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**Leather — Determination of
distension and strength of surface
(Ball burst method)**

*Cuir — Détermination de l'extension et de la résistance à la traction
de la surface (méthode de la bille)*



Reference numbers
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#).

ISO 3379 was prepared by the Physical Test Commission of the International Union of Leather Technologists and Chemists Societies (IUP Commission, IULTCS) in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 289, *Leather*, the secretariat of which is held by UNI, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

IULTCS, originally formed in 1897, is a world-wide organization of professional leather societies to further the advancement of leather science and technology. IULTCS has three Commissions, which are responsible for establishing international methods for the sampling and testing of leather. ISO recognizes IULTCS as an international standardizing body for the preparation of test methods for leather.

This second edition cancels and replaces the first edition (ISO 3379:1976), which has been technically revised.

Leather — Determination of distension and strength of surface (Ball burst method)

1 Scope

This International Standard specifies a test method for the determination of distension and strength of the leather grain or finished surface. This method is applicable to all flexible leathers and it is particularly suitable to determine the lastability of leathers for footwear uppers.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2418, *Leather — Chemical, physical and mechanical and fastness tests — Sampling location*

ISO 2419, *Leather — Physical and mechanical tests — Sample preparation and conditioning*

ISO 2589, *Leather — Physical and mechanical tests — Determination of thickness*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

wearing surface

exposed or visible face of the leather when used in its intended application

Note 1 to entry: The wearing surface is usually the grain side of leather, however, the wearing surface of some leathers may be otherwise dressed or finished, e.g. patent leather.

3.2

reverse side

opposite side to the wearing surface

Note 1 to entry: The reverse side is usually the flesh side of leather.

3.3

cracking

small surface splits or tears less than approximately 0,5 mm

3.4

bursting

complete rupture of the full thickness of the test piece

4 Principle

A circular test piece is clamped around its edge and is gradually distended by forcing a steel metal ball, attached to the end of a plunger, against the centre of the test piece on the reverse side. At certain distension, measured in terms of distance travelled by the plunger, cracks appear on the wearing surface of the test piece or it sustains other permanent physical damage; this distension is recorded as the cracking point or first damage. At a higher distension, the material usually bursts and this distension may also be recorded.