MAURITIAN STANDARD

MS ISO 4427-1:2007

First edition
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Plastics piping systems – Polyethylene (PE) pipes and fittings for water supply – Part 1: General

ICS 23.040.20; 23.040.45; 91.140.60; 93.025

Mauritius Standards Bureau
Moka

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National foreword

This Mauritian Standard is identical with the International Standard **ISO 4427-1:2007(E)**, *Plastics piping systems – