



BSI Standards Publication

Plastics - Poly(vinyl alcohol) (PVAL) materials

Part 2: Determination of properties

National foreword

This British Standard is the UK implementation of EN ISO 15023-2:2019. It supersedes [BS EN ISO 15023-2:2006](#), which is withdrawn.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.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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English Version

Plastics - Poly(vinyl alcohol) (PVAL) materials - Part 2:
Determination of properties (ISO 15023-2:2019)

Plastiques - Matériaux en poly(alcool de
vinyle) (PVAL) - Partie 2: Détermination
des propriétés (ISO 15023-2:2019)

Kunststoffe - Polyvinylalkohol (PVAL)-
Werkstoffe - Teil 2: Bestimmung von
Eigenschaften (ISO 15023-2:2019)

This European Standard was approved by CEN on 8 February 2019.

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European foreword

This document (EN ISO 15023-2:2019) 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of an identical text or by endorsement, at the latest by October 2019, and conflicting national standards shall be withdrawn at the latest by October 2019.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 15023-2:2006.

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 15023-2:2019](#) has been approved by CEN as EN ISO 15023-2:2019 without any modification.

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Determination of properties	1
Annex A (normative) Determination of volatile-matter content	3
Annex B (normative) Determination of sodium acetate content	5
Annex C (normative) Calculation of ash	8
Annex D (normative) Determination of degree of hydrolysis	9
Annex E (normative) Determination of viscosity of 4 % aqueous solution by the Brookfield test method or the inclined-tube falling-ball method	12
Bibliography	18

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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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 15023-2:2003), which has been technically revised. The main changes compared to the previous edition are as follows:

- the normative references have been updated;
- adjustments have been made due to a new designation system in ISO 15023-1.

A list of all parts in the ISO 15023 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 - Poly(vinyl alcohol) (PVAL) materials —

Part 2: Determination of properties

1 Scope

This document specifies the methods to be used in determining the properties of poly(vinyl alcohol), which is normally prepared by hydrolysis of poly(vinyl acetate) and whose composition comprises vinyl alcohol monomeric units and vinyl acetate monomeric units. This document is applicable to poly(vinyl alcohol) with a vinyl alcohol unit content (degree of hydrolysis) from 70 mol% to 100 mol%.

In addition to the designatory properties specified in [ISO 15023-1](#) (degree of hydrolysis and viscosity of an aqueous solution), this document includes a number of other properties which are commonly used to specify PVAL materials (see [Table 1](#)).

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 976](#), *Rubber and plastics — Polymer dispersions and rubber latices — Determination of pH*

[ISO 6587](#), *Paper, board and pulps — Determination of conductivity of aqueous extracts*

[ISO 8130-1](#), *Coating powders — Part 1: Determination of particle size distribution by sieving*

[ISO 12058-1](#), *Plastics — Determination of viscosity using a falling-ball viscometer — Part 1: Inclined-tube method*

3 Terms and definitions

No terms and definitions are listed in this document.

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/>

4 Determination of properties

In the determination of properties and the presentation of results, the standards, methods and special conditions listed in [Table 1](#) shall apply. The properties listed in [Table 1](#) are those appropriate to poly(vinyl alcohol).

Table 1 — Properties and test conditions

Property	Method	Unit	Test conditions and supplementary instructions
Volatile-matter content	Annex A	% by mass	105 °C, 3 h

Property	Method	Unit	Test conditions and supplementary instructions
Sodium acetate content	Annex B	% by mass	Titration or conductivity method
Ash	Annex C	% by mass	void
Degree of hydrolysis	Annex D	mol%	Titration method
Viscosity of 4 % aqueous solution	Annex E	mPa·s	Rotational or inclined-tube falling-ball viscometer, 20 °C
Particle size distribution	ISO 8130-1	%	void
pH of aqueous solution	ISO 976	—	Concentration (4,0 ± 0,2) %