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STN	**Potrubné systémy na obnovu kanalizačných potrubí, stôk a vodovodných sietí Časť 1: Materiál z polyetylénu (PE) (ISO 11300-1: 2026)**	**STN EN ISO 11300-1** 75 6130

Piping systems for rehabilitation of underground drains, sewers and water supply networks - Part 1: Polyethylene (PE) material (ISO 11300-1:2026)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/26

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English Version

Piping systems for rehabilitation of underground drains, sewers and water supply networks - Part 1: Polyethylene (PE) material (ISO 11300-1:2026)

Systèmes de canalisations pour la réhabilitation des branchements, des collecteurs d'assainissement et des réseaux d'alimentation en eau enterrés - Partie 1: Matériau polyéthylène (PE) (ISO 11300-1:2026)

Rohrleitungssysteme für die Sanierung von unterirdischen Entwässerungs-, Kanalisations- und Wasserversorgungsnetzen - Teil 1: Werkstoff Polyethylen (PE) (ISO 11300-1:2026)

This European Standard was approved by CEN on 1 February 2026.

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Ref. No. EN ISO 11300-1:2026 E

Contents

Page

European foreword..... 3

European foreword

This document (EN ISO 11300-1:2026) 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of an identical text or by endorsement, at the latest by August 2026, and conflicting national standards shall be withdrawn at the latest by August 2026.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 11296-2:2018, EN ISO 11297-2:2018, EN ISO 11298-2:2018, EN ISO 11296-1:2018, EN ISO 11296-3:2018, EN ISO 11297-1:2018, EN ISO 11297-3:2018, EN ISO 11298-1:2018, EN ISO 11298-3:2018, EN ISO 21225-1:2018 and EN ISO 21225-2:2018.

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The text of ISO 11300-1:2026 has been approved by CEN as EN ISO 11300-1:2026 without any modification.

International Standard

ISO 11300-1

First edition
2026-02

Piping systems for rehabilitation of underground drains, sewers and water supply networks —

Part 1: Polyethylene (PE) material

Systèmes de canalisations pour la réhabilitation des branchements, des collecteurs d'assainissement et des réseaux d'alimentation en eau enterrés —

Partie 1: Matériau polyéthylène (PE)

Reference number
ISO 11300-1:2026(en)

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Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **2**

3 Terms and definitions **3**
3.1 General 3
3.2 Terms related to techniques 4
3.3 Terms related to characteristics 4
3.4 Terms related to product stages 6
3.5 Terms related to materials 6
3.6 Terms related to service conditions 7
3.7 Terms related to joints 8

4 Symbols and abbreviated terms **9**
4.1 Symbols 9
4.2 Abbreviated terms 10

5 Pipes **10**
5.1 Materials 10
5.1.1 General 10
5.1.2 Virgin material 10
5.1.3 Reprocessable material and recyclable material 11
5.2 General characteristics 11
5.2.1 Appearance 11
5.2.2 Colour 11
5.3 Material characteristics 11
5.4 Geometric characteristics 11
5.5 Mechanical characteristics 11
5.6 Physical characteristics 12
5.7 Jointing 12
5.8 Marking 12
5.9 Regional requirements for pipes 13

6 Fittings **13**
6.1 Materials 13
6.2 General characteristics 13
6.3 Material characteristics 14
6.4 Geometric characteristics 14
6.5 Mechanical characteristics 14
6.6 Physical characteristics 14
6.7 Jointing 14
6.8 Marking 14
6.9 Regional requirements for fittings 14

7 Ancillary components **14**

8 Fitness for purpose **15**
8.1 Materials 15
8.2 General characteristics 15
8.3 Geometric characteristics 15
8.4 Mechanical characteristics 15
8.5 Sampling 16
8.6 Regional requirements for pipes 16

9 Installation practice **16**
9.1 Preparatory work 16
9.2 Storage, handling and transport of pipes and fittings 17

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9.3 Equipment ... 17
9.3.1 General ... 17
9.3.2 Butt fusion equipment and de-beading equipment ... 17
9.3.3 Pipe skids/rollers ... 18
9.3.4 Winching and rod-pulling equipment ... 18
9.3.5 Pipe entry guides ... 18
9.3.6 Electrofusion equipment ... 18
9.3.7 Inspection equipment ... 18
9.3.8 Lifting equipment ... 19
9.4 Installation ... 19
9.4.1 General ... 19
9.4.2 Safety precautions ... 20
9.4.3 Simulated installations ... 20
9.5 Process-related inspection and testing ... 20
9.6 Pipe end termination ... 21
9.7 Reconnection to the existing pipeline system ... 21
9.8 Final inspection and testing ... 21
9.9 Documentation ... 21

