

STN	Obuv Kritické látky potenciálne prítomné v obuvi a v častiach obuvi Skúšobná metóda na kvantitatívne stanovenie dimetylformamidu v materiáloch obuvi (ISO 16189: 2021)	STN EN ISO 16189 79 5905
------------	---	--

Footwear - Critical substances potentially present in footwear and footwear components - Test method to quantitatively determine dimethylformamide in footwear materials (ISO 16189:2021)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/22

Obsahuje: EN ISO 16189:2021, ISO 16189:2021

Oznámením tejto normy sa ruší
STN P CEN ISO/TS 16189 (79 5905) z novembra 2013

134426

EUROPEAN STANDARD

EN ISO 16189

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2021

ICS 61.060

Supersedes CEN ISO/TS 16189:2013

English Version

Footwear - Critical substances potentially present in footwear and footwear components - Test method to quantitatively determine dimethylformamide in footwear materials (ISO 16189:2021)

Chaussures - Substances critiques potentiellement présentes dans les chaussures et les composants de chaussures - Méthode d'essai pour déterminer quantitativement le diméthylformamide dans les matériaux de chaussures (ISO 16189:2021)

Schuhe - Möglicherweise in Schuhen und Schuhbestandteilen vorhandene kritische Substanzen - Prüfverfahren zur quantitativen Bestimmung von Dimethylformamid in Schuhwerkstoffen (ISO 16189:2021)

This European Standard was approved by CEN on 5 November 2021.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN ISO 16189:2021 (E)

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 16189:2021) has been prepared by Technical Committee ISO/TC 216 "Footwear" in collaboration with Technical Committee CEN/TC 309 "Footwear" the secretariat of which is held by UNE.

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 2022, and conflicting national standards shall be withdrawn at the latest by June 2022.

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

This document supersedes CEN ISO/TS 16189:2013.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 16189:2021 has been approved by CEN as EN ISO 16189:2021 without any modification.

INTERNATIONAL STANDARD

ISO 16189

Second edition
2021-11

Footwear — Critical substances potentially present in footwear and footwear components — Test method to quantitatively determine dimethylformamide in footwear materials

Chaussures — Substances critiques potentiellement présentes dans les chaussures et les composants de chaussures — Méthode d'essai pour déterminer quantitativement le diméthylformamide dans les matériaux de chaussures



Reference number
ISO 16189:2021(E)

© ISO 2021

ISO 16189:2021(E)**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
5 Reagents	1
6 Apparatus	2
7 Preparation of sample	3
7.1 Sampling.....	3
7.2 Extraction.....	3
8 Determination with GC-MS	3
8.1 Calibration standard.....	3
8.2 Examples of instrumental method.....	3
9 Expression of results - Calibration curve	4
10 Performance of the method	4
11 Test report	4
Annex A (informative) Suggested parameters for GC-MS determination of DMF	5
Bibliography	6

ISO 16189:2021(E)

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 216, *Footwear*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 309, *Footwear*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition of ISO 16189 cancels and replaces ISO/TS 16189:2013, which has been technically revised.

The main changes are as follows:

- [5.4](#) updated;
- [5.5](#) updated;
- [7.1](#): new size of cut pieces.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Footwear — Critical substances potentially present in footwear and footwear components — Test method to quantitatively determine dimethylformamide in footwear materials

1 Scope

This document specifies a method to determine the amounts of dimethylformamide (DMF) in footwear and footwear components containing polyurethane (PU) coated material.

NOTE 1 In the footwear industry, when PU is injected (reaction moulded), this process does not require the use of DMF. For PU coated material, the use of DMF is possible.

NOTE 2 Several abbreviations can be used for dimethylformamide DMF, DMFa, DMFo. This document uses DMF.

ISO/TR 16178:2021, Table 1 defines which materials are concerned by this determination.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4787, *Laboratory glassware — Volumetric instruments — Methods for testing of capacity and for use*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN