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CEN ISO/TS 23818-3

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English Version

Assessment of conformity of plastics piping systems for the rehabilitation of existing pipelines - Part 3: Unplasticised poly(vinyl chloride) (PVC-U) material (ISO/TS 23818-3:2026)

Évaluation de la conformité des systèmes de canalisations en plastique destinés à la réhabilitation des réseaux existants - Partie 3: Matériau poly(chlorure de vinyle) non-plastifié (PVC-U) (ISO/TS 23818-3:2026)

Bewertung der Konformität von Kunststoff-Rohrleitungssystemen für die Sanierung bestehender Rohrleitungen - Teil 3: Weichmacherfreies Poly(vinylchlorid) (PVC-U) (ISO/TS 23818-3:2026)

This Technical Specification (CEN/TS) was approved by CEN on 1 March 2026 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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Ref. No. CEN ISO/TS 23818-3:2026 E

European foreword

This document (CEN ISO/TS 23818-3:2026) 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.

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.

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Endorsement notice

The text of ISO/TS 23818-3:2026 has been approved by CEN as CEN ISO/TS 23818-3:2026 without any modification.

Technical Specification

ISO/TS 23818-3

Second edition
2026-02

Assessment of conformity of plastics piping systems for the rehabilitation of existing pipelines —

Part 3: Unplasticised poly(vinyl chloride) (PVC-U) material

Évaluation de la conformité des systèmes de canalisations en plastique destinés à la réhabilitation des réseaux existants —

Partie 3: Matériau poly(chlorure de vinyle) non-plastifié (PVC-U)

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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).

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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 ISO/TC 138 *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 8, *Rehabilitation of pipeline systems*, 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 second edition cancels and replaces the first edition (ISO/TS 23818-3:2021), which has been technically revised.

The main changes are as follows:

— the document has been amended following the merging and renumbering of International Standards concerning piping systems, referred to in this document;

— in Clause 3, seven definitions have been removed by reference to ISO 11295;

— lining with spirally-wound pipes has been excluded and has been incorporated in ISO/TS 23818-4.

A list of all parts in the ISO/TS 23818 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.

Introduction

International Standards dealing with the following applications are either available or in preparation for pipeline rehabilitation:

— ISO 11300: *Piping systems for rehabilitation of underground drains, sewers and water supply networks*;

— ISO 11301: *Piping systems for rehabilitation of underground gas supply networks*.

These International Standards are distinguished from those for conventionally installed plastics piping systems by the requirement to verify certain characteristics in the as-installed condition, after site processing. This is in addition to specifying requirements for plastics piping system components as manufactured.

For the assessment of conformity, five technical specifications for pipe systems of distinctive materials are applicable:

— ISO/TS 23818-1;

— ISO/TS 23818-2;

— ISO/TS 23818-3 (this document);

— ISO/TS 23818-4.

These technical specifications cover the International Standards concerning piping systems, as presented in Table 1.

Table 1 — Structure of technical specifications for assessment of conformity

Technical Specification	Material	Technique	Application	
			Drains, sewers and water supply networks	Gas supply networks
ISO/TS 23818-1	PE	Lining with continuous pipes and close fit pipes trenchless replacement using pipe bursting, pipe extraction, horizontal drilling and impact moling	ISO 11300-1	ISO 11301-1
ISO/TS 23818-2	Thermoset composite	Lining with cured-in-place pipes (CIPP)	ISO 11300-2	n/a
ISO/TS 23818-3	PVC-U	Lining with close-fit pipes	ISO 11300-3	n/a
ISO/TS 23818-4[a]	Thermoplastic composite	Lining with spirally wound pipes and rigidly anchored plastic liners (RAPL)	ISO 11300-4	n/a
—[b]	PA-U	—[b]	n/a	—[b]

[a] In preparation

[b] Under development (as ISO/TS 23818-5)

The format of the four technical specifications is in line with technical specifications for assessment of conformity to other system standards, apart from presenting the detailed requirements for inspection and testing in two annexes, for non-pressure applications and pressure applications (where applicable), respectively.

