SLOVENSKI STANDARD
SIST EN ISO 1183-3:2000

01-maj-2000

Polimerni materiali - Metode za določanje gostote nepenjenih polimernih materialov - 3. del: Metoda s plinskim piknometrom (ISO 1183-3:1999)

Plastics - Methods for determining the density of non-cellular plastics - Part 3: Gas pyknometer method (ISO 1183-3:1999)

Kunststoffe - Bestimmung der Dichte von nicht verschäumten Kunststoffen - Teil 3: Gas Pyknometer Verfahren (ISO 1183-3:1999)

Plastiques - Méthodes pour déterminer la masse volumique des plastiques non alvéolaires - Partie 3: Méthode du pycnometre a gaz (ISO 1183-3:1999)

Ta slovenski standard je istoveten z: **EN ISO 1183-3:1999**

ICS:

83.080.01	Polimerni materiali na splošno	Plastics in general

SIST EN ISO 1183-3:2000 **en**

EUROPEAN STANDARD

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EUROPÄISCHE NORM

EN ISO 1183-3

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ICS

English version

Plastics - Methods for determining the density of non-cellular plastics - Part 3: Gas pyknometer method (ISO 1183-3:1999)

Plastiques - Méthodes pour déterminer la masse volumique des plastiques non alvéolaires - Partie 3: Méthode du pycnomètre à gaz (ISO 1183-3:1999)

Kunststoffe - Bestimmung der Dichte von nicht verschäumten Kunststoffen - Teil 3: Gas Pyknometer Verfahren (ISO 1183-3:1999)

This European Standard was approved by CEN on 22 August 1999.

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

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

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

Ref. No. EN ISO 1183-3:1999 E

Foreword

The text of the International Standard ISO 14126:1999 has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

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 March 2000, and conflicting national standards shall be withdrawn at the latest by March 2000.

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

Endorsement notice

The text of the International Standard ISO 1183-3:1999 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

INTERNATIONAL STANDARD

ISO 1183-3

First edition
1999-09-15

Plastics — Methods for determining the density of non-cellular plastics —

Part 3:
Gas pyknometer method

Plastiques — Méthodes pour déterminer la masse volumique des plastiques non alvéolaires —

Partie 3: Méthode utilisant un pycnomètre à gaz

Reference number
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Contents

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 1183-3 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 5, *Physical-chemical properties.* Together with the other parts (see below), it cancels and replaces ISO 1183:1987, which has been technically revised.

ISO 1183 consists of the following parts under the general title, *Plastics — Methods for determining the density of non-cellular plastics:*

— *Part 1: Immersion method, pyknometer method and titration method*

— *Part 2: Density gradient column method*

— *Part 3: Gas pyknometer method*

Annex A of this part of ISO 1183 is for information only.

Introduction

This part of ISO 1183 is one of a series dealing with methods of measuring the density of solid non-cellular plastics. The values obtained using this part of ISO 1183 are expected to be comparable to those obtained using the other parts.

Density measurements may be used to investigate variations in the physical structure or the molecular order of materials. Such measurements are widely used to determine the degree of crystallinity of polymers. In addition, they may be used to determine the amount of filler present.

The density of a plastic material may depend on any conditioning or thermal treatment which the material has undergone.

The physical structure of a polymer can change with time and temperature. Its volume is also a temperature-dependent property. This means that the density may vary with time and/or temperature.

Plastics — Methods for determining the density of non-cellular plastics —

Part 3:
Gas pyknometer method

WARNING — The use of this part of ISO 1183 may involve hazardous materials, operations or equipment. This part of ISO 1183 does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this part of ISO 1183 to establish appropriate health and safety practices and to determine the applicability of any regulatory limitations prior to use.

1 Scope

This part of ISO 1183 specifies a method for the determination of the density or the specific volume of solid non-cellular plastics of any shape which do not contain closed pores.

2 Terms, definitions, symbols, units and abbreviated terms

For the purposes of this part of ISO 1183, the following terms, definitions, symbols, units and abbreviated terms apply:

2.1
test material
material to be tested

2.2
test specimen
that part of the test material actually subjected to the test

2.3
mass
m
quantity of matter contained in a body

NOTE Mass is expressed in kilograms (kg) or grams (g).

2.4
weight
W
force produced by gravity acting on a mass

NOTE 1 Since gravity varies with location, so does weight.

NOTE 2 Weight is expressed in newtons (N).