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Magnesium sulphate fertilizer— Specification

PUBLIC REVIEW DRAFT



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Foreword

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- (a) a member of International Organisation for Standardisation (ISO) and
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- (c) the National Enquiry Point on TBT Agreement of the World Trade Organisation (WTO).

The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of representatives of consumers, traders, academicians, manufacturers, government and other stakeholders.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

This Draft Uganda Standard has been developed as a result of a need to provide guidance to industry in production and regulation of Inorganic fertilizers.

This Draft Uganda Standard was developed by the UNBS/TC 2/SC 20 – Agrochemicals and veterinary drugs Sub Committee under the Food and Agriculture standards Technical Committee, UNBS/TC 2.

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Magnesium sulphate fertilizer — Specification

1 Scope

This Draft Uganda Standard specifies the requirements, methods of sampling and tests for magnesium sulphate fertilizer.

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.

AOAC 937.02, *Magnesium (Water-soluble) in fertilizers*

AOAC 980.02, *Sulfur in fertilizers*.

AOAC 2006.03: *Arsenic, Cadmium, Cobalt, Chromium, Lead, Molybdenum, Nickel, and selenium in fertilizers. Microwave digestion and inductively coupled plasma-optical emission spectrometry*

ISO 8157, *Fertilizers and soil conditioners—Vocabulary*

ISO 8633, *Solid fertilizers — Simple sampling method for small lots*

ISO 8634, *Solid fertilizers — Sampling plan for the evaluation of a large delivery*

3 Terms and definitions

For the purposes of this standard, the definitions given in ISO 8157, *Fertilizers and soil conditioners—Vocabulary* shall apply.

4 Requirements

4.1 Description

The product shall consist essentially of magnesium sulphate, and shall be in the form of a free flowing crystalline powder or granules. It shall be free from visible foreign matter.

4.2 Physical

If in granular form the particle size shall be such that not less than 90 % by mass shall be in the particle size range of 1 mm to 4 mm.

4.3 Chemical

The product shall comply with the chemical requirements provided in table 1

Table 1 compositional limits

SN	Characteristic	Requirement	Test method
i)	Water soluble magnesium content(as MgO)% by weight ,min	25.0	AOAC 937.02
ii)	Sulphate content as S (% by weight)min	20	AOAC 980.02
iii)	Moisture content,% by weight(max)	1.5	AOAC 965.08 B

4.4 Heavy metal contaminants

When tested in accordance with the methods specified therein, the heavy metal contaminants shall not exceed those indicated in Table 2.

Table 2 — Heavy metal contaminants limits

SN	Parameter	Limits in mg/kg	Test method
i)	Arsenic, As, max.	20.0	AOAC 2006.03
ii)	Cadmium, Cd, max.	20.0	
iii)	Mercury, Hg, max.	0.1	
iv)	Lead, Pb, max.	30.0	

5 Packaging

Magnesium sulphate fertilizer shall be packaged in materials that ensure the product integrity and quality and protect it against physical damage, chemical and moisture contamination.

6 Weights and Measures regulations

The fill of the package shall comply with the weight and measures act

7 Labelling

The following information shall be clearly and indelibly marked in English on each package or container:

- name of the fertilizer as “Magnesium sulphate”;
- name, address and physical location of manufacturer/packer/importer;
- guaranteed percentage by mass of the water soluble magnesium and sulphur content;
- date of manufacture;
- expiry date;
- batch/lot number;

- g) the net weight of the fertilizer in the package; in metric units;
- h) Storage and Handling instructions;
- i) instructions for use;
- j) disposal instructions and;
- k) Country of origin.

8 Sampling

Sampling shall be done in accordance with ISO 8633 and ISO 8634

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Bibliography

- [1] KS 2220:2015 Magnesium sulphate fertilizer— Specification

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