
Dc`ja Yfb]a UYf]U]!'A YrcXY'nUXc`c Ub`Y[cglcHY`bYdYb`Yb] `dc`ja Yfb]
a UYf]Ucj `!&"XY.`?c`cbg_Ua YrcXUbuUcgbcj][fUX]YbhU[cglcHY`fGC`%` ' !
&\$\$(\$

Plastics - Methods for determining the density of non-cellular plastics - Part 2: Density gradient column method (ISO 1183-2:2004)

Kunststoffe - Verfahren zur Bestimmung der Dichte von nicht verschäumten Kunststoffen - Teil 2: Verfahren mit Dichtegradientensäule (ISO 1183-2:2004)

Plastiques - Méthodes de détermination de la masse volumique des plastiques non alvéolaires - Partie 2: Méthode de la colonne à gradient de masse volumique (ISO 1183-2:2004)

Ta slovenski standard je istoveten z: EN ISO 1183-2:2004

ICS:

83.080.01	Polimerni materiali na splošno	Plastics in general
-----------	--------------------------------	---------------------

SIST EN ISO 1183-2:2004**en,fr,de**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 1183-2:2004](#)

<https://standards.iteh.ai/catalog/standards/sist/86ec81f4-2194-4fb9-a119-6848dd828a37/sist-en-iso-1183-2-2004>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 1183-2

July 2004

ICS 83.080.01

English version

**Plastics - Methods for determining the density of non-cellular
plastics - Part 2: Density gradient column method (ISO 1183-
2:2004)**

Plastiques - Méthodes de détermination de la masse
volumique des plastiques non alvéolaires - Partie 2:
Méthode de la colonne à gradient de masse volumique
(ISO 1183-2:2004)

Kunststoffe - Verfahren zur Bestimmung der Dichte von
nicht verschäumten Kunststoffen - Teil 2: Verfahren mit
Dichtegradientensäule (ISO 1183-2:2004)

This European Standard was approved by CEN on 22 June 2004.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN ISO 1183-2:2004 (E)**Foreword**

This document (EN ISO 1183-2:2004) 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 January 2005, and conflicting national standards shall be withdrawn at the latest by January 2005.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 1183-2:2004 has been approved by CEN as EN ISO 1183-2 2004 without any modifications.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 1183-2:2004](https://standards.iteh.ai/catalog/standards/sist/86ec81f4-2194-4fb9-a119-6848dd828a37/sist-en-iso-1183-2-2004)

<https://standards.iteh.ai/catalog/standards/sist/86ec81f4-2194-4fb9-a119-6848dd828a37/sist-en-iso-1183-2-2004>

INTERNATIONAL STANDARD

ISO
1183-2

First edition
2004-07-15

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

Part 2: Density gradient column method

*Plastiques — Méthodes de détermination de la masse volumique des
plastiques non alvéolaires —*
Partie 2: Méthode de la colonne à gradient de masse volumique

[SIST EN ISO 1183-2:2004](https://standards.iteh.ai/catalog/standards/sist/86ec81f4-2194-4fb9-a119-6848dd828a37/sist-en-iso-1183-2-2004)

<https://standards.iteh.ai/catalog/standards/sist/86ec81f4-2194-4fb9-a119-6848dd828a37/sist-en-iso-1183-2-2004>



Reference number
ISO 1183-2:2004(E)

© ISO 2004

ISO 1183-2:2004(E)**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 1183-2:2004](https://standards.iteh.ai/catalog/standards/sist/86ec81f4-2194-4fb9-a119-6848dd828a37/sist-en-iso-1183-2-2004)

<https://standards.iteh.ai/catalog/standards/sist/86ec81f4-2194-4fb9-a119-6848dd828a37/sist-en-iso-1183-2-2004>

© ISO 2004

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword.....	iv
1 Scope.....	1
2 Normative references	1
3 Terms and definitions	1
4 Conditioning	2
5 Method.....	2
6 Test report.....	4
Annex A (informative) Liquid systems suitable for density determinations	6
Annex B (informative) Preparation of density gradient column	7

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 1183-2:2004](https://standards.iteh.ai/catalog/standards/sist/86ec81f4-2194-4fb9-a119-6848dd828a37/sist-en-iso-1183-2-2004)

<https://standards.iteh.ai/catalog/standards/sist/86ec81f4-2194-4fb9-a119-6848dd828a37/sist-en-iso-1183-2-2004>

ISO 1183-2:2004(E)

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 2.

The main task of technical committees is to prepare International Standards. 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.

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

ISO 1183-2 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 5, *Physical-chemical properties*.

Together with the other parts (see below), this part of ISO 1183 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, liquid pycnometer method and titration method*
- *Part 2: Density gradient column method*
- *Part 3: Gas pycnometer method*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/sist/86ec81f4-2194-4fb9-a119-6848d1828a37/sist-en-iso-1183-2-2004>

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

Part 2: Density gradient column 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 gradient column method for the determination of the density of non-cellular moulded or extruded plastics in void-free form. Density gradient columns are columns containing a mixture of two liquids, the density in the column increasing uniformly from top to bottom.

NOTE This part of ISO 1183 is applicable to pellets as long as they are void-free. Density is frequently used to follow variations in physical structure or composition of plastic materials. Density may also be useful in assessing the uniformity of samples or specimens. Often the density of plastic materials will depend upon the choice of specimen preparation method. When this is the case, precise details of the specimen preparation method will have to be included in the appropriate material specification.

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.

ISO 31-3, *Quantities and units — Part 3: Mechanics*

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

ISO 1183-1:2004, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pycnometer method and titration method*

3 Terms and definitions

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

3.1

density

ρ

ratio of the mass m of a sample to its volume V (at the temperature t) expressed in kg/m³, kg/dm³ (g/cm³), or kg/l (g/ml)

NOTE The following terms, based upon ISO 31-3, are given here for clarification.