



SLOVENSKI STANDARD
SIST EN 15238:2007

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Soil improvers and growing media - Determination of quantity for materials with particle size greater than 60 mm

Soil improvers and growing media - Determination of quantity for materials with particle size greater than 60 mm

Bodenverbesserungsmittel und Kultursubstrate - Bestimmung der Menge für Materialien mit einer Partikelgröße über 60 mm

Amendements du sol et supports de culture - Détermination de la quantité pour les matériaux de granulométrie supérieure à 60 mm

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Ta slovenski standard je istoveten z: EN 15238:2006

ICS:

65.080 Gnojila Fertilizers

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ICS 65.080

English Version

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This European Standard was approved by CEN on 21 October 2006.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document (EN 15238:2006) has been prepared by Technical Committee CEN/TC 223 “Soil improvers and growing media”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Introduction

Soil improvers and growing media are generally traded by volume as the weight of the product can be greatly affected by the moisture content. It is important for both consumers and traders to know the volume of product being traded. Furthermore, for the cultivation of plants, it is the volume of the product, and not the weight, that is generally important. The volume is calculated from knowing the weight and density of the product, the latter being determined from weighing a known reference volume of product. As some soil improvers and growing media are compressible it is important that this aspect be addressed in the method of determining the density. A suitably competent person should undertake this testing.

For those materials traded by reference to its mass, this document recognises the effects the moisture content can have on the quantity declared. Therefore, for such transactions, any weight is accompanied by the moisture content so that the solid matter content can be calculated.

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1 Scope

This standard specifies a method for the determination of quantity of soil improvers, excluding liming materials and growing media in bulk and in packages. This is a reference method, which is designed with an appropriate precision level aimed at enabling validation of any quantity declaration made.

This document applies to material that is in solid form, but not in block form to be sold by dimension, and which exceeds the particle size restriction in EN 12580 [1] and where the declared nominal particle size is greater than 60 mm. This method is applicable for products where a mass fraction of less than 10% of material is retained on the 100 mm fall controller.

NOTE 1 The requirements of this standard may differ from the national legal requirements for the declaration of quantity for the products concerned.

NOTE 2 Where there is no legal requirement to use this method, for example in quantity control of packaged product, then it is permissible for any other methods to be used so long as these other methods can be demonstrated to be comparable with this standard method in giving the same quantity with the same precision.

2 Normative references

The following referenced documents are indispensable for the application 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.

EN 12579:1999, *Soil improvers and growing media – Sampling*

EN 13040, *Soil improvers and growing media – Sample preparation for chemical and physical tests, determination of dry matter content, moisture content and laboratory compacted bulk density*

EN 45501, *Metrological aspects of non-automatic weighing instruments*

3 Terms and definitions

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

3.1

batch

quantity of goods manufactured by the same process under the same conditions and labelled in the same manner and assumed to have the same characteristics

3.2

bulk material

material that is not packaged

3.3

container

any container, including lorry, boat, and package

3.4

density

density of the material as received or reconstituted for use in accordance with the manufacturer's instructions, determined by the method specified in this standard

- 3.5 package**
container in which the goods are delivered and which remains with them after delivery
- 3.6 strike**
transparent sheet of flat material, normally glass, which is easily large enough to cover the top of the measure.
- 3.7 volume**
out-turn volume determined by the method specified in this standard.

4 Symbols and abbreviated terms

For the purposes of this document, the following symbols and abbreviated terms apply:

- D density of material, as determined by the method specified in this standard;
- V the volume of material;
- m_x the mass of an item.

5 Principle

5.1 For each batch of material, whether for delivery in bulk or in packages, the quantity of material is determined and declared either by volume or by weight.

5.2 Where the quantity declared is by volume then the material is weighed and then sampled and its density determined. From this information the volume is calculated.

5.3 Where the quantity declared is by weight then the moisture content is also determined so that the dry matter weight can be determined and declared.

NOTE The structure of the material may change with time and handling and this may affect the volume of the material.

6 Apparatus

6.1 Measure, Rigid, 50 l \pm 1 l with a height to diameter ratio between 0,95:1 and 1:1, calibrated in accordance with Clause 7. The volume, V_1 shall be determined to the nearest 20 ml at 20 °C, with an uncertainty of measurement ($k=2$) of no more than 100 ml.

