
Polimerni materiali - Ugotavljanje viskoznosti polimerov v razredčenih raztopinah s kapilarnimi viskozimetri - 2. del: Polivinilklorid (ISO/DIS 1628-2:2026)

Plastics - Determination of the viscosity of polymers in dilute solution using capillary viscometers - Part 2: Poly(vinyl chloride) resins (ISO/DIS 1628-2:2026)

Kunststoffe - Bestimmung der Viskosität von Polymeren in verdünnter Lösung unter Verwendung von Kapillarviskosimetern - Teil 2: Vinylchlorid-Polymere (ISO/DIS 1628-2:2026)

Plastiques - Détermination de la viscosité des polymères en solution diluée à l'aide de viscosimètres à capillaires - Partie 2: Résines de poly(chlorure de vinyle) (ISO/DIS 1628-2:2026)

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83.080.20

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Thermoplastic materials

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DRAFT International Standard

ISO/DIS 1628-2

Plastics — Determination of the viscosity of polymers in dilute solution using capillary viscometers —

Part 2: Poly(vinyl chloride) resins

*Plastiques — Détermination de la viscosité des polymères en
solution diluée à l'aide de viscosimètres à capillaires —*

Partie 2: Résines de poly(chlorure de vinyle)

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ISO/DIS 1628-2:2026(en)

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*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 249, *Plastics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition, which has been technically revised.

The main change is the incorporation of an alternative procedure, the differential pressure method (following same change in ISO 1628-1:2024), based on comparing the differential pressure in capillary tubing due to the flow of polymer solution and neat solvent simultaneously.

A list of all parts in the ISO 1628 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 — Determination of the viscosity of polymers in dilute solution using capillary viscometers —

Part 2: Poly(vinyl chloride) resins

1 Scope

1.1 This document specifies conditions for the determination of the reduced viscosity (also known as viscosity number) and *K*-value of PVC resins. It is applicable to resins in powder form which consist of homopolymers of the monomer vinyl chloride and copolymers, terpolymers, etc., of vinyl chloride with one or more other monomers, but where vinyl chloride is the main constituent. The resins can contain small amounts of unpolymerized substances (e.g. emulsifying or suspending agents, catalyst residues, etc.) and other substances added during the course of the polymerization. This document is not applicable, however, to resins having a volatile-matter content in excess of $0,5 \% \pm 0,1 \%$, when determined in accordance with ISO 1269:2006. In addition to this, it is not applicable to resins which are not entirely soluble in cyclohexanone.

1.2 The reduced viscosity and *K*-value of a particular resin are related to its molecular mass, but the relationship varies depending on the concentration and type(s) of other monomer(s) present. Hence, homopolymers and copolymers having the same reduced viscosity or *K*-value can have different molecular masses.

1.3 The values determined for reduced viscosity and *K*-value, for a particular sample of PVC resin, are influenced differently by the concentration of the solution chosen for the determination. Hence the use of the procedures specified in this document only gives values for reduced viscosity and *K*-value that are comparable when the concentrations of the solutions used are identical.

1.4 The experimental procedures specified in this document can also be used to characterize the polymeric fraction obtained during the chemical analysis of a PVC composition. However, the values calculated for the reduced viscosity and *K*-value in these circumstances can deviate from the correct values for the resin used to produce the composition because of the impure nature of the recovered polymer fraction.

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 1269:2006, *Plastics — Homopolymer and copolymer resins of vinyl chloride — Determination of volatile matter (including water)*

ISO 1628-1:2024, *Plastics — Determination of the viscosity of polymers in dilute solution using capillary viscometers — Part 1: General principles*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1628-1:2024 apply.