Annex A (normative) **Additional requirements applicable for lining with continuous pipes** ... **22**

Annex B (normative) **Additional requirements applicable for lining with close-fit pipes** ... **24**

Annex C (normative) **Additional requirements for trenchless replacement techniques — Pipe bursting, pipe extraction, horizontal directional drilling and impact moling** ... **29**

Annex D (normative) **Layered pipes** ... **34**

Annex E (normative) **Factory-folded heat-reverted polyethylene (PE) pipe — Determination of memory ability** ... **35**

Annex F (informative) **Pipe design considerations specific to pipe bursting and pipe extraction** ... **37**

Annex G (informative) **Pipe design considerations specific to HDD** ... **39**

Annex H (informative) **Summary of required elements to be included in installation manuals** ... **41**

Bibliography ... **43**

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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 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 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 first edition of ISO 11300-1, together with ISO 11300-2, ISO 11300-3, ISO/DIS 11300-4 (in preparation) and ISO 11301-1, cancels and replaces ISO 11296-1:2018, ISO 11296-2:2018, ISO 11296-3:2018, ISO 11297-1:2018, ISO 11297-2:2018, ISO 11297-3:2018, ISO 11298-1:2018, ISO 11298-2:2018, ISO 11298-3:2018, ISO 21225-1:2018 and ISO 21225-2:2018, which have been technically revised.

The main changes are as follows:

— for piping systems made from polyethylene (PE) material, this document replaces the related content, including requirements, of the documents listed above.

A list of all parts in the ISO 11300 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.

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Introduction

This document is a part of a series of International Standards concerning piping systems of various materials used for the rehabilitation of existing pipelines in a specified application area:

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

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

The ISO 11300 series and the ISO 11301 series are subdivided into parts covering a specific material per piping system.

The ISO 11300 series is subdivided in four parts:

— *Part 1: Polyethylene (PE) material (this document);*

— *Part 2: Thermoset composite materials;*

— *Part 3: PVC-U material;*

— *Part 4: Thermoplastic composite materials.*

These documents cover various techniques for renovation and trenchless replacement. Furthermore, they 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 piping system components “as manufactured”.

A consistent structure of clause headings has been adopted for all parts of the ISO 11300 series and the ISO 11301 series, in order to facilitate direct comparisons across renovation technique families.

Figure 1 shows the clause structure and the relationship between the ISO 11300 series and the ISO 11301 series.

For complementary information, see ISO 11295.

For assessment of conformity to the requirements of this document, see ISO/TS 23818-1[3].

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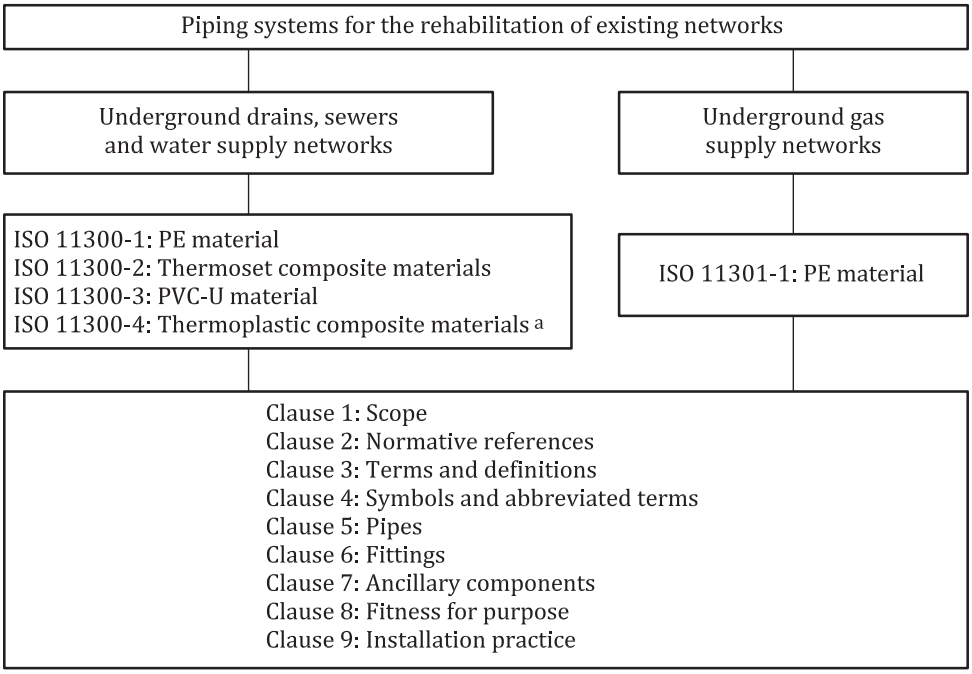

[a] In preparation.