NOTE 1 Information about the measurement and expression of uncertainty is given in the OIML Guide (G1) to the expression of uncertainty in measurement, (sometimes referred to as GUM).

NOTE 2 A 400 mm internal diameter pipe of height 398 mm with an end cap may be suitable.

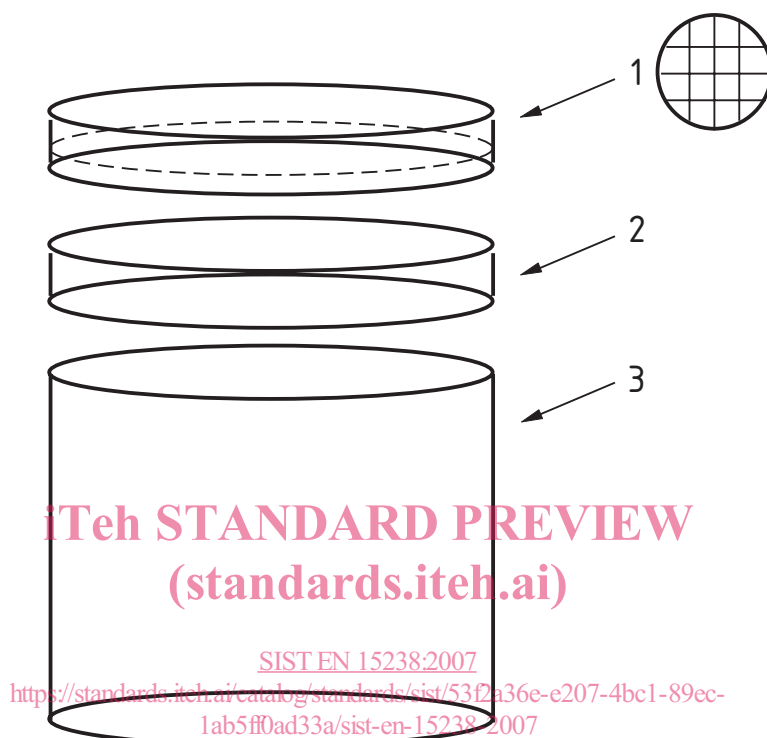
NOTE 3 For easy and safe handling of the filled measure, lifting and emptying handles are advisable. For health and safety reasons, the filled measure may require two persons to lift it.

6.2 Collar, Rigid, of the same diameter as the measure (6.1) and with a height of 75 mm \pm 5 mm. Equipped with locating lugs to enable it to sit on the measure correctly.

6.3 Fall Controller, A fall controller of $100\text{ mm} \pm 5\text{ mm}$ mesh size, held no more than 50 mm above the collar, equipped with locating lugs to enable it to sit on the collar correctly.

NOTE Wires crossing each other perpendicularly form the mesh with 100 mm square holes.

Figure 1 shows a diagram of the apparatus as described in 6.1 to 6.3.



Key

- | | |
|---|--|
| 1 | Fall controller of square mesh with $100\text{ mm} \pm 5\text{ mm}$ openings held not more than 50 mm above filling collar |
| 2 | Filling collar of same internal diameter as cylinder, height $75\text{ mm} \pm 5\text{ mm}$ |
| 3 | Measuring cylinder, rigid (50 ± 1) l, e.g. 400 mm internal diameter, height 398 mm |

NOTE 1 For convenience and ease of use it is advisable to have 3 handles on the cylinder (2 for lifting and the third for tilting) and 2 on the filling collar and fall controller.

NOTE 2 The fall controller and filling collar should each have 4 locating lugs.

NOTE 3 The measuring cylinder should have 3 short legs so that it sits level.

Figure 1 — Measuring cylinder, collar and fall controller

6.4 Weighing Instrument, used to determine the density of the material by this method conforming to EN 45501 and with a scale division no larger than 0,01kg.

NOTE National legislation is likely to require that the equipment be verified before use, and so it will be marked with the 'CE' mark and a green 'M' to show it is legal to use for trade purposes, as required by Directive 90/384/EEC.