
INTERNATIONAL STANDARD



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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION · МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ · ORGANISATION INTERNATIONALE DE NORMALISATION

Leather — Determination of tearing load

Cuir — Détermination de la résistance au déchirement

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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 3377 was drawn up by Technical Committee ISO/TC 120, *Leather*, and circulated to the Member Bodies in May 1974.

It has been approved by the Member Bodies of the following countries :

Australia
Brazil
Bulgaria
Canada
Chile
Czechoslovakia
France
Germany

Hungary
India
Iran
Ireland
Israel
Poland
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Romania

ISO 3377:1975

South Africa, Rep. of

Spain

Thailand

Turkey

United Kingdom

U.S.S.R.

No Member Body expressed disapproval of the document.

This International Standard is based on method IUP/8 of the International Union of Leather Technologists' and Chemists' Societies.

Leather — Determination of tearing load

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the tearing load of all types of leather.

2 REFERENCES

ISO 2418, *Leather — Laboratory samples — Location and identification.*

ISO 2419, *Leather — Conditioning of test pieces for physical tests.*

ISO 2589, *Leather — Physical testing — Measurement of thickness.*

3 PRINCIPLE

A rectangular test piece of leather, having a slit or hole of prescribed shape, is slipped over the turned-up ends of a pair of holders attached to the jaws of a tensile strength testing machine. The highest force exerted during separation of the holders is taken as the tearing load.

4 APPARATUS

4.1 Press knife for cutting the test piece shown in figure 1.

This may be made up from two parts which are subsequently bolted or welded together, or two press knives may be used separately and in succession to cut out the test piece and the slot. The part used to cut the slot can be worked from a block of tool steel of length 25 mm and breadth 10 mm, the internal walls being vertical and the sloping edge of the knife being on its exterior surface.

The sloping edge shall taper so that the corners at A and B consist of sharp edges normal to the plane of the test piece.

When the two knives are assembled to make a single one, all the cutting edges shall be in one plane; the heights of the inner and outer parts of the knife shall be the same, so that pressure is applied to both simultaneously.

4.2 Thickness gauge, as specified in ISO 2589.

4.3 **Tensile strength testing machine**, having a uniform rate of separation of the jaws of 100 ± 20 mm/min., and such that readings of force fall in that part of the scale which has been shown by calibration to be correct within 1 %.

4.4 **Test piece holders** (see figure 2), each consisting of a strip of steel 10 mm wide and 2 mm thick, bent through a right angle at one end, and welded to a bar which makes the strip rigid and which fits one pair of jaws of the tensile strength testing machine (4.3) or replaces them.

5 TEST PIECE

Cut a rectangular test piece 50 mm long and 25 mm wide and having a slot of the shape and dimensions shown in figure 1, preferably using the press knife (4.1) which cuts out the specimen and slot in one operation. Unless otherwise specified, cut the test piece in accordance with ISO 2418, with the longer sides of the rectangles parallel to the backbone. Cut the test piece by pressing the press knife through from the grain to the flesh side.

Condition the test piece in accordance with ISO 2419 and measure its thickness in accordance with ISO 2589.

6 PROCEDURE

6.1 Adjust the apparatus so that turned-up ends of the test piece holders are in contact with one another. Slip the test piece over the turned-up ends, so that they protrude through the slot with the widths of the turned-up ends parallel to the straight edges of the slot. Press the test piece down firmly onto the holders.

6.2 Run the machine until the test piece is torn apart, and record the largest force reached during tearing.

7 EXPRESSION OF RESULTS

Express the recorded force, in newtons, as the tearing load of the test piece. Express the thickness of the test piece as described in ISO 2589.

8 TEST REPORT

The test report shall include the following particulars :

- a) a reference to this International Standard;

- b) all details required for the identification of the sample;

- c) the tearing load and thickness of the test piece;

NOTE — If a specification requires that more than one test piece shall be tested, the individual results and thicknesses shall be reported in addition to the arithmetic mean values.

- d) any unusual features noted during the determination;

- e) any operation not included in this International Standard, or those documents to which reference is made, or regarded as optional.

Dimensions in millimetres

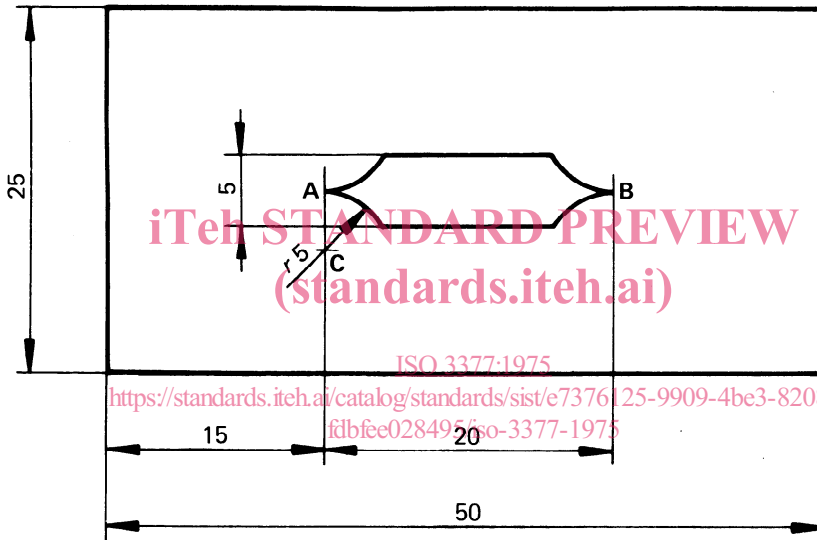


FIGURE 1 — Test piece

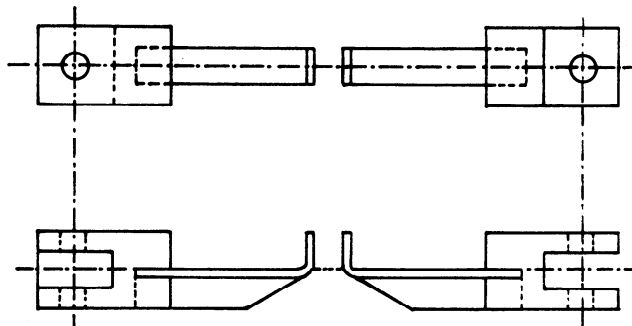


FIGURE 2 — Test piece holders