



NSAI
Standards

Irish Standard
I.S. EN ISO 11297-3:2018

Plastics piping systems for renovation of underground drainage and sewerage networks under pressure - Part 3: Lining with close-fit pipes (ISO 11297-3:2018)

I.S. EN ISO 11297-3:2018

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National Foreword

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EUROPEAN STANDARD

EN ISO 11297-3

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English Version

**Plastics piping systems for renovation of underground
drainage and sewerage networks under pressure - Part 3:
Lining with close-fit pipes (ISO 11297-3:2018)**

Systèmes de canalisations en plastique pour la
rénovation des réseaux de branchements et de
collecteurs d'assainissement enterrés sous pression -
Partie 3: Tubage par tuyau continu sans espace
annulaire (ISO 11297-3:2018)

Kunststoff-Rohrleitungssysteme für die Renovierung
von erdverlegten Abwasserdruckleitungen - Teil 3:
Close-Fit-Lining (ISO 11297-3:2018)

This European Standard was approved by CEN on 26 August 2018.

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

EN ISO 11297-3:2018 (E)

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European foreword

This document (EN ISO 11297-3:2018) 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of an identical text or by endorsement, at the latest by April 2019, and conflicting national standards shall be withdrawn at the latest by April 2019.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 11297-3:2013.

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Endorsement notice

The text of ISO 11297-3:2018 has been approved by CEN as EN ISO 11297-3:2018 without any modification.

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INTERNATIONAL
STANDARD

ISO
11297-3

Second edition
2018-09

**Plastics piping systems for renovation
of underground drainage and
sewerage networks under pressure —**

**Part 3:
Lining with close-fit pipes**

*Systèmes de canalisations en plastique pour la rénovation des réseaux
de branchements et de collecteurs d'assainissement enterrés sous
pression —*

Partie 3: Tubage par tuyau continu sans espace annulaire



Reference number
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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: 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*.

This second edition cancels and replaces the first edition (ISO 11297-3:2013), which has been technically revised.

The main changes compared to the previous edition are as follows:

- [Figure 1](#) and [Clauses 1, 5.2.2, 5.5, 8.4, 9.3.4](#) and [9.4](#) have been technically revised;
- New sub-clauses [5.9](#), [6.3](#) and [8.9](#) specifying regional requirements for pipes, fittings and the installed system respectively, have also been added in accordance with the Vienna Agreement, to allow reference to European standards in countries where these are mandated by law in place of ISO standards of identical scope.

A list of all parts in the ISO 11297 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 International Standard is a part of a system standard for plastics piping systems of various materials used for renovation of existing pipelines in a specified application area. System standards for renovation dealing with the following applications are either available or in preparation:

- ISO 11296, *Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks*;
- ISO 11297, *Plastics piping systems for renovation of underground drainage and sewerage networks under pressure* (this document);
- ISO 11298, *Plastics piping systems for renovation of underground water supply networks*;
- ISO 11299, *Plastics piping systems for renovation of underground gas supply networks*.

These system standards are distinguished from system standards 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 verification of characteristics of plastics piping systems “as manufactured”.

Each of the System Standards comprises a:

- *Part 1: General*

and all applicable renovation technique family-related parts, which for non- drainage and sewerage networks under pressure include or potentially include the following:

- *Part 2: Lining with continuous pipes*
- *Part 3: Lining with close-fit pipes* (this document)
- *Part 4: Lining with cured-in-place pipes*
- *Part 5: Lining with discrete pipes*
- *Part 6: Lining with adhesive-backed hoses*

The requirements for any given renovation technique family are specified in Part 1, applied in conjunction with the relevant other part. For example, both ISO 11297-1 and this document together specify the requirements relating to lining with close-fit pipes. For complementary information, see ISO 11295. Not all technique families are pertinent to every area of application and this is reflected in the part numbers included in each System Standard.

A consistent structure of clause headings has been adopted for all parts to facilitate direct comparisons across renovation technique families.

[Figure 1](#) shows the common part and clause structure and the relationship between ISO 11297 and system standards for other applications.