For this document, covering only non-pressure applications, the format is schematically represented in Figure 1.

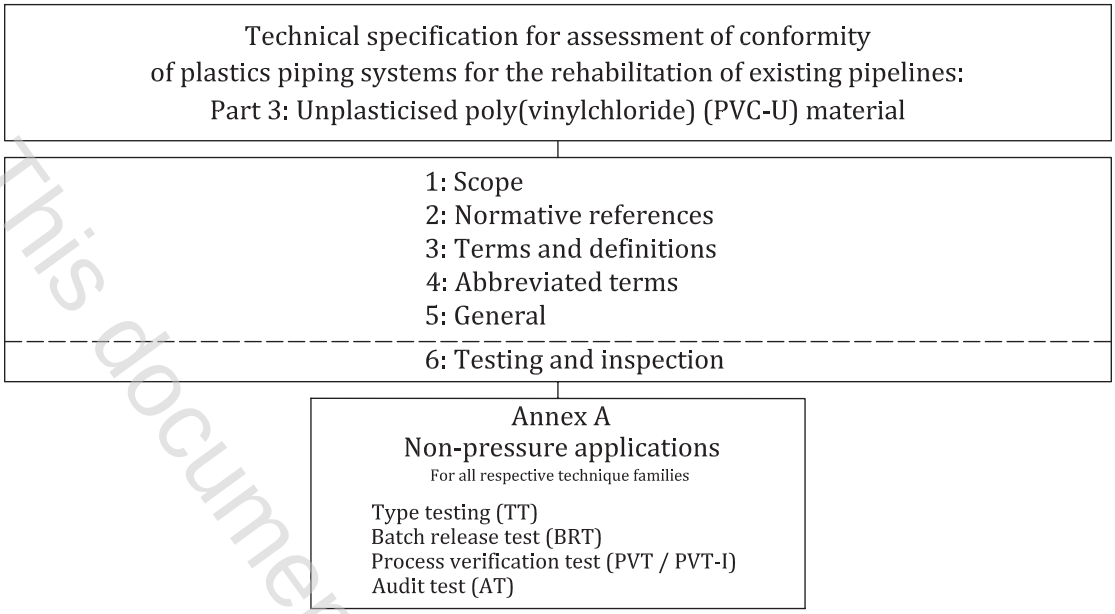

Figure 1 — Format of the technical specifications for conformity assessment

Figures 2 and 3 are intended to provide general information on the concept of testing and organization of those tests used for the purpose of the assessment of conformity. For each type of test, i.e. type testing (TT), batch release test (BRT), process verification test (PVT), and audit test (AT), this document details the applicable characteristics to be assessed as well as the frequency and sampling of testing.

A typical scheme for the assessment of conformity of PVC-U pipes, fittings, joints or assemblies by manufacturers is given in Figure 2.

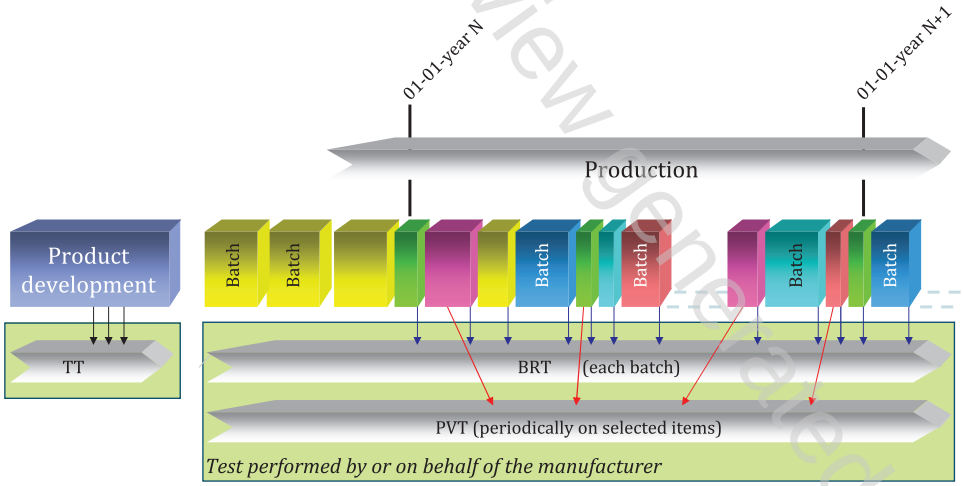

Figure 2 — Typical scheme for the assessment of conformity by a manufacturer

A typical scheme for the assessment of conformity of PVC-U pipes, fittings, joints or assemblies by manufacturers, including certification, is given in Figure 3.

