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

**Part 2:**

Preparation of test specimens and determination  
of properties

*Plastiques — Matériaux à base de copolymères éthylène/alcool vinylique  
(EVOH) pour moulage et extrusion —*

*Partie 2: Préparation des éprouvettes et détermination des propriétés*



## Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 14663-2 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

ISO 14663 consists of the following parts, under the general title *Plastics — Ethylene/vinyl alcohol (EVOH) copolymer moulding and extrusion materials*:

- Part 1: *Designation system and basis for specifications*
- Part 2: *Preparation of test specimens and determination of properties*

Annexes A, B and C form an integral part of this part of ISO 14663.

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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 part of ISO 14663 specifies the methods of preparation of test specimens and the test methods to be used in determining the properties of EVOH moulding and extrusion materials. Requirements for handling test material and for conditioning both the test material before moulding and the specimens before testing are given here.

Procedures and conditions are described for the preparation of test specimens, and procedures for measuring properties of the materials from which these specimens are made are given. Properties and test methods which are suitable and necessary to characterize EVOH moulding and extrusion materials are listed.

The properties have been selected from the general test methods in ISO 10350. Other test methods in wide use for or of particular significance to these moulding and extrusion materials are also included in this part of ISO 14663, as is the designatory property specified in part 1: melt mass-flow rate.

In order to obtain reproducible and comparable test results, it is necessary 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 standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 14663. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 14663 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 75-1:1993, *Plastics — Determination of temperature of deflection under load — Part 1: General test method.*

ISO 75-2:1993, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite.*

ISO 178:1993, *Plastics — Determination of flexural properties.*

- ISO 179-1:—<sup>1)</sup>, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test.*
- ISO 180:—<sup>2)</sup>, *Plastics — Determination of Izod impact strength.*
- ISO 291:1997, *Plastics — Standard atmospheres for conditioning and testing.*
- ISO 294-2:1996, *Plastics — Injection moulding of test specimens of thermoplastic materials — Part 2: Small tensile bars.*
- ISO 306:1994, *Plastics — Thermoplastic materials — Determination of Vicat softening temperature (VST).*
- ISO 527-1:1993, *Plastics — Determination of tensile properties — Part 1: General principles.*
- ISO 527-2:1993, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics.*
- ISO 899-1:1993, *Plastics — Determination of creep behaviour — Part 1: Tensile creep.*
- ISO 1133:1997, *Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics.*
- ISO 1183:1987, *Plastics — Methods for determining the density and relative density of non-cellular plastics.*
- ISO 2039-2:1987, *Plastics — Determination of hardness — Part 2: Rockwell hardness.*
- ISO 2818:1994, *Plastics — Preparation of test specimens by machining.*
- ISO 3146:1985, *Plastics — Determination of melting behaviour (melting temperature or melting range) of semi-crystalline polymers.*
- ISO 3167:1993, *Plastics — Multipurpose test specimens.*
- ISO 3451-1:1997, *Plastics — Determination of ash — Part 1: General methods.*
- ISO 10350:1993, *Plastics — Acquisition and presentation of comparable single-point data.*
- ISO 14663-1:1999, *Plastics — Ethylene/vinyl alcohol (EVOH) copolymer moulding and extrusion materials — Part 1: Designation system and basis for specifications.*
- IEC 60093:1980, *Methods of test for volume resistivity and surface resistivity of solid electrical insulating materials.*
- IEC 60112:1979, *Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions.*
- IEC 60243-1:1998, *Electrical strength of solid insulating materials — Test methods — Part 1: Tests at power frequencies.*
- IEC 60250:1969, *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 60296:1982, *Specification for unused mineral insulating oils for transformers and switchgear.*
- IEC 60695-11-10:1999, *Fire hazard testing — Part 11-10: Test flames — 50 W horizontal and vertical flame test methods.*

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<sup>1)</sup> To be published. (Revision of ISO 179:1993)

<sup>2)</sup> To be published. (Revision of ISO 180:1993)