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**Ammonium chloride fertilizer —  
Specification — Part 1: Solid**

ICS 65.080

Reference number

DRS 603-1: 2025

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Contents

Page

Foreword .....iv

1 Scope ..... 1

2 Normative references ..... 1

3 Terms and definitions ..... 1

4 Requirements ..... 2

4.1 General requirements ..... 2

4.2 Specific requirements ..... 2

5 Inorganic Chemical contaminants ..... 2

6 Packaging ..... 2

7 Labelling ..... 3

8 Storage, handling and transportation ..... 3

9 Sampling ..... 3

Foreword

Rwanda Standards are prepared by Technical Committees and approved by Rwanda Standards Board (RSB) Board of Directors in accordance with the procedures of RSB, in compliance with Annex 3 of the WTO/TBT agreement on the preparation, adoption and application of standards.

The main task of technical committees is to prepare national standards. Final Draft Rwanda Standards adopted by Technical committees are ratified by members of RSB Board of Directors for publication and gazettment as Rwanda Standards.

DRS 603-1 was prepared by Technical Committee RSB/TC 7, *Fertilizers, soil conditioners and beneficial substances*.

In the preparation of this standard, reference was made to the following standard:

IS 1114: Specification for ammonium chloride, Fertilizer grade

The assistance derived from the above source is hereby acknowledged with thanks.

DRS 603 consists of the following parts, under the general title *Ammonium chloride fertilizer — Specification*:

— *Part 1: Solid*

— *Part 2: Liquid*

Committee membership

The following organizations were represented on the Technical Committee on *Fertilizers, soil conditioners and beneficial substances* (RSB/TC 7) in the preparation of this standard.

Rwanda Inspectorate, Competition and Consumer Protection Authority

Ministry of Agriculture and Animal Resources

National Agricultural Export Development Board

Rwanda Forensic Institute

Rwanda Investigation Bureau

University of Rwanda/College of Sciences and Technology

ALICOMEC

PWR Ltd

Rwanda Standards Board (RSB) – Secretariat

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## Ammonium chloride fertilizer — Specification — Part 1: Solid

### 1 Scope

This Draft Rwanda Standard specifies the requirements, sampling and test methods for solid ammonium chloride 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.

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

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

AOAC 2006.03, *Arsenic, cadmium, cobalt, chromium, lead, molybdenum, nickel and selenium in fertilizers*

RS ISO 7409, *Fertilizers — Marking — Presentation and declarations*

RS EAS 1166, *Handling, storage and disposal of bagged fertilizers and soil conditioners — Code of practice*

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

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

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

ISO 25475, *Fertilizers — Determination of ammoniacal nitrogen*

ISO 23381, *Determination of salt out (crystallization) temperature of liquid fertilizers*

ISO 20295, *Soil quality — Determination of perchlorate in soil using ion chromatography*

### 3 Terms and definitions

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

4 Requirements

4.1 General requirements

The solid ammonium chloride fertilizer shall:

- a) be in the form of white crystals or granules or powder;
- b) be free from hard caking; and
- c) have no perceptible odour.

4.2 Specific requirements

The solid ammonium chloride fertilizer shall comply with the requirements given in table 1 when tested in accordance with the test methods specified therein.

Table 1 – Specific requirements for solid ammonium chloride fertilizer

S/N	Parameters	Requirements	Test methods
i.	Moisture content, % m/m, max.	2.0	AOAC 965.08
ii.	Ammoniacal nitrogen (as N), % m/m, min.	25.0	ISO 25475
iii.	Chlorides other than ammonium chloride (as NaCl), % m/m (on dry basis), max.	2.0	ISO 23381

5 Inorganic Chemical contaminants

Inorganic chemical contaminants in solid ammonium chloride fertilizer shall conform to the limits given in Table 2 when tested in accordance with the test methods prescribed therein.

Table 2 – Limits for inorganic chemical contaminants for solid ammonium chloride fertilizer

S/N	Heavy metal	Limits (mg/kg, max.)	Test method
i.	Arsenic (As)	20	ISO 17318
ii.	Cadmium (Cd)	5	
iii.	Mercury (Hg)	0.1	
iv.	Lead (Pb)	30	
v.	Chromium (Cr)	2	
vi.	Nickel (Ni)	100	AOAC 2006.03
vii.	Perchlorate (ClO <sub>4</sub> <sup>-</sup> )	10	ISO 20295

6 Packaging

The solid ammonium chloride 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).



## 7 Labelling

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

- a) name of the fertilizer as "Ammonium chloride fertilizer"
- b) physical form as "solid"
- c) brand name if any;
- d) name and address of the manufacturer/packer/ distributor;
- e) nitrogen (N) content;
- f) net content by mass in metric units;
- g) country of origin;
- h) handling instructions including the words "Use No Hooks";
- i) production date
- j) expiry date;
- k) batch number; and
- l) storage conditions.

## 8 Storage, handling and transportation

The solid ammonium chloride fertilizer shall be stored, handled and transported in accordance with RS EAS 1166.

## 9 Sampling

Sampling and sample preparation of ammonium chloride fertilizer shall be done in accordance with RS ISO 14820-1 and RS ISO 14820-2, respectively.

## Bibliography

[1] Regulation (EU) 2019/1009 of 5<sup>th</sup> June 2019, *laying down rules on the making available on the market of EU fertilizing products and amending Regulations (EC) No. 1069/2009 and (EC) No. 1107/2009 and repealing Regulation (EC) No. 2003/2003*

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