Figure 1 — Clause structure of the ISO 11300 series and the ISO 11301 series

The various techniques for rehabilitation of underground drains, sewers and water supply networks, within the scope of pipeline rehabilitation techniques generally, are shown schematically in Figure 2. For definitions of standardized renovation techniques shown in Figure 2, but outside the scope of this document, see ISO 11295.

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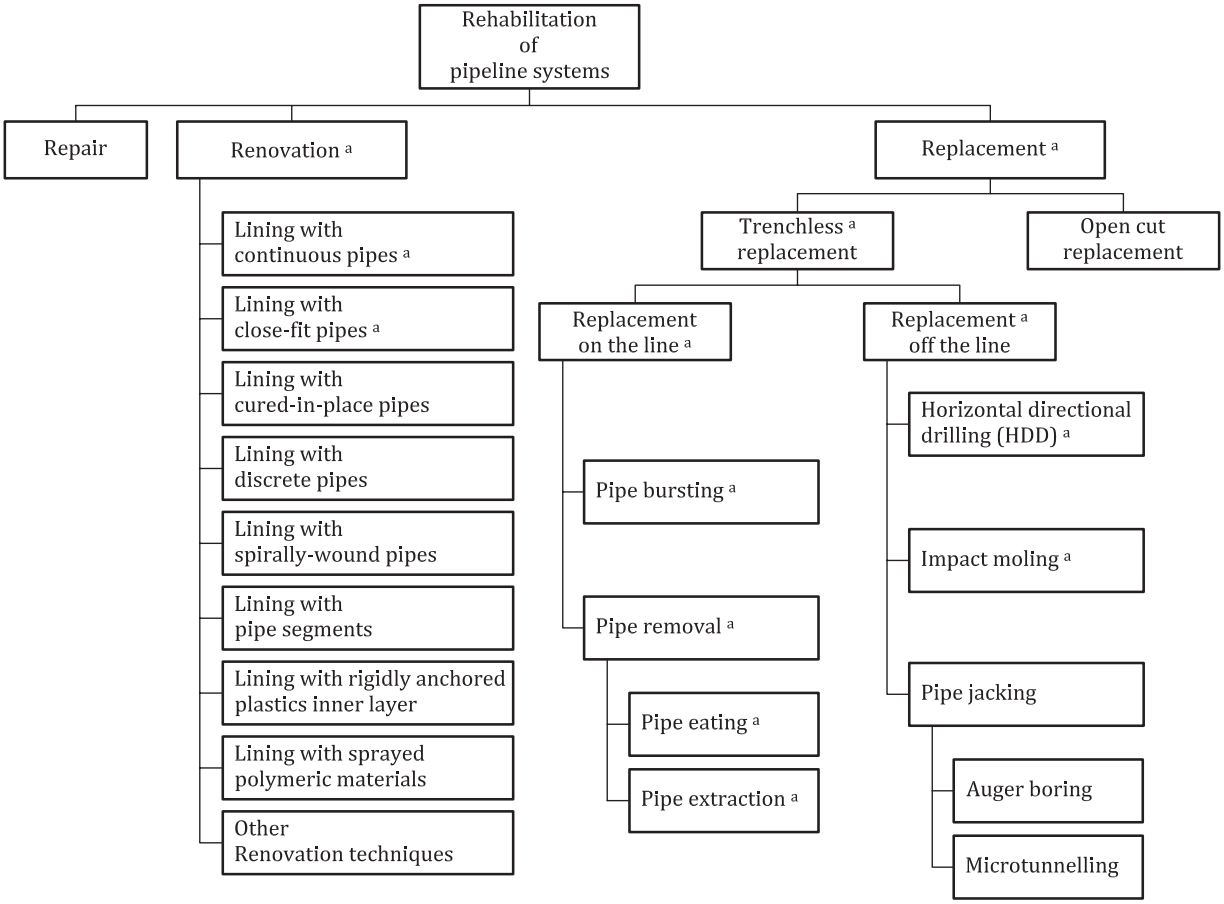

a This document is applicable, for piping systems made from PE materials.

Figure 2 — Technique families for rehabilitation of underground drains, sewers and water supply networks using plastics pipes, within the scope of pipeline rehabilitation techniques

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International Standard **ISO 11300-1:2026(en)**

Piping systems for rehabilitation of underground drains, sewers and water supply networks —

Part 1: Polyethylene (PE) material

1 Scope

This document specifies requirements and test methods for pipes and fittings which are part of piping systems for the rehabilitation, by means of renovation and trenchless replacement, of underground non-pressure and pressure drains and sewers and water supply networks, which transport water intended for human consumption, including raw water pipelines.

