
Usnje - Ugotavljanje razgradljivosti z mikroorganizmi (ISO 20136:2017)

Leather - Determination of degradability by micro-organisms (ISO 20136:2017)

Leder - Bestimmung der Abbaubarkeit durch Mikroorganismen (ISO 20136:2017)

Cuir - Détermination de la dégradabilité par les micro-organismes (ISO 20136:2017)

Ta slovenski standard je istoveten z: EN ISO 20136:2017

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ICS:

59.140.30

Usnje in krzno

Leather and furs

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 20136

March 2017

ICS 59.140.30

English Version

Leather - Determination of degradability by micro-organisms (ISO 20136:2017)

Cuir - Détermination de la dégradabilité par les micro-organismes (ISO 20136:2017)

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This European Standard was approved by CEN on 14 February 2017.

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European foreword

This document (EN ISO 20136:2017) has been prepared by Technical Committee IULTCS “International Union of Leather Technologists and Chemists Societies” in collaboration with Technical Committee CEN/TC 289 “Leather” the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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INTERNATIONAL
STANDARD

ISO
20136

IULTCS/IUC 37

First edition
2017-03

**Leather — Determination of
degradability by micro-organisms**

Cuir — Détermination de la dégradabilité par les micro-organismes

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Reference numbers
ISO 20136:2017(E)
IULTCS/IUC 37:2017(E)

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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 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html (standards.itech.ai)

This document was prepared by the Chemical Tests Commission of the International Union of Leather Technologists and Chemists Societies (IUC 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 method for the sampling and testing of leather. ISO recognizes IULTCS as an international standardizing body for the preparation of test methods for leather.

Introduction

One of the big problems faced by the footwear industry is waste treatment. Although this waste, especially in the case of leather, is not considered hazardous by current legislation, it is however produced in large quantities which present a problem for municipal landfill sites.

The aim of the tanning process is to avoid skin putrefaction and increase the resistance of the obtained leather. For this purpose, chemical and biological agents are used which are involved in the denaturation and hardening of the main stromal protein, collagen, thus also producing physicochemical changes in the skin.

There is a wide range of different agents used for leather tanning, which can be based on organic products, vegetable extracts or inorganic products, mostly metals.

The most used tanning agent in the footwear industry is Chromium (III), which gives the skin desirable characteristics, such as elasticity, easy buffing and a good breathability and vapour permeability. However, the traditional tanning industry, and especially chrome tanning, generates wastes that pose an environmental threat. Also, chrome-tanned hides and skins have too long a lifespan, much larger than the useful life of the final products. Therefore, the use of additives that are less harmful to the environment and which generate products that have a certain ease of degradation, once the material has achieved its purpose, would be preferred, thus minimising waste products.

Within this sector, the development of fast biodegradability quantification methods for leather that has been treated with alternative tanning agents is needed in order to predict whether these materials are more biodegradable than their predecessors. The methodology described in this document attempts to allow the completion of this form of analysis in a test time of no more than 35 days.

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