BS EN ISO 21309-2:2019

BSI Standards Publication

Plastics - Ethylene/vinyl alcohol (EVOH) copolymer moulding and extrusion materials

Part 2: Preparation of test specimens and determination of properties

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National foreword

This British Standard is the UK implementation of EN ISO 21309-2:2019. It is identical to ISO 21309-2:2019. It supersedes BS EN ISO 14663-2:2006, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/82, Thermoplastic materials.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Plastiques - Matériaux à base de copolymères éthylène/alcool vinylique (EVOH) pour moulage et extrusion - Partie 2: Préparation des éprouvettes et détermination des propriétés (ISO 21309-2:2019)

Kunststoffe - Ethylen-Vinylalkohol (EVOH)-Copolymer-Werkstoffe - Teil 2: Herstellung von Probekörpern und Bestimmung von Eigenschaften (ISO 21309-2:2019)

This European Standard was approved by CEN on 1 February 2019.

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European foreword

This document (EN ISO 21309-2:2019) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 “Plastics” the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by September 2019, and conflicting national standards shall be withdrawn at the latest by September 2019.

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 EN ISO 14663-2:2006.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 21309-2:2019 has been approved by CEN as EN ISO 21309-2:2019 without any modification.

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Foreword

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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 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 first edition of ISO 21309-2 cancels and replaces ISO 14663-2:1999, which has been technically revised. The main changes compared to the previous edition are as follows:

— the number of the standard has been changed;

— the normative references have been updated.

A list of all parts in the ISO 21309 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.

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Plastics — Ethylene/vinyl alcohol (EVOH) copolymer 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 in determining the properties of ethylene/vinyl alcohol (EVOH) copolymer moulding and extrusion materials. It gives requirements for handling test material and for conditioning both the test material before moulding and the specimens before testing.

This document describes 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 EVOH moulding and extrusion materials are listed in this document.

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 is the melt mass-flow rate designatory property specified in ISO 21309-1.

In order to obtain reproducible and comparable test results, it is intended to use the methods of specimen preparation and conditioning, the specimen dimensions and the test procedures specified herein. 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 75-1:2013, *Plastics — Determination of temperature of deflection under load — Part 1: General test method*

ISO 75-2:2013, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite*

ISO 178, *Plastics — Determination of flexural properties*

ISO 179-1:2010, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test*

ISO 180:2000, *Plastics — Determination of Izod impact strength*

ISO 291:2008, *Plastics — Standard atmospheres for conditioning and testing*

ISO 294-2, *Plastics — Injection moulding of test specimens of thermoplastic materials — Part 2: Small tensile bars*

ISO 306, *Plastics — Thermoplastic materials — Determination of Vicat softening temperature (VST)*

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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*

ISO 899-1, *Plastics — Determination of creep behaviour — Part 1: Tensile creep*

ISO 1133-1, *Plastics — Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics — Part 1: Standard method*

ISO 1183-1:2012, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pyknometer method and titration method*

ISO 2039-2, *Plastics — Determination of hardness — Part 2: Rockwell hardness*

ISO 3146:2000, *Plastics — Determination of melting behaviour (melting temperature or melting range) of semi-crystalline polymers by capillary tube and polarizing-microscope methods*

ISO 3451-1:2008, *Plastics — Determination of ash — Part 1: General methods*

ISO 10350-1, *Plastics — Acquisition and presentation of comparable single-point data — Part 1: Moulding materials*

ISO 20753, *Plastics — Test specimens*

ISO 21309-1, *Plastics — Ethylene/vinyl alcohol (EVOH) copolymer moulding and extrusion materials — Part 1: Designation system and basis for specifications*

IEC 60112, *Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions*

IEC 60243-1, *Electrical strength of solid insulating materials — Test methods — Part 1: Tests at power frequencies*

IEC 60250, *Recommended methods for the determination of the permittivity and dielectric dissipation factor of electrical insulating materials at power, audio and radio frequencies including metre wavelengths*

IEC 60296, *Specification for unused mineral insulating oils for transformers and switchgear*

IEC 60695-11-10, *Fire hazard testing — Part 11-10: Test flames — 50 W horizontal and vertical flame test methods*

IEC 62631-3-1, *Dielectric and resistive properties of solid insulating materials — Part 3-1: Determination of resistive properties (DC methods) — Volume resistance and volume resistivity — General method*

IEC 62631-3-2, *Dielectric and resistive properties of solid insulating materials — Part 3-2: Determination of resistive properties (DC methods) — Surface resistance and surface resistivity*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

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