Thermoplastics pipes and fittings - Vicat softening temperature - General test method and test conditions for vinyl chloride-based (PVC-U, PVC-C, PVC-HI) and acrylonitrile-based (ABS, ASA) pipes and fittings (ISO 2507:2026)

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 2507:2026 sisaldab Euroopa standardi EN ISO 2507:2026 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 2507:2026 consists of the English text of the European standard EN ISO 2507:2026.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 04.02.2026.	Date of Availability of the European standard is 04.02.2026.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 23.040.20, 23.040.45

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 2507

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Supersedes EN ISO 2507-1:2017, EN ISO 2507-2:2017, EN ISO 2507-3:2017

English Version

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Tubes et raccords en matières thermoplastiques - Température de ramollissement Vicat - Méthode d'essai générale et conditions d'essai pour les tubes et raccords à base de chlorure de vinyle (PVC-U, PVC-C, PVC-HI) et à base d'acrylonitrile (ABS, ASA) (ISO 2507:2026)

Rohre und Formstücke aus Thermoplasten - Vicat-Erweichungstemperatur - Allgemeines Prüfverfahren und Prüfbedingungen für Rohre und Formstücke auf Poly(vinylchlorid)- (PVC-U, PVC-C, PVC-Hi) und auf Acrylnitrilbasis (ABS, ASA) (ISO 2507:2026)

This European Standard was approved by CEN on 11 January 2026.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 2507:2026) has been prepared by Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids" in collaboration with Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems” the secretariat of which is held by NEN.

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 August 2026, and conflicting national standards shall be withdrawn at the latest by August 2026.

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 2507-1:2017, EN ISO 2507-2:2017 and EN ISO 2507-3:2017.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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

Endorsement notice

The text of ISO 2507:2026 has been approved by CEN as EN ISO 2507:2026 without any modification.

International Standard

ISO 2507

Third edition
2026-01

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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 document 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.

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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 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 5, *General properties of pipes, fittings and valves of plastic materials and their accessories — Test methods and basic specifications*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 155, *Plastics piping systems and ducting systems,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition of ISO 2507 cancels and replaces ISO 2507-1:1995, ISO 2507-2:1995 and ISO 2507-3:1995, which have been technically revised.

The main changes are as follows:

— the document was modified following edition 6 of ISO 306:2022;

— the procedure for test piece preparation from pipes and fittings was described in more detail.

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.

Introduction

This document is based on ISO 306.

For convenience of use, it has been considered preferable to draw up a complete document for use in determining the Vicat softening temperature of thermoplastics pipes and fittings. For further details, reference to ISO 306 is recommended.

However, that ISO 306 is applicable to materials in the form of sheets, whereas this document is applicable to products in the form of pipes and fittings.

This document gives the general conditions under which the Vicat softening temperature of pipes and fittings is determined and provides the particular requirements for conducting tests on pipes and fittings of various materials.

Thermoplastics pipes and fittings — Vicat softening temperature — General test method and test conditions for vinyl chloride-based (PVC-U, PVC-C, PVC-HI) and acrylonitrile-based (ABS, ASA) pipes and fittings

1 Scope

This document specifies a specific method for determining the Vicat softening temperature (VST) of thermoplastics pipes and fittings. It includes the adaption of method B 50 of ISO 306:2022 using a force of 50 N and a heating rate of 50 °C/h and the procedure for specimen preparation.

It includes the particular test conditions for determining the Vicat softening temperature (VST) of unplasticized poly(vinylchloride) (PVC-U) or chlorinated poly(vinylchloride) (PVC-C) pipes and fittings, for high impact resistance poly(vinylchloride) (PVC-HI) pipes and for acrylonitrile/butadiene/styrene (ABS) and acrylonitrile/styrene/acrylic ester (ASA) pipes and fittings.

This document can also be used for pipes and fittings from other materials (e.g. PE-UHMW).

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

ISO 472, *Plastics — Vocabulary*

ISO 16012, *Plastics — Determination of linear dimensions of test specimens*

IEC 60584-1, *Thermocouples — Part 1: EMF specifications and tolerances*

IEC 60584-3, *Thermocouples — Part 3: Extension and compensating cables — Tolerances and identification system*

IEC 60751, *Industrial platinum resistance thermometers and platinum temperature sensors*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 472 and the following apply.

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

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

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

3.1
penetration
distance over which the indenting tip shall penetrate into the specimen under test

Note 1 to entry: It is expressed in millimetres (mm).