

Leather — Physical and mechanical tests — Determination of fogging characteristics

The European Standard EN 14288:2003 has the status of a
British Standard

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National foreword

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Cuir - Essais physiques et mécaniques - Détermination des caractéristiques de la condensation provoquée par le cuir

Leder - Physikalische und mechanische Prüfungen - Bestimmung der Fogging-Eigenschaften

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Foreword

This document EN 14288:2003 has been prepared by Technical Committee CEN/TC 289 "Leather", the secretariat of which is held by UNI.

It is based on DIN 75201 of Deutsches Institut für Normung.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2004, and conflicting national standards shall be withdrawn at the latest by June 2004.

Annexes A and B are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard : Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies two alternative methods for determining the fogging characteristics of leathers used in the passenger compartments of motor vehicles, namely Method A and Method B. However, these are 2 different test procedures to measure the volatile components and there is no mathematical correlation between the results obtained with Method A and those with Method B.

Method A determines by reflection the light scattering properties (or opaqueness) and the nature of the film or droplet formation from volatile components condensed on a cold glass surface. Method B measures gravimetrically the quantity of volatile components condensed on a cold aluminium foil surface. Annex A gives the results of inter-laboratory trial which show that Method B performs well whereas Method A showed a large variation in the percentage reflection.

The test conditions allow the two tests to be carried out in succession.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 2418, *Leather - Chemical, physical and mechanical and fastness tests - Sampling location (ISO 2418:2002)*.

EN ISO 2419, *Leather - Physical and mechanical tests - Sample preparation and conditioning (ISO 2419:2002)*.

EN ISO 3696:1995, *Water for analytical laboratory use - Specification and test methods (ISO 3696:1987)*.

3 Method A - Reflectometer method

3.1 Principle

A test piece is heated in a glass beaker, any volatile ingredients are condensed onto a cooled glass plate and the reflectometer value of the glass plate with condensed fog is expressed as a percentage of the reflectometer value of the same plate without fogging condensate. The measurement by light reflection depends on the nature of the film/droplet formation and needs careful interpretation. An example is that a thick but clear film can give a good test result when in actual fact it is a bad result in terms of volatiles. The test should be stopped if a transparent oily film is formed on the glass. The reflection measurement result is only valid when an even opaque film (like a fogged windscreen) formed by small droplets is present. (See annex A)

3.2 Apparatus

3.2.1 Beaker, plane bottomed, of heat-resistant glass, with a flat ground rim at the top without a pouring spout, with an outside diameter of 90 mm $\pm$ 2 mm, height 190 mm $\pm$ 2 mm. See Figure 1. A beaker with a minimum weight of 450 g is needed to prevent floating in the thermostatic bath (3.2.2).