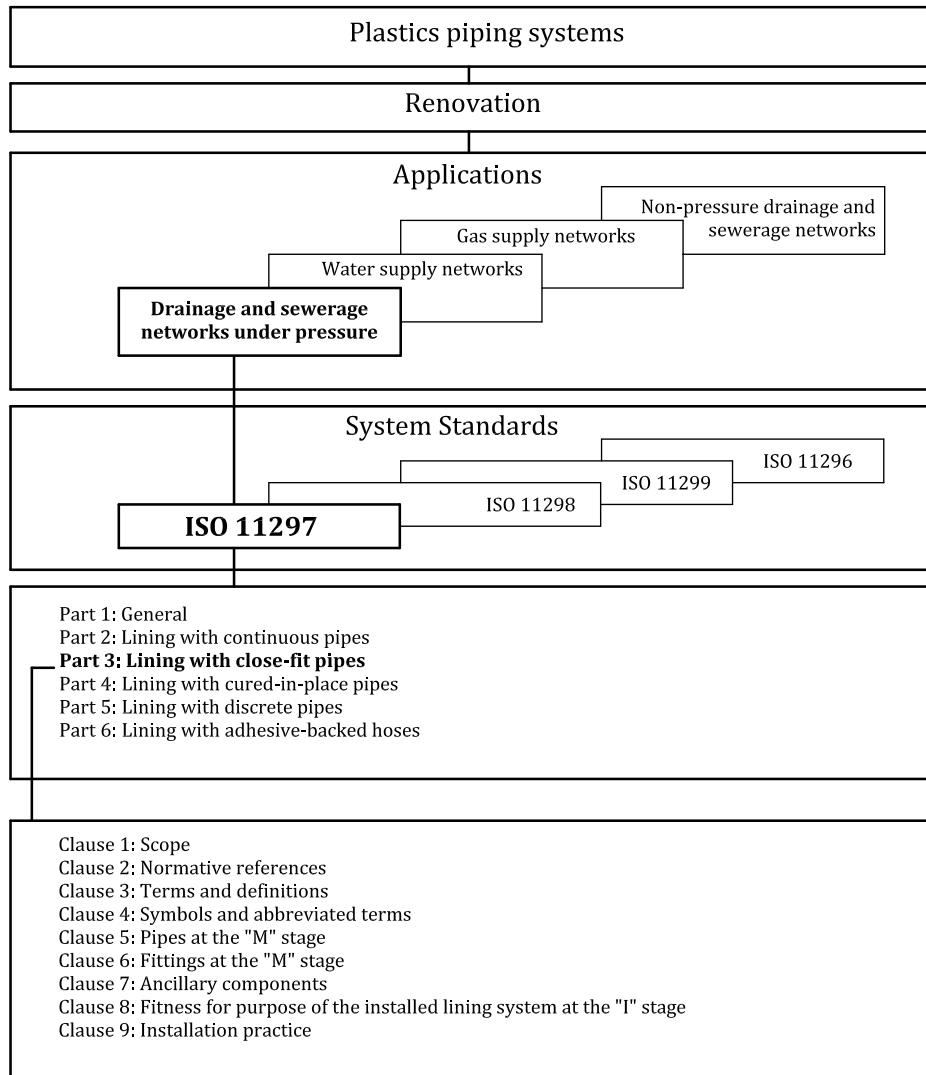


Figure 1 — Format of the renovation system standards

Plastics piping systems for renovation of underground drainage and sewerage networks under pressure —

Part 3: Lining with close-fit pipes

1 Scope

This document, in conjunction with ISO 11297-1, specifies requirements and test methods for close-fit lining systems intended to be used for the renovation of underground drainage and sewerage networks under pressure.

It applies to pipes and fittings, as manufactured, as well as to the installed lining system. It is applicable to polyethylene (PE) pipes of either solid wall single layer or co-extruded layer construction, which is reduced in the factory or on site to provide a close-fitting independent or interactive pressure pipe liner, as well as associated fittings and joints for the construction of the lining system. It is not applicable to PE coated pipes having a peelable, contiguous, thermoplastic additional layer on the outside of the pipe.

It is applicable to PE pipes, fittings and assemblies intended to be used at an operating temperature of 20 °C as the reference temperature.

NOTE For applications operating at constant temperatures greater than 20 °C and up to 40 °C, see ISO 4427-1:2007, Annex A.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3, *Preferred numbers — Series of preferred numbers*

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

ISO 4427-1:2007, *Plastics piping systems — Polyethylene (PE) pipes and fittings for water supply — Part 1: General*

ISO 4427-2:2007, *Plastics piping systems — Polyethylene (PE) pipes and fittings for water supply — Part 2: Pipes*

ISO 4427-3, *Plastics piping systems — Polyethylene (PE) pipes and fittings for water supply — Part 3: Fittings*

ISO 4427-5:2007, *Plastics piping systems — Polyethylene (PE) pipes and fittings for water supply — Part 5: Fitness for purpose of the system*

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

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

ISO 11297-1:2018, *Plastics piping systems for renovation of underground drainage and sewerage networks under pressure — Part 1: General*

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

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