

# INTERNATIONAL STANDARD

**ISO**  
**2031**

Second edition  
1991-05-01

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

*Granulés crus de liège — Détermination de la masse volumique*

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Reference number  
ISO 2031:1991(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.

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 2031 was prepared by Technical Committee ISO/TC 87, *Cork*.

This second edition cancels and replaces the first edition (ISO 2031:1972), which has been technically revised.

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Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

## Granulated cork — Determination of bulk density

### 1 Scope

This International Standard specifies a method of determining the bulk density of granulated cork, as defined in ISO 633.<sup>1)</sup>

### 2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was 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 edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2067:1988, *Granulated cork — Sampling*.

### 3 Apparatus

**3.1 Balance**, accurate to 0.5 g.

**3.2 Oven**, capable of maintaining a temperature of  $20\text{ °C} \pm 2\text{ °C}$  and a relative humidity of  $(65 \pm 5)\%$ .

**3.3 Cubic container with a known accurate mass**, capacity  $2\text{ dm}^3$  (side 126 mm). (No. 4 in figure 1.)

**3.4 Cubic container with a known accurate mass**, capacity  $1\text{ dm}^3$ . (No. 4 in figure 1.)

**3.5 Wooden ruler**.

**3.6 Stand**, for the hopper with a height such that the upper rim of the hopper is 450 mm away from the supporting surface. (No. 3 in figure 1.)

**3.7 Conical hopper**, made of a sheet of stainless steel (No. 1 in figure 1), 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; the base ends in a cylindrical tube 50 mm high and has 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 with the same speed and flow type. (No. 2 in figure 1.)

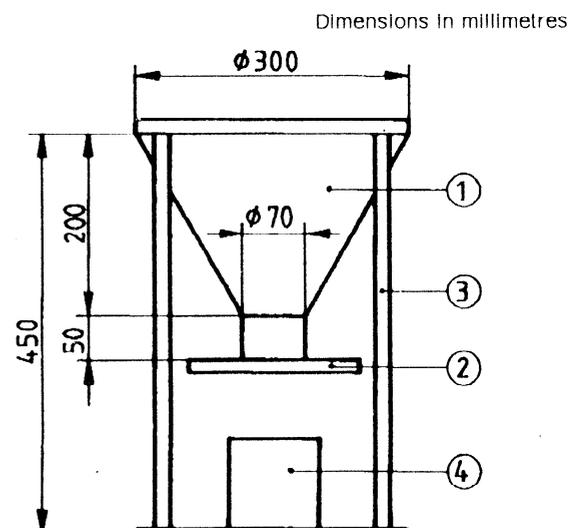


Figure 1 — Apparatus

### 4 Sampling

Follow the instructions given in ISO 2067.

1) ISO 633:1986, *Cork — Vocabulary*.

## 5 Procedure

### 5.1 Preparation of sample

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

### 5.2 Test portion

Immediately after conditioning the sample, take at random a test portion large enough (see ISO 2067, 5.4) to fill three times, allowing for overflow, the cubic container (3.4).

NOTE 1 If large granules are being tested (see ISO 2067, 5.2) the cubic container (3.3) shall be used.

### 5.3 Determination

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

Close the base of the hopper and pour the test portion to fill the hopper.

Open fully the bottom of the hopper (3.7) and allow sufficient granulated cork to fall to 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.

Carry out three tests, each time with the same test portion.

## 6 Expression of results

Bulk density, expressed in kilograms per cubic metre, is equal to

$m/2$  for large granules (see ISO 2067, 5.3);

$m$  for the remaining granules;

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 of the three determinations.

Round the result to the nearest whole number.

## 7 Test report

The test report shall include the following particulars:

- 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.

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