INTERNATIONAL STANDARD

ISO 8507

Second edition
1997-11-15

Agglomerated cork discs — Test methods

Disques en agglomeré composé de liège — Méthodes d'essai

Foreword

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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 8507 was prepared by Technical Committe ISO/TC 87, *Cork*.

This second edition cancels and replaces the first edition (ISO 8507:1986), which has been technically revised.

Annex A of this International Standard is for information only.

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Agglomerated cork discs —Test methods

1 Scope

This International Standard specifies the test methods applicable to agglomerated cork discs intended to provide a tight closure in use with crown or screw caps.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were 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 editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7322: — [1], *Composition cork — Test methods*

ISO 10718:1993, *Cork stoppers — Enumeration of colony-forming units of yeasts, moulds and bacteria capable of growth in an alcoholic medium*

3 Definition

For the purposes of this International Standard, the following definition applies.

3.1 moisture content: Loss of mass of a test specimen after drying under specified conditions.

4 Apparatus

4.1 Drying oven with thermostat and air circulation, capable of being maintained at 103 ºC ± 2 ºC.

4.2 Balance, accurate to an uncertainty of ± 1 mg.

4.3 Tin sheet, of diameter about 125 mm and thickness 0,5 mm.

4.4 Desiccator, to hold the test specimens and containing an efficient desiccant.

4.5 Magnifying glass or **binoculars**, with × 30 magnification.

[1] To be published. (Revision of ISO 7322:1986)

4.6 Set of gauges, of stainless steel, machined to 0,01 mm, ranging from the nominal diameter of the discs, 0,5 mm, in steps of 0,1 mm.

4.7 Set of polished stainless steel mandrels, machined to 0,01 mm, ranging from five to seven times the nominal thickness of the discs to be tested.

4.8 Glass beaker, tall-form, of capacity 250 ml.

4.9 Watch glass and **lead weight**, to keep the discs immersed in the water in the beaker (4.8).

5 Conditioning

Unless otherwise specified, tests shall be carried out on discs after conditioning for 72 h at a temperature of 23 ºC ± 2 ºC and relative humidity of (50 ± 5) %.

6 Tests

6.1 Number of determinations

Carry out the tests on the number of test specimens specified in 6.2 to 6.7.

6.2 Determination of moisture content

6.2.1 Principle

A test specimen is weighed, dried under specified conditions then reweighed. From this the loss of mass is calculated.

6.2.1 Procedure

Place 15 discs on the tin sheet and weigh to the nearest milligram. Place the whole in the oven (4.1) set at 103ºC and leave for a period of 2 h. After that time, allow the discs and sheet to cool in the desiccator (4.4) for about 30 min then reweigh them to the nearest milligram. Repeat the operations of drying/cooling/re-weighing until a constant mass is obtained (i.e. until two consecutive weighings do not differ by more than 1 %).

Repeat the test for two more test specimens of 15 discs each.

6.2.2 Expression of results

The moisture content, expressed as a percentage by mass, is calculated from

$$\frac{m_0 - m_1}{m_1} \times 100$$

where

m_0 is the mass of the test specimen before drying , in grams and rounded off to 0,01 g;

m_1 is the mass of the test specimen after drying, in grams and rounded off to 0,01g.

Calculate the test result as the mean value of the three determinations and express it as a percentage, rounded off to the nearest integer.

6.3 Determination of dimensions

6.3.1 Diameter

6.3.1.1 Procedure

Take at least 20 discs from the sample.

Try the discs, in succession, in the gauges (4.6) in descending order of diameter. The diameter of the disc shall be that of the last well-fitting gauge which allows an easy release.

6.3.1.2 Expression of results

The diameter of the discs, in millimetres, is the average of the results obtained in the determinations.

Express the results in millimetres rounded off to the nearest tenth.

6.3.2 Thickness

Take at least 50 discs from the sample.

Carry out the test as described in ISO 7322 under the following conditions:

Diameter of the indentor (mm)	Total applied load (N)	Equivalent pressure (kPa)
28,7	445	700

6.4 Flexibility

6.4.1 Procedure

Take at least 10 discs from the sample.

Roll a disc progressively and slowly around the mandrel (4.7) of diameter

- 5 mm if the thickness of the disc is less than or equal to 1,5 mm;

- 10 mm if the thickness of the disc is greater than 1,5 mm.

6.4.2 Expression of results

Express the results as a statement of the absence or presence of fissures or splits in the granules.

6.5 Behaviour in boiling water

6.5.1 Procedure

Boil the water in the container (4.8). Immerse at least 15 discs and keep the water boiling for 3 h. Remove the discs and examine them visually.

6.5.2 Expression of results

Express the result of the test by indicating the presence or absence of disintegration in the agglomerated cork and classifying the discs as resistant or not resistant to boiling water.

NOTE — A disc is said to disintegrate if it splits open and/or shows a substantial loss of particles during the test.

6.6 Absence of mildew

Take at least 9 discs from the sample.

The test shall be carried out as described in ISO 10718.

6.7 Sealing behaviour

See ISO 9392.

7 Test report

The test report shall include the following information:

a) a reference to this International Standard, i.e. ISO 8507;

b) the product identification, including production code number and identification of the manufacturer or suplier;

c) the form in which the product arrived at the laboratory;

d) the test results as indicated in the relevant clauses;

e) any deviation from the methods specified in this International Standard that may have affected the results.

Annex A

(informative)

Bibliography

[1] ISO 2859-0:1995, *Sampling procedures for inspection by attributes — Part 0: Introduction to the ISO 2859 attribute sampling system.*

[2] ISO 3951:1989, *Sampling procedures and charts for inspection by variables for percent nonconforming*.

[3] ISO 4711:1987, *Agglomerated cork discs — Specifications*.

[4] ISO 9392:1989, *Agglomerated cork discs — Sealing behaviour*.

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Descriptors: closing devices, cork, agglomerates, sealing disks, tests, performance tests, dimensional measurements.

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