
**Pesticides – Cypermethrin
Part 3:
Wettable powders (WP) –
Specification**

ICS: 65.100.10

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Foreword

This Ethiopian Standard has been prepared under the direction of the Technical Committee for Pesticides (TC 19) and published by the Ethiopian Standards Agency (ESA).

The standard is a Canceles and replaces of the Ethiopian Standard ES 705-3:2002 - *Pesticides Cypermethrin Part 3: Wettable powders (WP) - Specification*, with some editorial changes without altering the technical contents in the former text.

In preparing this Ethiopian Standard reference has been made to the following:

- AGP:CP/316:1995, FAO specification for plant protection products, "Cypermethrin wettable powders, FAO specification 332/WP/S/F (1993), published by the Food and Agriculture Organization of the United Nations (FAO), Rome.

Acknowledgement is made for the use of information from the above publication.

Pesticides — Cypermethrin

Part 3

Wettable powders (WP) — Specification

1 Scope

This Ethiopian Standard specifies the requirements for the cypermethrin wettable powders (for plant protection purpose).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ES 693, *Pesticides – Terminology.*

ES 694, *Pesticides – Methods of sampling.*

ES 695, *Pesticides – Packaging.*

ES 696, *Pesticides – Guideline on good labelling practice.*

ES 697, *Pesticides – Guideline for retail distribution, storage and handling.*

ES 700, *Pesticides – Guideline on the disposal of bulk quantities of obsolete pesticides.*

ES 705-1, *Pesticides – Cypermethrin – Part 1: Technical material (TC) – Specification.*

ES 722, *Pesticides – Determination of total cypermethrin content.*

ES 746, *Pesticides – Determination of material soluble in acetone.*

ES 747, *Pesticides – Determination of suspensibility of wettable powders in water.*

ES 753, *Pesticides – Determination of accelerated storage stability.*

ES 754, *Pesticides – Determination of persistent foaming.*

ES 755, *Pesticides – Determination of wetting of wettable powders.*

ES 756, *Pesticides – Sieve analysis.*

ES 757, *Pesticides – Determination of pH value.*

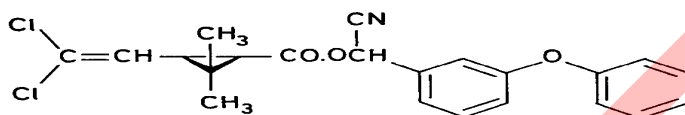
3 Definitions

For the purpose of this Ethiopian Standard, terms defined in ES 693 shall apply.

4 General information

COMMON NAME:cypermethrin (ISO)

STRUCTURAL FORMULA:



EMPIRICAL FORMULA: C₂₂H₁₉Cl₂NO₃

RMM:416.3

CAS REGISTRY NUMBER:52315-07-8

CIPAC CODE NUMBER: 332

CHEMICAL NAMES:

(*RS*)-1-cyano-3-phenoxybenzyl (1*RS*,3*RS*;1*RS*,3*SR*)-3-

(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC)

(*RS*)-1-cyano-3-phenoxybenzyl (1*RS*)-*cis-trans*-3-

(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate (Rothamsted IUPAC)

cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-

2,2-dimethylcyclopropanecarboxylate (CA)

CHEMICAL GROUP:

Pyrethroid

USE CATEGORY:

Insecticide

WHO CLASS¹⁾

5 Requirements

5.1 Description

The material shall consist of a homogenous mixture of technical cypermethrin, complying with the requirements of ES 705-1, together with fillers and any other necessary formulants.

¹⁾ Based on the technical material

5.2 Active ingredients

5.2.1 Identity tests

Identity test of the product shall be carried out in accordance with ES 722, where the identity of the active ingredient is in doubt, then the isolated active ingredient shall comply with at least one additional test.

5.2.2 Cypermethrin

The cypermethrin content determination shall be carried out in accordance with ES 722 and shall be declared in g/kg and, when determined, the content obtained shall not differ from that declared by more than the following amounts.

<u>Declared content</u>	<u>Permitted tolerance</u>
Up to 25 g/kg	± 15% of the declared content
Above 25 up to 100 g/kg	± 10% of the declared content
Above 100 up to 250 g/kg	± 6% of the declared content
Above 250 up to 500 g/kg	± 5% of the declared content

5.2.3 Cis-isomer content

The *cis*- isomer content shall be declared and shall be between 40% minimum and 60% maximum of the declared cypermethrin content.

When determined in accordance with ES 722, the permitted tolerance shall be ± 10% of the declared *cis*- isomer content.

5.3 Physical properties

5.3.1 pH range

When determined in accordance with ES 757 the pH range of the product shall be 4 to 10 prepare the test solution in accordance with clause 6.2 of ES 746.

5.3.2 Wet sieve test

When determined in accordance with clause 5.2 of ES 756, the maximum amount retained on 75 µm test sieve shall be 2%.

5.3.3 Suspensibility test

NOTE 1 -The product should be tested at the highest and lowest rates of use recommended by the supplier, provided this is consistent with the conditions given in method.

NOTE 2 - This test will normally be carried out only after the heat stability test 5.4.1.

When determined in accordance with clause 8.1.1 of ES 747, a minimum of 50% of the cypermethrin content found under clause 5.2.2 shall be in suspension after 30 min in standard water C. Alternatively if the buyer requires other standard waters to be used, then this shall be specified when ordering.

5.3.4 Persistent foam

When determined in accordance with ES 754, the maximum volume of persistent foam shall be 25 ml after 1 min.

5.3.5 Wetting of the product without swirling

When determined in accordance with clause 8.1 of ES 755, the product shall be completely wetted in 2 min without swirling.

5.4 Storage stability

5.4.1 Stability at 54°C

After storage at 54 ± 2 °C for 14 days when determined in accordance with clause 6.1.1 of ES 753, the determined average active ingredient content must not be lower than 95% relative to the determined average content before storage and the product shall continue to comply with clauses 5.3.1, 5.3.2 and 5.3.3.

NOTE 3 - Samples of the product taken before and after the storage stability test (in each case 4 representative sub-samples) should be analyzed together after the test to reduce the analytical error.

6 Handling

Pesticides shall be handled in accordance with ES 697.

7 Sampling

Samples shall be taken in accordance with ES 694.

8 Packaging

Pesticides shall be packed in accordance with ES 695.

9 Labelling

Pesticides labelling shall be in accordance with ES 696.

10 Disposal

Disposal of bulk quantities of obsolete pesticides shall be in accordance with ES 700.

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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

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More Information?

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