
Pesticides — Myclobutanil
Part1:
Myclobutanil Technical Material (TC)
Specifications

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).

This standard is developed of Ethiopian Standard ES 6807: 2021 for "*Pesticides - Myclobutanil Part 1: Technical Material (TC) - Specifications*" to be published.

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

A. Martijn and W. Dobrat: 1883, Analysis of Technical and Formulated Pesticides, CIPAC, Published by the Collaborative International Pesticides Analytical Council Limited, England.

FAO/WHO Meeting on Pesticide Residues JMPR, Myclobutanil 1997.

Indian Standard for Myclobutanil Technical, 2001,

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

Pesticides - Part 1: Myclobutanil Technical Material (TC) - Specification

1 Scope

This Ethiopian Standard specifies requirements, method of sampling and test for the Technical Material of Myclobutanil (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 - Guidelines on good labelling practice.*

ES 697, *Pesticides - Guidelines for retail distribution, storage and handling.*

ES 700, *Pesticides - Guideline for the disposal of bulk quantities of obsolete pesticides.*

ES 737, *Pesticides - Determination of material insoluble in acetone.*

ES 749, *Pesticides - Determination of water content.*

ES 750, *Pesticides - Determination of free acidity or alkalinity.*

3 Definitions

For the purpose of this standard terms defined in ES 693 shall apply.

4 General Information

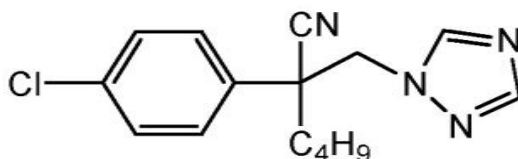
ISO COMMON NAME: Myclobutanil

CHEMICAL NAMES:

IUPAC NAME: 2-(4-chlorophenyl)-2-(1,2,4-triazole-1-ylmethyl)hexanenitrile

CAS NAME: α -n-butyl- α -(4-chlorophenyl)-1H-1,2,4-triazole-1-propanenitrile

STRUCTURAL FORMULA



MOLECULAR FORMULA:	C ₁₅ H ₁₇ Cl N ₄
RELATIVE MOLECULAR MASS:	288.8 g/mol
CAS REGISTRY NUMBER:	88671-89-0
CIPAC NUMBER:	442
CHEMICAL GROUP:	Triazole
USE CATEGORY:	a light yellow solid used as a fungicide.
WHO CLASS:	III, Slightly Hazardous
POSSIBLE FORMULATION TYPES:	Suspension Concentrate (SC), Wettable Powder (WP), Emulsion Concentrate (EC), Emulsion Oil in Water (EW)
IDENTITY TESTS:	Retention time in HPLC, IR spectrum, EI-MS from GC-MS

5 Requirements

5.1 Description

The material shall consist of Myclobutanil together with related manufacturing impurities, in the form of colorless to white crystals with a faint aldehyde odour, free from visible extraneous matter and added modifying agents.

5.2 Myclobutanil Active Ingredient

5.3 Myclobutanil Content

The Myclobutanil Content shall be declared (not less than 950 g/kg) and, the average measured content shall not be lower than the declared minimum content.

5.4 Relevant Impurities

5.4.1 Water

When determined in accordance with clause 4.1 of ES 749, the maximum water content shall be 0.5 g/kg.

5.4.2 Material Insoluble in Acetone

When determined in accordance with clause 6.1 of ES 737, the maximum acetone insoluble water shall be 1.0 g/kg.

6 Physical and Chemical Properties

S/N	Parameters	Typical Value	Test method
1	Appearance	colorless to white crystals with a faint aldehyde odour	visual
2	Solubility - In water at (mg l ⁻¹)	2 mg/L at 25 °C	EEC A6; OECD 105
3	Solubility - In organic solvents at 20 °C (mg l ⁻¹)	Soluble in most organic solvent	flask method

4	Melting point (°C)	63 to 68 °C	OECD 105, OPPTS
5	Boiling point (°C)	202 to 208 °C at 1 mm Hg	796.1840, EEC A.6
6	Flashpoint (°C)	Not expected to self ignite; Not highly flammable	EEC A1; OECD 102;
7	Specific gravity (g ml ⁻¹)	1.24g/ml at 25 ± 0.5°C	differential scanning calorimetry (DSC)
8	Stability	Stable under normal storage conditions Aqueous solutions decompose on exposure to light, with a half-life of about 222 days (sterile water), 0.8 days (sensitized sterile water), 25 days (pond water); no hydrolysis in 28 days at 28 °C, pH 5,7, and 9.	OECD 103, OPPTS
9	Henry's law constant at 25 °C (Pa m ³ mol ⁻¹)	4.33 X 10-04 (Non volatile)	830.7220, EEC A.2

7 Handling

Pesticides shall be handled in accordance with ES 697.

8 Sampling

Samples shall be taken in accordance with ES 694.

9 Packaging

Products shall be packed in accordance with ES 695.

NOTE 1- Packing materials shall comply with pertinent national and international transport and safety regulations.

10 Labeling

Pesticides shall be labeled in accordance with ES 696.

11 Disposal

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

Organization and Objectives

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia established in 2010 based on regulation No. 193/2010. ESA is established due to the restructuring of Quality and Standards Authority of Ethiopia (QSAE) which was established in 1970.

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 organizations, 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 Standards 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 from our website.

ESA has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of ESA.

International Involvement

ESA, representing Ethiopia, is a member of the International Organization for Standardization (ISO), and Codex Alimentarius Commission (CODEX). It also maintains close working relations with the international Electro-technical Commission (IEC) and American Society for Testing and Materials (ASTM). It is a founding member of the African Regional Organization for Standardization (ARSO).

More Information?

Contact us at the following address.

The Head Office of ESA is at Addis Ababa.

☎ 011- 646 06 85, 011- 646 05 65

☎ 011-646 08 80

✉ 2310 Addis Ababa, Ethiopia

E-mail: info@ethiostandards.org,

Website: www.ethiostandards.org



Standard Mark