
Polimerni materiali - Materiali na osnovi polietilena z ultra visoko molsko maso (PE-UHMW) za oblikovanje in ekstrudiranje - 2. del: Priprava preskušancev in ugotavljanje lastnosti (ISO/DIS 21304-2:2026)

Plastics - Ultra-high-molecular-weight polyethylene (PE-UHMW) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO/DIS 21304-2:2026)

Kunststoffe - Ultrahochmolekulare Polyethylen (PE-UHMW)-Formmassen - Teil 2: Herstellung von Probekörpern und Bestimmung von Eigenschaften (ISO/DIS 21304-2:2026)

Plastiques - Matériaux à base de polyéthylène à très haute masse moléculaire (PE-UHMW) pour moulage et extrusion - Partie 2: Préparation des éprouvettes et détermination des propriétés (ISO/DIS 21304-2:2026)

Ta slovenski standard je istoveten z: prEN ISO 21304-2

ICS:

83.080.20

Plastomeri

Thermoplastic materials

oSIST prEN ISO 21304-2:2026

en,fr,de

Sample Document

get full document from standards.iteh.ai



DRAFT International Standard

ISO/DIS 21304-2

Plastics — Ultra-high-molecular-weight polyethylene (PE-UHMW) moulding and extrusion materials —

Part 2: Preparation of test specimens and determination of properties

Plastiques — Matériaux à base de polyéthylène à très haute masse moléculaire (PE-UHMW) pour moulage et extrusion —

Partie 2: Préparation des éprouvettes et détermination des propriétés

ICS: 83.080.20

This document has not been edited by the ISO Central Secretariat.

ISO/CEN PARALLEL PROCESSING

Reference number
ISO/DIS 21304-2:2026(en)

ISO/TC 61/SC 9

Secretariat: **KATS**

Voting begins on:
2026-09-30

Voting terminates on:
2026-12-23

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENTS AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

© ISO 2026

Sample Document

get full document from standards.iteh.ai



COPYRIGHT PROTECTED DOCUMENT

© ISO 2026

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

ISO/DIS 21304-2:2026(en)

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	3
4 Preparation of test specimens	3
4.1 Treatment of the material before moulding.....	3
4.2 Compression moulding.....	3
5 Conditioning of test specimens	3
6 Determination of properties	4
Annex A (normative) Method for determining the melt volume-flow rate of PE-UHMW materials	7
Annex B (normative) Method for determining the elongational stress of PE-UHMW moulding materials	10
Annex C (normative) Method for determining the Charpy double-notched impact strength of PE-UHMW moulding material	16
Bibliography	21

Sample Document

get full document from standards.iteh.ai

ISO/DIS 21304-2:2026(en)

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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO *had not* received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

This second edition cancels and replaces the first edition (ISO 21304-2:2021), which has been technically revised.

The main changes are as follows:

- Average cooling rate has been replaced by cooling rate in Table 1 according to ISO 293;
- 4 Methods of A, B, C and D have been specified for cutting double-notches in [Annex C](#);
- 2 Types of double-notching devices have been specified in [C.3.3](#);

A list of all parts in the ISO 21304 series can be found on the ISO website.

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.

Plastics — Ultra-high-molecular-weight polyethylene (PE-UHMW) moulding and extrusion materials —

Part 2: Preparation of test specimens and determination of properties

1 Scope

This document specifies the methods of preparation of test specimens and the test methods to be used for determining the properties of ultra-high-molecular-weight polyethylene (PE-UHMW) moulding and extrusion materials. It establishes general principles for handling test materials and for conditioning both the test materials before moulding and the specimens before testing.

This document specifies procedures and conditions for the preparation of test specimens and procedures for measuring properties of the materials from which these specimens are made. Properties and test methods which are suitable and necessary to characterize PE-UHMW moulding and extrusion materials are established.

The properties have been selected from the general test methods in ISO 10350-1. Other test methods in wide use for or of particular significance to these moulding and extrusion materials are also included in this document, as are the designatory properties specified in ISO 21304-1. This document specifies the materials with MFR less than 0,1 g/10 min at 190 °C /21,6 kg based on ISO 17855-1.

The methods of preparation and conditioning, the specimen dimensions and the test procedures specified in this document are used in order to obtain reproducible and comparable test results. Values determined will not necessarily be identical to those obtained using specimens of different dimensions or prepared using different procedures.

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 62, *Plastics — Determination of water absorption*

ISO 75-1, *Plastics — Determination of temperature of deflection under load — Part 1: General test method*

ISO 75-2, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite*

ISO 178, *Plastics — Determination of flexural properties*

ISO 179-1, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test*

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*

ISO 293, *Plastics — Compression moulding of test specimens of thermoplastic materials*

ISO 527-1, *Plastics — Determination of tensile properties — Part 1: General principles*

ISO 527-2, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics*