LUBIMATERJALID. OSAKESTE SUURUSE JAOTUMISE MÄÄRAMINE MÄRG- JA KUIVSÕELUMISEGA

Liming materials - Determination of size distribution by dry and wet sieving

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12948:2010 sisaldab Euroopa standardi EN 12948:2010 ingliskeelset teksti.	This Estonian standard EVS-EN 12948:2010 consists of the English text of the European standard EN 12948:2010.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 10.11.2010.	Date of Availability of the European standard is 10.11.2010.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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English Version

Liming materials - Determination of size distribution by dry and wet sieving

Amendements minéraux basiques - Détermination de la distribution granulométrique par tamisage par voie sèche ou par voie humide

Calcium-/Magnesium-Bodenverbesserungsmittel - Bestimmung der Korngrößenverteilung durch Trocken- und Nasssiebung

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 12948:2010) has been prepared by Technical Committee CEN/TC 260 “Fertilizers and liming materials”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by May 2011, and conflicting national standards shall be withdrawn at the latest by May 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12948:2002.

The following has been added to the former edition of the European Standard:

a) the sampling method is not part of the standard. Informative reference to EN 1482-1 added;

b) normative reference to EN 1482-2 concerning sample preparation added;

c) clarification of the method of dispersion of agglomerates in method B added;

d) Bibliography revised.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, 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.

Introduction

The dry sieving of powdered material containing individual particles can be carried out quite easily. This method is simple, quick, cheap and enables the determination of the particle size of water-soluble materials. Therefore the dry sieving method should always be used first. However, the sieve apertures can become blocked by sample particles, a phenomenon known as blinding. Blinding is mainly caused by caking and the production of electrostatic charges, particularly on sieves with small apertures. Dry sieving of very wet material can also lead to blinding. These difficulties are not encountered with the wet sieving method, which is applicable to any kind of material such as powders (dry or wet), paste-like products or granules except those containing water-soluble constituents.

In order to ensure the comparability of results, all masses of size fractions are expressed as dry matter.

The approach to methods and principles of sieving refers to existing guidelines and European Regulations ([1] and [2]).

1 Scope

This European Standard specifies two methods for the determination of the particle size distribution of liming materials.

The dry sieving method (method A) is applicable to all liming materials except wet and paste-like products.

Method A is not applicable, if blinding, caking, electrostatic charges or agglomeration occur after pre drying.

The wet sieving method (method B) is applicable to products which are susceptible to blinding, caking, electrostatic charges or agglomeration after pre drying.

Method B can be used to determine the primary particle size distribution of granulated products.

Method B is not applicable to burnt lime and liming materials containing water-soluble constituents.

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 1235:1995, *Solid fertilizers — Test sieving (ISO 8397:1988 modified)*

EN 1482-2, *Fertilizers and liming materials — Sampling and sample preparation — Part 2: Sample preparation*

EN 12048, *Solid fertilizers and liming materials — Determination of moisture content — Gravimetric method by drying at (105 ± 2) °C (ISO 8190:1992 modified)*

ISO 565, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

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

3 Principle

3.1 Method A

Dry sieving of a liming material with one or more test sieves by hand or using a mechanical sieving machine.

3.2 Method B

Wet sieving of a liming material, if necessary after dispersion under continuous water spraying, by hand or using a mechanical sieving machine. Drying of the different fractions retained on the sieves.

4 Apparatus

Usual laboratory apparatus and in particular 4.1 to 4.6.

4.1 Balance, capable of weighing to the nearest 0,01 g.