

MAURITIAN
STANDARD

MS ISO
4427-2:2019

Second edition
2019-09-28

**Plastics piping systems for water
supply and for drainage and
sewerage under pressure —
Polyethylene (PE) —**

**Part 2:
Pipes**

ICS 23.040.20; 91.140.60; 93.025



**Mauritius Standards Bureau
Moka**

National foreword

This Mauritian Standard is identical with the International Standard **ISO 4427-2:2019**, *Plastics piping systems for water supply and for drainage and sewerage under pressure — Polyethylene (PE) — Part 2: Pipes*. It was adopted by the Mauritius Standards Bureau on the recommendation of the **Building and Construction Standards Committee** through its Subcommittee on Plastic Pipes and Fittings. The standard was approved by the **Standards Council** on 29 August 2019 and notified in the Government Gazette on **28 September 2019**. *

This second edition cancels and replaces the first edition (ISO 4427-2:2007), which has been technically revised. It also incorporates Amendment ISO 4427-2:2007/Amd. 1:2014.

For the purposes of this standard, the following change should be made:
-The 'decimal comma' should be replaced by 'decimal point'.

The main changes compared to the previous edition are:

- Update of normative references;
- Technical consistency with ISO 4437-2.

* **General Notice No. 1623 of 2019**



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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 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, fitting and valves for the transport of fluids*, Subcommittee SC 2, *Plastics pipes and fittings for water supplies*.

This second edition cancels and replaces the first edition (ISO 4427-2:2007), which has been technically revised. It also incorporates Amendment ISO 4427-2:2007/Amd. 1:2014.

The main changes compared to the previous edition are:

- Update of the normative references;
- Technical consistency with ISO 4437-2 (see Bibliography [1]).

A list of all parts in the ISO 4427 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

The ISO 4427 series of standards are a set of system standards that specify the requirements for a piping system and its components when made from polyethylene (PE). The piping system is intended to be used in buried or above ground applications, for the conveyance of water for human consumption, raw water prior to treatment, drainage and sewerage under pressure, vacuum sewer systems, and water for other purposes.

In respect of potential adverse effects on the quality of water intended for human consumption caused by the products covered by the ISO 4427 series, it does not provide information on the restriction on the use of products.

NOTE Guidance for assessment of conformity can be found in Reference [2] in the Bibliography.

PREVIEW

PREVIEW

Plastics piping systems for water supply, and for drainage and sewerage under pressure — Polyethylene (PE) —

Part 2: Pipes

1 Scope

This document specifies the pipes made from polyethylene (PE) for buried or above ground applications, intended for the conveyance of:

- water for human consumption;
- raw water prior to treatment;
- drainage and sewerage under pressure;
- vacuum sewer systems;
- water for other purposes.

NOTE 1 The intended uses include sea outfalls, laid in water and pipes suspended below bridges.

Pipes complying with this document are **not** intended for the transport of water intended for human consumption in contaminated soils unless special consideration has been taken.

NOTE 2 For example, ISO 21004 provides an alternative solution for use in contaminated soils. See Reference [3] in the Bibliography.

This document specifies three types of pipe:

- PE pipes (outside diameter d_n), including any identification stripes;
- PE pipes with co-extruded layers on either or both the outside and/or inside of the pipe (total outside diameter d_n) where all layers have the same MRS rating;
- PE pipes (outside diameter d_n) having a peelable and contiguous thermoplastics additional layer on the outside of the pipe (“coated pipe”).

This document also specifies the test parameters for the test methods referred to in this document.

In conjunction with the other parts of the ISO 4427 series, this document is applicable to PE pipes, their joints and to joints with components made of PE and other materials, intended to be used under the following conditions:

- a) a maximum allowable operating pressure (PFA) up to and including 25 bar¹⁾;
- b) an operating temperature of 20 °C as the reference temperature.

NOTE 3 For other operating temperatures, guidance is given in ISO 4427-1:2019, Annex A.

1) 1 bar = 0,1 MPa = 10⁵ Pa; 1 MPa = 1 N/mm².