It is applicable to polyethylene (PE) pipes, fittings and assemblies, as manufactured and as installed. It is not applicable to the existing pipeline.

It is applicable to the following technique families for renovation, intended to be used at an operating temperature of 20 °C as the reference temperature:

— lining with continuous pipes;

— lining with close-fit pipes.

This document is applicable to the following technique families for trenchless replacement, intended to be used at an operating temperature of 20 °C as the reference temperature:

— pipe bursting and pipe extraction;

— horizontal directional drilling and impact moling.

NOTE For applications operating at constant temperatures greater than 20 °C and up to 40 °C, see ISO 4427-1:2019, Annex A.

When used with lining with continuous pipes, lining with close-fit pipes and trenchless replacement technique families, this document is applicable to:

— PE solid wall single layered pipes (nominal outside diameter, d_n), including any identification stripes;

— PE pipes with co-extruded layers on either or both the outside and inside of the pipe (total outside diameter, d_n), as specified in Annex D, where all layers have the same MRS rating.

Furthermore, when used with lining with continuous pipes and trenchless replacement this document is applicable to:

— PE coated pipes (outside diameter, d_n) having a peelable, contiguous, thermoplastics additional layer on the outside of the pipe (“coated pipe”), as specified in Annex D.

This document is applicable to jointing by means of butt fusion and electrofusion and to fabricated and injection-moulded fittings and mechanical connections of PE.

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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 1167-1, *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure — Part 1: General method*

ISO 1167-2, *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure — Part 2: Preparation of pipe test pieces*

ISO 2505, *Thermoplastics pipes — Longitudinal reversion — Test method and parameters*

ISO 3126, *Plastics piping systems — Plastics components — Determination of dimensions*

ISO 4427-1:2019, *Plastics piping systems for water supply and for drainage and sewerage under pressure — Polyethylene (PE) — Part 1: General*

ISO 4427-2, *Plastics piping systems for water supply, and for drainage and sewerage under pressure — Polyethylene (PE) — Part 2: Pipes*

ISO 4427-3, *Plastics piping systems for water supply, and for drainage and sewerage under pressure — Polyethylene (PE) — Part 3: Fittings*

ISO 4427-5, *Plastics piping systems for water supply, and for drainage and sewerage under pressure — Polyethylene (PE) — Part 5: Fitness for purpose of the system*

ISO 4633, *Rubber seals — Joint rings for water supply, drainage and sewerage pipelines — Specification for materials*

ISO 8772, *Plastics piping systems for non-pressure underground drainage and sewerage — Polyethylene (PE)*

ISO 9967, *Thermoplastics pipes — Determination of creep ratio*

ISO 9969, *Thermoplastics pipes — Determination of ring stiffness*

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

ISO 12176-1, *Plastics pipes and fittings — Equipment for fusion jointing polyethylene systems — Part 1: Butt fusion*

ISO 12176-2, *Plastics pipes and fittings — Equipment for fusion jointing polyethylene systems — Part 2: Electrofusion*

EN 681-1, *Elastomeric seal — Material requirements for pipe joint seals used in water and drainage applications — Part 1: Vulcanized rubber*

EN 681-2, *Elastomeric seals — Material requirements for pipe joint seals used in water and drainage applications — Part 2: Thermoplastic elastomers*

EN 681-3, *Elastomeric seals — Material requirements for pipe joint seals used in water and drainage applications — Part 3: Cellular materials of vulcanized rubber*

EN 681-4, *Elastomeric seals — Material requirements for pipe joint seals used in water and drainage applications — Part 4: Cast polyurethane sealing elements*

EN 12201-1, *Plastics piping systems for water supply, and for drainage and sewerage under pressure — Polyethylene (PE) — Part 1: General*

EN 12201-2, *Plastics piping systems for water supply, and for drainage and sewerage under pressure — Polyethylene (PE) — Part 2: Pipes*

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EN 12201-3, *Plastics piping systems for water supply, and for drainage and sewerage under pressure — Polyethylene (PE) — Part 3: Fittings*

EN 12201-5, *Plastics piping systems for water supply, and for drainage and sewerage under pressure — Polyethylene (PE) — Part 5: Fitness for purpose of the system*

EN 12666-1, *Plastics piping systems for non-pressure underground drainage and sewerage — Polyethylene (PE) — Part 1: Specifications for pipes, fittings and the system*

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