BRITISH STANDARD

BS ISO
9727-1:2007

Cylindrical cork stoppers — Physical tests —

Part 1: Determination of dimensions

ICS 55.100; 79.100

National foreword

This British Standard was published by BSI. It is the UK implementation of ISO 9727-1:2007.

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.

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 29 June 2007

ISBN 978 0 580 52946 7

Amendments issued since publication

Amd. No.	Date	Comments

INTERNATIONAL STANDARD

ISO 9727-1

First edition
2007-05-15

Cylindrical cork stoppers — Physical tests —

Part 1: Determination of dimensions

Bouchons cylindriques en liège — Essais physiques —

Partie 1: Détermination des dimensions

Reference number
ISO 9727-1:2007(E)

Foreword

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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 9727-1 was prepared by Technical Committee ISO/TC 87, *Cork*.

This first edition of ISO 9727-1, together with the other parts of ISO 9727:2007, cancels and replaces ISO 9727:1991, which has been technically revised.

ISO 9727 consists of the following parts, under the general title *Cylindrical cork stoppers — Physical tests*:

— *Part 1: Determination of dimensions*

— *Part 2: Determination of mass and apparent density for agglomerated cork stoppers*

— *Part 3: Determination of humidity content*

— *Part 4: Determination of dimensional recovery after compression*

— *Part 5: Determination of extraction force*

— *Part 6: Determination of liquid tightness*

— *Part 7: Determination of dust content*

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Cylindrical cork stoppers — Physical tests —

Part 1:
Determination of dimensions

1 Scope

This part of ISO 9727 specifies a test method for determining the dimensions of cylindrical cork stoppers, namely diameter, length and, in some cases, ovalisation.

It is applicable to all types of cylindrical cork stoppers as defined in ISO 633, ready for use or semi-worked.

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 633, *Cork — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 633 and the following apply.

3.1
ovalisation
⟨natural cork stoppers⟩ difference between measurements of diameter carried out along the perpendicular and along the parallel to the cork growth layer

4 Apparatus

4.1 Vernier gauge, with a constant contact force and a maximum resolution of 0,05 mm, or any other device allowing the same precision to be reached.

5 Test conditions

5.1 Environment

The test shall be carried out in an environment with the following characteristics:

— temperature 21 °C ± 4 °C;

— relative humidity of air 60 % ± 20 %.

5.2 Cork stoppers

5.2.1 Temperature

At the beginning of the test, confirm that the stoppers of the test sample are at a temperature of 21 °C ± 4 °C.

5.2.2 Humidity

At the beginning of the test, confirm that the stoppers of the test sample are at a humidity of 6 % ± 2 %.

When the humidity is not between 4 % and 8 %, the result of the humidity obtained shall be referred to in the test report.

6 Sampling

From each lot, take the amount of stoppers that correspond to the sampling plan previously agreed between the interested parties.

Stoppers from the sample shall not show visible defects that may interfere with the performance of the measurement, namely:

— stoppers with an abnormal shape (asymmetric, truncated, bevel);

— stoppers with gutters or belly irregularities.

7 Procedure

Before testing, each stopper shall be numerated.

7.1 Determination of diameter

7.1.1 Natural corkwood stoppers

On each stopper of the test sample and using the vernier gauge or any other device allowing the same precision (4.1) to be reached, measure the diameter at half the distance between ends and following the parallel to the growth layers of cork, in millimetres. Register the value obtained. Repeat the procedure following the perpendicular to the growth layers of cork, in millimetres. Register the value obtained.

7.1.2 Agglomerated cork stoppers and stoppers “1+1” (a disc on each end)

On each stopper of the test sample and using the vernier gauge or any other device allowing the same precision (4.1) to be reached, measure the diameter at half the distance between ends, in millimetres. Register the value obtained (only one measurement per stopper).

7.1.3 Agglomerated cork stoppers with one or several discs on the same end

On each stopper of the test sample and using the vernier gauge or any other device allowing the same precision (4.1) to be reached, measure the diameter, in millimetres, at the limit line between the agglomerated body and disc(s), at the glued surface. Register the value obtained (only one measurement per stopper).

7.2 Determination of length

On each stopper of the test sample and using the vernier gauge or any other device allowing the same precision (4.1) to be reached, measure the length, in millimetres. Carry out the measurement by introducing the stopper between stands of the vernier gauge, in such a way that the central axis of the stopper goes through the stand of the vernier gauge. Register the value obtained.

8 Results

8.1 Diameter

8.1.1 Natural cork stoppers

For each stopper, calculate the arithmetic average of both measurements taken. Express the result in millimetres, rounded off to the nearest tenth. The final test result is the arithmetic average of the results obtained with each stopper of the test sample, expressed in millimetres rounded off to 0,1, and also the standard deviation, the maximum and the minimum results rounded off to 0,1.

8.1.2 Other stoppers

For each stopper, the diameter is expressed in millimetres, rounded off to the nearest tenth. The final test result is the arithmetic average of the results obtained with each stopper of the test sample, expressed in millimetres, rounded off to 0,1, and also the standard deviation, the maximum and the minimum results rounded off to 0,1.

8.2 Length

For each stopper, the length is expressed in millimetres, rounded off to the nearest tenth. The final test result is the arithmetic average of the results obtained with each stopper of the test sample, expressed in millimetres, rounded off to 0,1, and also the standard deviation, the maximum and the minimum results rounded off to 0,1.

8.3 Ovalisation

For each natural cork stopper, calculate the difference between the two measurements taken. Express the result in millimetres, rounded off to the nearest tenth. The final test result is the arithmetic average of the result obtained with each stopper of the test sample, expressed in millimetres, rounded off to 0,1, and also the standard deviation, the maximum and the minimum results rounded off to 0,1.

9 Test report

The test report shall include the following information:

a) a reference to this part of ISO 9727;

b) complete identification of the sample, including its type and origin;

c) sampling report;

d) results obtained;

e) any deviation from this part of ISO 9727 that may have affected the results.

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