ETHIOPIAN STANDARD

ES 6800:2021

First edition
xx-xx-2021

Pesticides — Methoxyfenoxide Part1: Technical Material(TC)- Specifications

ICS: 65.100.10
Published by Ethiopian Standards Agency

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 developed of the Ethiopian Standard ES 6800:2021 for "*Pesticides – Methoxyfenozide 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.

2001, 33rd Session, Joint FAO/WHO Meeting on Pesticide Residues JMPR and CCPR, Methoxyfenozide.

2004, Standard for methoxy fenozide, Australian Pesticides and Veterinary Medicines Authority,

Stephen Funk: 2003, US Environmental Protection Agency, USA Methoxyfenozide (209)

The FAO/WHO Joint Meeting on Pesticide Specifications (JMPS)

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

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

1 Scope

This Ethiopian Standard specifies the requirements for the technical material of Methoxyfenozide (for agricultural 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.

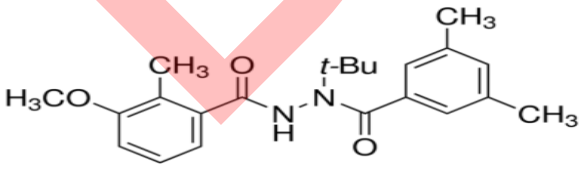
4 General information

ISO COMMON NAME: Methoxyfenozide

CHEMICAL NAMES: 3-methoxy-2-methylbenzoic acid 2-(3,5-dimethylbenzoyl)-2-(1,1-dimethylethyl) hydrazide

IUPAC NAME: N-tert-butyl-N'-(3-methoxy-o-toluoyl)-3,5-xylohydrazide

STRUCTURAL FORMULA.



MOLECULAR FORMULA: $C_{22}H_{28}N_2O_3$

RELATIVE MOLECULAR MASS: 368.47

CAS REGISTRY NUMBER: 161050-58-4

CIPAC NUMBER: 656

CHEMICAL GROUP:Diacylhydrazine

USE CATEGORY: insecticide

WHO CLASS: U, Unlikely to present acute hazard in normal use.

5 Requirements

5.1 Description

The material shall consist of methoxyfenozide together with related manufacturing impurities and shall be a white powder, free from visible extraneous matter and added modifying agents.

5.2 Methoxyfenozide Active Ingredient

5.2.1 Methoxyfenoxide Content

The Methoxyfenozide Content shall be declared (not less than 950 g/kg) and, when determined according to the average measured content shall not be lower than the declared minimum content.

5.2.2 Relevant Impurities

Water

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

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,

Tert-Butylhydrazine (RH-84078, RH-99838, TBZ)

When determined according to the maximum tert-Butylhydrazine shall be 0.001g/kg.

6 Physical and Chemical properties

6.1 Acidity and Alkalinity

When determined in accordance with ES 750 the maximum acidity content shall be 0.5 g/kg, calculated as H_2SO_4 or maximum alkalinity: 0.1 g/kg calculated as NaOH.

6.2 Pure active ingredient

Table 1. Physical and Chemical properties of Methoxyfenozide

S/N	Parameters	Typical Value	Test method
1	Appearance	Crystalline powder - White powder	visual
2	Solubility - In water at 20 °C (mg l^{-1})	3.3 mg/L	EEC A6; OECD 105 flask method
3	Solubility - In organic solvents at 20 °C (mg l^{-1})	Soluble in most organic solvent	
4	Melting point (°C)	206-208°C	EEC A1; OECD 102; differential scanning calorimetry (DSC)
5	Boiling point (°C)	Decompose before boiling	
6	Flashpoint (°C)	Not expected to self ignite; Not highly flammable	A5
7	Specific gravity (g ml^{-1})	1.57 g/ml at 25 ± 0.5°C	EEC A3; OECD 109; pycnometer method
8	Stability	Stable to simulated sunlight for 3 days (33.5 ± 1.0°C) and in contact with iron oxide for 5 days (24.7 ±	OECD 113

		0.3°C)	
9	Henry's law constant at 25 °C (Pa m^3 mol^{-1})	4.33 X 10-04 (Non volatile)	A5

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.

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Ethiopian Standards Agency

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.

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).

<u>More Information</u>?
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