Pre-shaped growing media - Determination of length, TEST YS width, height, volume and bulk density



FESTI STANDARDI FESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15761:2010 sisaldab Euroopa standardi EN 15761:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.01.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 02.12.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 15761:2010 consists of the English text of the European standard EN 15761:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.01.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 02.12.2009.

The standard is available from Estonian standardisation organisation.

ICS 65.080

Standardite reprodutseerimis- ja levitamisõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega: Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute Estonian Standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation: Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: +372 605 5050; E-mail: info@evs.ee

EUROPEAN STANDARD

EN 15761

NORME EUROPÉENNE EUROPÄISCHE NORM

December 2009

ICS 65.080

English Version

Pre-shaped growing media - Determination of length, width, height, volume and bulk density

Supports de culture préformés - Détermination de la longueur, de la largeur, de la hauteur, du volume et de la masse volumique apparente

Vorgeformte Kultursubstrate - Bestimmung von Länge, Breite, Dicke, Volumen und Schüttdichte

This European Standard was approved by CEN on 1 November 2009.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, 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.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

•••••		ugc
Forewo	ord	3
ntrodu	ıction	4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Principle	6
5	Apparatus	6
6	Procedure	6
6.1 6.2	Accuracy	6
o.∠ 6.3	Number of measurements Test procedure	7
6.3.1	General	7
6.3.2 6.4	Test specimens with holes or grooves Determining the weight	7 7
7. 	Calculations and expression of results	
7.1	Length, width and height	<i>†</i> 7
7.2	Volume	
7.2.1 7.2.2	Accuracy Test specimens with no recesses	/ 7
7.2.3	Test specimens with recesses	7
7.3	Bulk density	
8	Precision	
9	Test report	
Annex	A (informative) Results of an inter-laboratory trial	10
A.1 A.2	Trials	_
	results	

Page

Foreword

This document (EN 15761:2009) 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 2010, and conflicting national standards shall be withdrawn at the latest by June 2010.

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.

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, 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, JS, gdom. Sweden, Switzerland and the United Kingdom.

Introduction

This European Standard has been produced so that there is a standard method to measure and weigh preshaped growing media and to calculate the volume and bulk density.

The volume of growing media is a useful attribute for growers and is critical for ensuring plants have sufficient growing media for their root system.

The bulk density is crucial as the reporting of all chemical analyses is expressed in units of weight per volume, and the volume is determined from the weight of the sample used for the chemical analyses.

Pre-shaped growing media is generally at present made from Stonewool or Rockwool or mineral wool. They are known by various names, typically:

- "plugs" are small blocks used for seedlings, which are generally cylindrical in shape and with a diameter from 20 mm; once the seed has germinated the seedling in the plug may then be placed into "blocks";
- "blocks" may have holes to take plugs and can vary in size from 40 mm × 40 mm × 40 mm up to 100 mm × 200 mm × 65 mm; they are generally used for propagation purposes;
- "slabs" are used for growing vegetables and range in size from $370 \text{ mm} \times 240 \text{ mm} \times 100 \text{ mm}$ to $2\,000 \text{ mm} \times 200 \text{ mm} \times 75 \text{ mm}$.

It is anticipated that this standard will be developed to encompass other new pre-shaped growing media in due course, e.g. coir blocks.

1 Scope

This European Standard describes a method of determination of length, width, height, volume and bulk density of rectangular pre-shaped growing media.

In this standard "pre-shaped growing media":

- includes solid, regular shaped, stable growing media sold, which are ready for use as a growing media, where the dimensions and corners are stable, and the surfaces and edges are perpendicular to each other – including mineral wool and polyurethane products;
- does not include solid growing media that has to be hydrated for it to form, varies in dimension with varying water content – for example coir or peat slabs or growing bags.

The minimum linear dimension (length, width or height) for blocks to which this standard applies is 40 mm, and the maximum dimension is 2 000 mm.

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.

CR 13456:1999, Soil improvers and growing media — Labelling, specifications and product schedules

3 Terms and definitions

For the purposes of this document, the terms and definitions given in CR 13456:1999 and the following apply.

3.1

length

1

longer linear dimension of the major surface of the test specimen

3.2

width

w

shorter linear dimension of the major surface of the test specimen measured at right angles to the length

3.3

height

h

linear dimension measured perpendicularly to the length and the width planes

3.4

depth

d

linear dimension measuring how deep recess intrude into the media

3.5

bulk density

indication of how much 1 I of the product weighs, with the volume being determined in a standardized way

NOTE The bulk density is expressed in grams per litre (g/L) or in kilograms per cubic metre (kg/m³).