
INTERNATIONAL STANDARD



2589

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

Leather — Physical testing — Measurement of thickness

First edition — 1972-12-15

iTeh STANDARD PREVIEW
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UDC 675 : 531.717

Ref. No. ISO 2589-1972 (E)

Descriptors : animal products, leather, tests, physical tests, dimensional measurement, thickness.

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 2589 was drawn up by Technical Committee ISO/TC 120, *Leather*.

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It was approved in May 1972 by the Member Bodies of the following countries :

Australia

Brazil

Chile

Czechoslovakia

Egypt, Arab Rep. of

France

Germany

Hungary

India

Iran

Ireland

Israel

New Zealand

Poland

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Romania

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/4 of the International Union of Leather Chemists' Societies.

Leather — Physical testing — Measurement of thickness

0 INTRODUCTION

The measured thickness of a leather depends upon such factors as the pressure and the time for which pressure is applied. It is recognized that the thicknesses of certain leathers, if measured at zero load or small loads, would differ materially from those obtained by measurements made in accordance with this International Standard. It is recommended, however, that the thickness of a leather, unless otherwise specified, should be accepted as being that found by the method described below.

1 SCOPE

This International Standard specifies a method for measurement of the thickness of leather.

2 FIELD OF APPLICATION

This method is applicable to all kinds of leather, of any type of tannage, except for firm leathers of thickness 3 mm or greater. This measurement is valid for both the whole leather and a test sample.

3 APPARATUS

The apparatus comprises the following parts :

3.1 Dial gauge, with a large open scale graduated to read to 0,01 mm directly with an accuracy of 0,01 mm over the whole scale length and having its pointer sufficiently close to the scale to minimize errors due to parallax.

3.2 Anvil, comprising the flat, horizontal surface of a 10 mm diameter cylinder projecting 3 mm above the surface of a concentric flat circular platform of 50 mm diameter.

NOTE — The circular platform of 50 mm diameter helps to support medium weight leathers, which otherwise might present a convex surface to the presser foot.

The anvil is raised 3 mm above the platform so that serious errors are avoided in measurements on heavy leathers which are not flat.

3.3 Presser foot, having a flat, circular surface of 10 mm diameter, coaxial with the anvil, and capable of movement normal to the face of the anvil. The contacting surfaces of the anvil and presser foot shall be parallel to within 0,005 mm for all positions of the presser foot. The presser foot shall be dead weight loaded with 390 ± 10 g (equivalent to about 49 kN/m²).

3.4 Rigid stand.

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4 CONDITIONING

When the greatest possible accuracy is required, pre-condition the leather in accordance with ISO 2419, *Leather — Conditioning of test pieces for physical tests*.

NOTE — For such changes of relative humidity as occur naturally in some countries, the changes of thickness of most leathers are less than 3 %. For many purposes conditioning prior to measurement of thickness is therefore not necessary.

5 PROCEDURE

Place the leather in the gauge with the grain side up, if this can be identified.

Apply the load gently and take the reading 5 s after the full load is reached.

Make the measurement with the sample and the faces of the foot and the anvil in a horizontal position.

NOTE — In routine testing, spring-loaded types of measuring gauge are frequently used. Their readings, however, are liable to change with time, and it is therefore necessary to calibrate them periodically by comparing their readings with those of a gauge of the standard type. In case of dispute, spring-loaded gauges are not to be used.

6 EXPRESSION OF RESULTS

Express the result to the nearest 0,01 mm, unless otherwise agreed between the interested parties.

7 TEST REPORT

The test report shall include the following information :

- a) reference to this International Standard;
- b) the results obtained;

c) any unusual features noted during the determination;

d) any operation carried out which is not laid down in this International Standard, and details of any alternative procedure used;

e) full details for identification of the sample;

f) the number of points at which the thickness was measured.

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