.2](#));
- Type of blank granules used (*see* [3.1.2](#));
- 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

7.1 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](#).

7.2 Grind the granules to a fine size and weigh a quantity containing approximately 1 g of the active ingredient. Extract the material for about 8 h continuously in a Soxhlet extraction apparatus using benzene as a solvent. Evaporate the solvent on a water bath and then make a volume of 50 ml in a volumetric flask. Take a suitable aliquot and then proceed according to the method prescribed in Annex A of IS 8293.

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

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