
International Standard



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Pure expanded corkboard — Determination of the modulus of rupture by bending

Agglomérés expansés purs de liège — Détermination de la tension de rupture par flexion

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2077 was developed by Technical Committee ISO/TC 87, *Cork*.

It was submitted directly to the ISO Council, in accordance with clause 5.10.1 of the Directives for the technical work of ISO. It cancels and replaces ISO Recommendation R 2077-1971, which had been approved by the member bodies of the following countries :

Bulgaria	Greece	Portugal
Czechoslovakia	Iran	Spain
Egypt, Arab Rep. of	Italy	United Kingdom
France	Poland	

The member body of the following country had expressed disapproval of the document on technical grounds :

South Africa, Rep. of

Pure expanded corkboard — Determination of the modulus of rupture by bending

1 Scope

This International Standard specifies the method of determination of the modulus of rupture by bending of pure expanded corkboard.

2 Field of application

This method is applicable solely to pure expanded corkboard with a thickness of 20 mm and over.

3 Apparatus

3.1 bending machine, sensitive to 1 N, provided with a fixed head and a mobile head, the latter moving vertically at the speed of 30 cm/min.

The fixed head has two cylindrical steel supports with a diameter of 20 ± 2 mm on which the test piece is freely placed, the distance between them being adjustable. The mobile head has a fitting similar to each of the supports, and parallel to and equidistant from them.

3.2 Metal ruler, graduated in 0,5 mm.

3.3 Electrical disc-saw.

4 Sampling

Operate as prescribed in the International Standard for the pure expanded corkboard being tested.

5 Procedure

5.1 Test piece

From each board being tested, cut out with the saw (3.3) a test piece having a breadth of 75 mm, a thickness equal to that of the board to which it belongs (minimum 20 mm) and a length not less than seven times the nominal thickness of the board.

5.2 Determination

Make the tests at room temperature and humidity.

After having measured the linear dimensions with the ruler (3.2), place each test piece on the fixed supports of the bending machine (3.1), the axis-to-axis distance of which shall be equal to five times the nominal thickness of the board.

Apply the mobile head on the test piece and record the value of the force which produces rupture.

6 Expression of results

The modulus of rupture by bending for the test piece, in megapascals, to the nearest 0,01 MPa, is given by the formula

$$\frac{3 Fl}{2 b \delta^2} \times 10$$

where

F is the breaking force in newtons to the nearest 1 N;

l is the distance between the supports, in millimetres, to the nearest millimetre;

b is the breadth of the test piece, in millimetres, to the nearest millimetre;

δ is the thickness of the test piece, in millimetres, to the nearest millimetre.

Take the average of three tests as the result.

7 Test report

The test report shall give the following information :

- reference to this International Standard;
- complete identification of the sample;
- the results obtained;
- details of any operational conditions not given in this International Standard, or considered as optional;
- any incidents likely to have affected the results.