

BS ISO 2031:2015



BSI Standards Publication

Granulated cork — Determination of apparent bulk density

bsi.

...making excellence a habit.™

National foreword

This British Standard is the UK implementation of ISO 2031:2015.

The UK participation in its preparation was entrusted to Technical Committee PRI/81, Cork.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2015.
Published by BSI Standards Limited 2015

ISBN 978 0 580 90102 7

ICS 79.100

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 September 2015.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

INTERNATIONAL
STANDARD

BS ISO 2031:2015

ISO
2031

Third edition
2015-10-01

**Granulated cork — Determination of
apparent bulk density**

Granulés de liège — Détermination de la masse volumique apparente



Reference number
ISO 2031:2015(E)

© ISO 2015



COPYRIGHT PROTECTED DOCUMENT

© ISO 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Apparatus	1
4 Sampling	2
5 Procedure	2
5.1 Preparation of the sample	2
5.2 Test portion	2
5.3 Determination	2
6 Expression of results	3
7 Test report	3

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 87, *Cork*.

This third edition cancels and replaces the second edition (ISO 2031:1991) of which it constitutes a minor revision. Minor editorial changes have been made in this edition.

Granulated cork — Determination of apparent bulk density

1 Scope

This International Standard specifies a method of determining the apparent bulk density of granulated cork, as defined in ISO 633.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 633, *Cork — Vocabulary*

ISO 2067, *Granulated cork — Sampling*

3 Apparatus

3.1 Balance, accurate to 0,5 g.

3.2 Oven, capable of maintaining a temperature of (20 ± 2) °C and a relative humidity of (65 ± 5) %.

3.3 Cubic container with a known accurate mass, capacity 2 dm³ (side 126 mm) to be used with granulates having a grain size larger than 4 mm (see [Figure 1](#)).

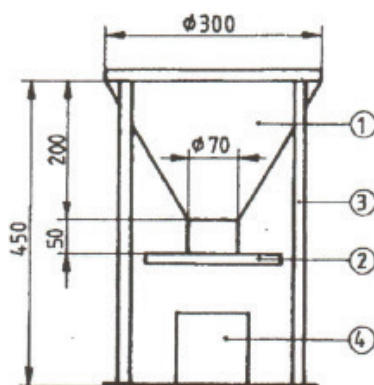
3.4 Cubic container with a known accurate mass, capacity 1 dm³ (side 100 mm) to be used with granulates having a grain size equal to or lower than 4 mm (see [Figure 1](#)).

3.5 Wooden ruler.

3.6 Hopper stand, for the hopper with a height such that the upper rim of the hopper is 450 mm away from the supporting surface (see [Figure 1](#)).

3.7 Conical hopper, of stainless steel, with:

- upper and lower diameters of 300 mm and 70 mm respectively, at a distance of 200 mm from each other;
- the top of the hopper is open and the bottom ends in a cylindrical tube 50 mm high with a removable bottom, which allows a quick and complete opening of the cylindrical tube, in such a way that the granulated cork falls down into the container, always at the same speed and flow type (see [Figure 1](#)).



Key

- 1 conical hopper
- 2 removable bottom
- 3 stand for the hopper
- 4 cubic container

Figure 1 — Apparatus

4 Sampling

Follow the instructions given in ISO 2067.

5 Procedure

5.1 Preparation of the sample

Condition the sample at a temperature of (20 ± 2) °C and a relative humidity of (65 ± 5) %, keeping it in the oven (3.2) for 24 h.

For process control, record the environmental conditions under which the determinations are carried out. The ambient temperature shall not exceed 30 °C.

5.2 Test portion

Immediately after conditioning the sample, take at random a test portion large enough (see ISO 2067) to fill the cubic container (3.3 or 3.4 depending on the granularity) three times, allowing for overfill.

5.3 Determination

Hang the hopper (3.7) on the stand (3.6). Place the cubic container (3.3 or 3.4) under the base of the hopper and on the supporting surface of the stand.

Close the hopper bottom and pour the test portion to fill the hopper.

Do not move or shake the container up to the determination of its weight. Do not compress the granules. Open fully the bottom of the hopper (3.7) and allow enough granulated cork to fall until you completely fill the container. Use the ruler (3.5) to level the top.

Weigh it on the balance (3.1) taking into account the mass of the cubic container.

Perform three tests, each time with the same portion.

6 Expression of results

The apparent bulk density, expressed in kilogrammes per cubic metre, is equal to

$$\frac{m}{2} \text{ for grain sizes larger than 4 mm (see ISO 2067), or}$$
$$m \text{ for grain sizes equal to or lower than 4 mm}$$

where m is the mass, in grams, rounded to the nearest whole number, of the granulated cork taken from the container (3.3 or 3.4), in each determination.

Take as the result the arithmetic mean value of the three determinations.

Round the result to the nearest integer.

7 Test report

The test report shall include the following information:

- a) the complete identification of the sample;
- b) the test results;
- c) details of procedures not specified in this International Standard or considered as optional;
- d) any incidents that may have affected the results.

British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at bsigroup.com/standards or contacting our Customer Services team or Knowledge Centre.

Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at bsigroup.com/shop, where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to bsigroup.com/subscriptions.

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

PLUS is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit bsigroup.com/shop.

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email bsmusales@bsigroup.com.

BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

Copyright

All the data, software and documentation set out in all British Standards and other BSI publications are the property of and copyrighted by BSI, or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI. Details and advice can be obtained from the Copyright & Licensing Department.

Useful Contacts:

Customer Services

Tel: +44 845 086 9001

Email (orders): orders@bsigroup.com

Email (enquiries): cservices@bsigroup.com

Subscriptions

Tel: +44 845 086 9001

Email: subscriptions@bsigroup.com

Knowledge Centre

Tel: +44 20 8996 7004

Email: knowledgecentre@bsigroup.com

Copyright & Licensing

Tel: +44 20 8996 7070

Email: copyright@bsigroup.com



...making excellence a habit.™