International Standard

ISO 5313

Second edition
2026-01

High nitrogen content, straight ammonium nitrate fertilizers — Determination of oil retention

Engrais simples à base de nitrate d'ammonium et à forte teneur en azote — Détermination de la rétention d'huile

Reference number
ISO 5313:2026(en)

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Published in Switzerland

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Foreword

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This document was prepared by Technical Committee ISO/TC 134, *Fertilizers, soil conditioners and beneficial substances*.

This second edition cancels and replaces the first edition (ISO 5313:1986), of which it constitutes a minor revision. The changes are as follows:

— the normative reference to the withdrawn ISO 8358 was updated to ISO 14820-2;

— editorial changes to align this document to the current ISO/IEC Directives Part 2.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The porosity of a high nitrogen content, straight ammonium nitrate fertilizer can be measured by means of the determination of the gas oil retention, called by convention oil retention.

The method specified in this document is an empirical method, requiring the minimum of apparatus, and gives results with an acceptable level of reproducibility.

High nitrogen content, straight ammonium nitrate fertilizers — Determination of oil retention

1 Scope

This document specifies a method for the determination of the gas oil retention of solid, high nitrogen content, straight ammonium nitrate fertilizers.

The method is applicable to fertilizers which do not contain materials soluble in gas oil and which are prilled or granular.

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.

ISO 3310-1, *Test sieves — Technical requirements and testing — Part 1 : Test sieves of metal wire cloth*

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

3 Terms and definition

For the purposes of this document, the following terms and definitions apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
oil retention
quantity of gas oil retained by the fertilizer determined under the conditions specified

Note 1 to entry: It is expressed as a percentage by mass.

4 Principle

A test portion is totally immersed in gas oil for a specified period, followed by draining away and removal of surplus gas oil under specified conditions. The increase in mass of the test portion is measured.

5 Reagent

5.1 Gas oil.

Viscosity: (1,3 to 5,0) mPa·s (1,6 to 6,0 cSt) at 40 °C.

Density: (0,82 to 0,86) g/ml at 15 °C.

Sulfur content: < 1,0 % (mass fraction).