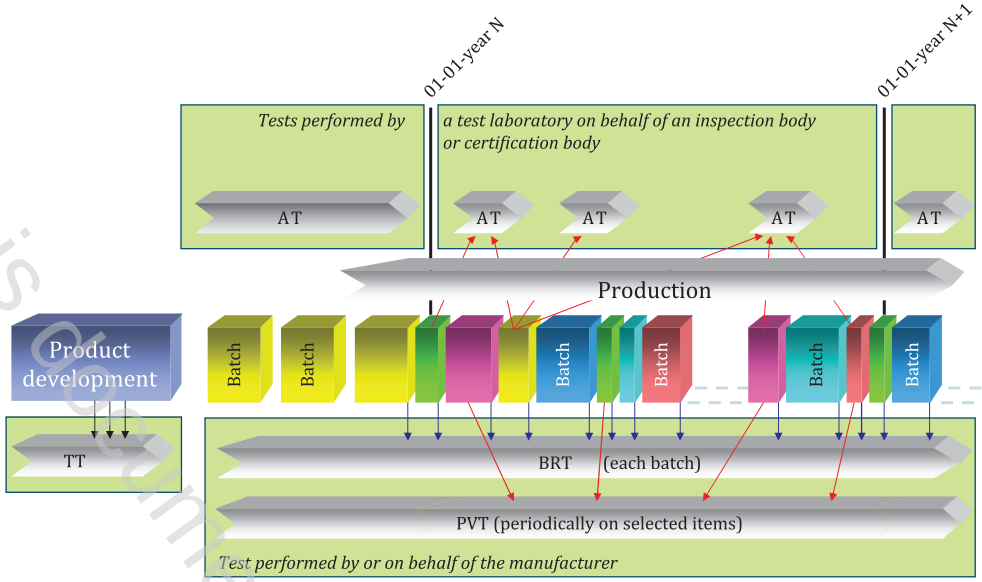

Figure 3 — Typical scheme for the assessment of conformity by a manufacturer, including certification

Assessment of conformity of plastics piping systems for the rehabilitation of existing pipelines —

Part 3:
Unplasticised poly(vinyl chloride) (PVC-U) material

1 Scope

This document provides a scheme for the assessment of conformity of PVC-U products and assemblies for the rehabilitation of existing pipelines, in accordance with ISO 11300-3, and intended to be included in the manufacturer's quality plan as part of the quality management system and for the establishment of certification 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 1628-2, *Plastics — Determination of the viscosity of polymers in dilute solution using capillary viscometers — Part 2: Poly(vinyl chloride) resins*

ISO 4435:2003, *Plastics piping systems for non-pressure underground drainage and sewerage — Unplasticized poly(vinyl chloride) (PVC-U)*

ISO 11295, *Plastics piping systems used for the rehabilitation of pipelines — Classification and overview of strategic, tactical and operational activities*

ISO 11300-3, *Piping systems for rehabilitation of underground drains, sewers and water supply networks — Part 3: Polyethylene (PE) material*

EN 1401-1, *Plastics piping systems for non-pressure underground drainage and sewerage – Unplasticized poly(vinyl chloride) (PVC-U) – Part 1: Specifications for pipes, fittings and the system*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 11295, ISO 11300-3 and the following 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 https://www.electropedia.org/

3.1 Assessment of conformity

3.1.1
certification body
impartial body, governmental or non-governmental, possessing the necessary competence and responsibility to carry out certification of conformity according to given rules of procedure and management