

DRAFT UGANDA STANDARD

Second Edition
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Calcium ammonium nitrate fertilizer — Specification



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US 758: 2017

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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
- (b) a contact point for the WHO/FAO Codex Alimentarius Commission on Food Standards, and
- (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.

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.

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 758:2007), which has been technically revised.

Calcium ammonium nitrate fertilizer— Specification

1 Scope

This Draft Uganda Standard specifies requirements, sampling and test methods for calcium ammonium nitrate (CAN) 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 950.01, *Water (Total) in fertilizers*

AOAC 962.01, *Calcium and magnesium in liming materials. EDTA titrimetric methods*

ISO 5315, *Fertilizers— Determination of total nitrogen content -- Titrimetric method after distillation*

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 15604, *Fertilizers— Determination of different forms of nitrogen in the same sample, containing nitrogen as nitric, ammoniacal, urea and cyanamide nitrogen*

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 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 material shall be free from lumps and visible foreign matter and shall be free-flowing; 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 material shall consist of homogeneous granules of ammonium nitrate with limestone filler and shall comply with the requirements given in Table 1 when tested with the appropriate method also given in Table 1.

Table 1— Chemical requirements for calcium ammonium nitrate fertilizer

SN	Characteristic	Requirement	Method of test
i.	Total nitrogen content (as N), % (m/m), min	26	ISO 5315
ii.	Ammoniacal nitrogen, per cent by mass of total nitrogen	50%	ISO 25475
iii.	Nitrate nitrogen, percent by mass of total nitrogen	50%	ISO 15604
iv.	Calcium and/or magnesium carbonate by weight: min	18	AOAC 962.01
v.	Moisture % m/m, max	1	AOAC 950.01

4.3 Heavy metal contamination

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

Table 2 — Limits for heavy metal contaminants

Metal	Maximum limits, mg/kg	Test methods
Arsenic	20	ISO 17318
Cadmium	7	
Mercury	0.1	
Lead	30	
Chromium	500	

5 Packaging

Calcium ammonium nitrate 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 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 "Calcium ammonium nitrate";
- b) name, address and physical location of manufacturer/packer/importer;
- c) chemical composition of the fertilizer;
- d) nitrogen content of the material as a percentage by weight;
- e) date of manufacture;
- f) expiry date;
- g) batch/lot number;
- h) the net weight of the fertilizer in the package, in metric units;
- i) storage and handling instructions;
- j) risk warning;
- k) instructions for use;
- l) disposal instructions and;
- m) country of origin.

8 Sampling

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

Bibliography

- [1] US 758:2007, *Calcium ammonium nitrate fertilizer — Specification*
- [2] FAO Mineral fertilizer Specifications 2010
- [3] MS 1329: Specification for diammonium phosphate.
- [4] Agricultural Chemicals (Control) Act, 2006 (Act No.1 of 2007)
- [5] The Fertilizer Control Regulations, 2010

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