

# DRAFT UGANDA STANDARD

Second Edition  
2017-mm-dd

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## Monoammonium phosphate (MAP) and Diammonium phosphate (DAP) fertilizers — Specification



Reference number  
US 759: 2017

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**Contents**

Page

|   |    |
|---|----|
| Foreword .....                                  | iv |
| 1 <b>Scope</b> .....                            | 1  |
| 2 <b>Normative references</b> .....             | 1  |
| 3 <b>Terms and definitions</b> .....            | 1  |
| 4 <b>Requirements</b> .....                     | 1  |
| 4.1 <b>General requirements</b> .....           | 1  |
| 4.2 <b>Specific requirements</b> .....          | 2  |
| 4.3 <b>Heavy metal contaminants</b> .....       | 2  |
| 5 <b>Packaging</b> .....                        | 2  |
| 6 <b>Weights and Measures regulations</b> ..... | 2  |
| 7 <b>Labelling</b> .....                        | 2  |
| 8 <b>Sampling</b> .....                         | 3  |
| Bibliography .....                              | 4  |

## Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade, Industry and Cooperatives established under Cap 327, of the Laws of Uganda, as amended. UNBS is mandated to co-ordinate the elaboration of standards and is

- (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 key stakeholders including government, academia, consumer groups, private sector and other interested parties.

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.

The committee responsible for this document is Technical Committee UNBS/TC 2, *Food and agriculture*, Subcommittee SC 20, *Agrochemicals and veterinary drugs*.

This second edition cancels and replaces the first edition (US 759:2007), which has been technically revised.

# Monoammonium phosphate (MAP) and Diammonium phosphate (DAP) fertilizers — Specification

## 1 Scope

This Draft Uganda Standard specifies the requirements, sampling and tests methods for Monoammonium phosphate (MAP) and Diammonium phosphate (DAP) fertilizers

## 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 950.01, *Water (Total) in fertilizers*

ISO 5316, *Fertilizer— Extraction of water-soluble phosphates*

ISO 8157, *Fertilizers and soil conditioners—Vocabulary*

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

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

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

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

ISO 25475, *Fertilizers— Determination of ammoniacal nitrogen*

## 3 Terms and definitions

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

- a) The fertilizer shall be free flowing, granular and free from dust, cakes, lumps or any foreign matter; and

- b) Particle size: Not less than 90 % of the material shall pass through 4 mm IS sieve and be retained on 1 mm IS sieve. Not more than 5 % shall be below 1 mm size when tested in accordance with ISO 8397.

## 4.2 Specific requirements

The fertilizers shall comply with the compositional limits specified in Table 1.

**Table 1 — Compositional limits for (MAP) and (DAP) fertilizers**

| SN   | Characteristic  | Requirement/limits |     | Test method |
|------|---|--------------------|-----|-------------|
|      |   | MAP                | DAP |             |
| i)   | Ammoniacal nitrogen, % (m/m), min.  | 11                 | 18  | ISO 25475   |
| ii)  | Water soluble phosphates as P <sub>2</sub> O <sub>5</sub> , % (m/m), min. | 44                 | 41  | ISO 5316    |
| iii) | Available phosphates, as P <sub>2</sub> O <sub>5</sub> , % (m/m), min.    | 50                 | 46  | ISO 6598    |
| iv)  | Moisture, % (m/m), max.   | 1.5                | 1.5 | AOAC 950.01 |

## 4.3 Heavy metal contaminants

The heavy metal contaminants, if present, shall not exceed the limits stipulated in Table 2

**Table 2 — Heavy metal contaminants limits**

| Sn.  | Parameter          | Limits in mg/kg | Test method |
|------|--------------------|-----------------|-------------|
| i)   | Arsenic, As, max.  | 20.0            | ISO 17318   |
| ii)  | Cadmium, Cd, max.  | 15.0            |             |
| iii) | Mercury, Hg, max.  | 0.1             |             |
| v)   | Lead, Pb, max.     | 30.0            |             |
| vi)  | Chromium, Cr, max. | 500.0           |             |
|      |                    |                 |             |

## 5 Packaging

Monoammonium phosphate (MAP) and Diammonium phosphate (DAP) fertilizers 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 weights and measures act

## 7 Labelling

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

- a) name of the fertilizer as “MAP or DAP”;
- b) name, address and physical location of manufacturer/packer/importer;
- c) the guaranteed percentage (by weight) of nutrients reported as: Ammoniacal Nitrogen (N), Available Phosphates ( $P_2O_5$ );
- d) date of manufacture;
- e) expiry date;
- f) 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

## Bibliography

- [1] US 759: 2007, *Monoammonium phosphate (MAP) and Diammonium phosphate (DAP) fertilizers — Specification*
- [2] FAO Mineral fertilizer Specifications 2010
- [3] Agricultural Chemicals (Control) Act, 2006 (Act No.1 of 2007)
- [4] The Fertilizer Control Regulations, 2010

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