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Poorplastid ja -kummid. Näivtiheduse (mahutiheduse) määramine

Cellular plastics and rubbers - Determination of
apparent (bulk) density

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 845:2000 sisaldab Euroopa standardi EN ISO 845:1995 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 845:2000 consists of the English text of the European standard EN ISO 845:1995.</p> <p>This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: Käesolev rahvusvaheline standard määrab kindlaks meetodi kogu materjali näivtiheduse ja karkassmaterjali näivtiheduse määramiseks jäikadel poorplastidel ning mahutiheduse määramiseks pooljäikadel ja elastsetel poorplastidel ja kummidel. Kui testitava materjalil on vormimise käigus tekkinud koorik, võib kogu materjali näivtihedust või karkassmaterjali näivtihedust või mõlemaid määrata. Kui materjalil ei ole vormimise käigus koorikut moodustunud ...</p>	<p>Scope:</p>
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ICS 83.100

Võtmesõnad: jäigad plastid, kummid, mahutihedus, määramine, plastid, poorplastid, testimine

ICS 83.100

Descriptors: Cellular plastics, rubber, plastics, bulk density, testing.

English version

Cellular plastics and rubbers
Determination of apparent (bulk) density
(ISO 845:1988)

Caoutchoucs et plastiques alvéolaires;
détermination de la masse volumique
apparente (ISO 845:1988)

Schaumstoffe aus Kautschuk und Kunst-
stoffen; Bestimmung der Rohdichte
(ISO 845:1988)

This European Standard was approved by CEN on 1995-05-11 and is identical to the ISO Standard as referred to.

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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 845:1988 Cellular plastics and rubbers; determination of apparent (bulk) density

which was prepared by ISO/TC 61 'Plastics' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 249 'Plastics' as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by November 1995 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom.

Endorsement notice

The text of the International Standard ISO 845:1988 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

This European Standard should not be used for cellular plastics and rubber materials for use as thermal insulation in building applications. Determination of apparent density of these products is covered by prEN 1602 'Thermal insulating products for building applications; determination of apparent density'.

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1 Scope

This International Standard specifies a method for determining the apparent overall density and the apparent core density of rigid cellular plastics, and the bulk density of semi-rigid and flexible cellular plastics and rubbers.

If the material to be tested includes skins formed during moulding, the apparent overall density or the apparent core density, or both, may be determined. If the material does not have skins formed during moulding, the term overall density is not applicable.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 291 : 1977, *Plastics — Standard atmospheres for conditioning and testing*.

ISO 1382 : 1982, *Rubber — Vocabulary*.

ISO 1923 : 1981, *Cellular plastics and rubbers — Determination of linear dimensions*.

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 apparent overall density (of a cellular material): The mass per unit volume of a sample, including all skins formed during moulding.

3.2 apparent core density (of a cellular material): The mass per unit volume of a sample after all skins formed during moulding have been removed.

3.3 bulk density¹⁾ (of a cellular material): The mass per unit volume of a material measured under specified conditions and including both permeable and impermeable voids present in the material.

4 Apparatus

Ordinary laboratory apparatus and

4.1 Balance, capable of determining the mass of a test piece to an accuracy of 0,5 %.

4.2 Measuring instruments, in accordance with ISO 1923.

5 Test pieces

5.1 Dimensions

Each test piece shall be of a shape such that its volume can be easily calculated. It shall be cut without deforming the original cell structure of the material.

The size of a test piece should preferably be as large as possible, commensurate with the apparatus available and with the shape of the original material. For rigid materials, the total surface area of a test piece shall be at least 100 cm². For semi-rigid and flexible materials, the volume of a test piece shall be at least 100 cm³.

For rigid materials, when the apparent overall density is being determined using test pieces cut from a larger sample, the ratio of the area of skin formed during moulding to total volume shall be the same for the test pieces as for the sample.

5.2 Number of test pieces

A minimum of three test pieces shall be tested for flexible materials and a minimum of five shall be tested for rigid materials.

The sample may be a manufactured object whose mass and volume can be measured accurately. Its total mass and total volume may be used to determine the sample density (see 8.3).

1) See ISO 1382.