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Fertilizers — Potassium sulphate (sulphate of potash) — Specification

EAST AFRICAN COMMUNITY

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Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the Principles and procedures for development of East African Standards.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

The committee responsible for this document is Technical Committee EASC/TC 020, *Agriculture and agrochemicals*.

Fertilizers — Potassium Sulphate (Sulphate of Potash) — Specification

1 Scope

This Draft East African Standard specifies requirements, sampling and test methods for potassium sulphate (sulphate of potash) fertilizer.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 928.02, *Chlorine (Water-soluble) in fertilizers*

AOAC 965.08, *Water (free) in fertilizers — Vacuum-desiccation*

AOAC974.01, *Sodium in fertilizers. Flame photometric*

AOAC 2006.03, *Arsenic, Cadmium, Cobalt, Chromium, Lead, Molybdenum, Nickel and Selenium in fertilizers*

ISO 8157, *Fertilizers, soil conditioners and beneficial substances — Vocabulary*

ISO 8397, *Solid fertilizers and soil conditioners — Test sieving*

ISO 10084, *Solid fertilizers – Determination of mineral – acid- soluble sulphate content- Gravimetric method*

ISO 17318, *Fertilizers and soil conditioners — Determination of arsenic, cadmium, chromium, lead and mercury contents*

ISO 17319, *Fertilizers and soil conditioners — Determination of water-soluble potassium content — Potassium tetraphenylborate gravimetric method*

ISO 14820-1, *Fertilizers and liming materials - Sampling and sample preparation - Part 1: Sampling*

ISO 14820-2, *Fertilizers and liming materials - Sampling and sample preparation - Part 2: Sample preparation*

ISO 7409, *Fertilizers -Marking - Presentation and declarations*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8157 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Requirements

4.1 General requirements

4.1.1 The material shall be crystalline, prills, granular or powder, uniform in colour and free from any foreign matter.

4.1.2 The particle size shall be such that at least 90 % by weight of the material shall be of particles in the size range of 1 mm to 4 mm for prills and 2 mm to 4 mm for granules or not less than 65 % particles in the size range of 0.25 mm to 1.7 mm for powdered crystals. The fertilizer material shall be tested in accordance with ISO 8397.

4.2 Specific requirements

Potassium sulphate (sulphate of potash) fertilizer shall comply with the requirements given in Table 1 when tested in accordance with the test methods prescribed therein.

Table 1 — Specific requirements for potassium sulphate (sulphate of potash) fertilizer

S/N	Characteristic	Requirement, % by mass	Test method
i.	Potash content (as K ₂ O), min.	50	ISO 17319
ii.	Sulphur (as S), min.	17.5	ISO 10084
iii.	Total chloride (as Cl), max.	2.5	AOAC 928.02
iv.	Sodium content (as NaCl), max.	2.0	AOAC 974.01
v.	Moisture content, max.	1.5	AOAC 965.08

5 Contaminants

5.1 Heavy metal contaminants in potassium sulphate (sulphate of potash) fertilizer shall conform to the limits given in Table 2 when tested in accordance with the test methods prescribed therein.

Table 2 — Requirements for heavy metal contaminants in potassium sulphate (sulphate of potash) fertilizer

S/N	Heavy metal	Maximum requirement, mg/kg	Test method
i.	Arsenic (As)	20	ISO 17318
ii.	Cadmium (Cd)	30	
iii.	Mercury (Hg)	0.1	
iv.	Lead (Pb)	30	
v.	Chromium (Cr)	500	
vi.	Selenium (Se)	1.0	AOAC 2006.03

7 Packaging

The fertilizer shall be packaged in materials that are clean and non-defective that protect the product from physical, chemical and moisture contamination and withstand multiple stages of handling (transportation and storage).

8 Labelling

Each package shall be legibly and indelibly labeled in accordance with ISO 7409 in English and/or any other official language of the destination country with the following information:

- a) name of the fertilizer; "Potassium sulphate (sulphate of potash) fertilizer"
- b) brand name if any;
- c) name and address of the manufacturer/packer;
- d) net content by mass, in metric units;
- e) nutrient content as percent by mass;
- f) country of origin;
- g) handling instructions, including the words "Use no hooks";
- h) production date
- i) expiry date;
- j) batch number; and
- k) storage conditions.

9 Sampling

Sampling and sample preparation of phosphate rock powder fertilizers shall be carried out as prescribed in ISO 14820-1 and ISO 14820-2 respectively.

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