



**International
Standard**

ISO 5311

**Fertilizers — Determination of bulk
density (tapped)**

Engrais — Détermination de la masse volumique après tassement

**Fourth edition
2026-02**

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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Preparation of test sample	1
5 Method 1 — Machine-tapping method	2
5.1 Principle.....	2
5.2 Apparatus.....	2
5.3 Procedure.....	2
6 Method 2 — Hand-tapping method	2
6.1 Principle.....	2
6.2 Apparatus.....	2
6.3 Procedure.....	3
7 Expression of results	3
7.1 Method of calculation and formula.....	3
7.2 Repeatability.....	3
8 Test report	3

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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 fourth edition cancels and replaces the third edition (ISO 5311:1992), of which it constitutes a minor revision. The changes are as follows:

- the normative reference to ISO 8358 in [Clause 4](#) was changed to ISO 14820-2.

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Introduction

The bulk densities (loose and tapped) of a fertilizer provide information relative to the required size of packaging materials, store-houses, stock-rooms, etc. Generally, the bulk density (tapped) is up to 10 % greater than the bulk density (loose), and sometimes it can exceed this value. Both bulk densities depend on the actual density, surface form and particle size of the fertilizers.

The bulk density (loose) can be used to calculate the maximum volume of a given mass of fertilizer which can be expected in practice. The actual volume occupied by a given mass of fertilizer will normally be within the range calculated from the bulk density (loose) and the bulk density (tapped).

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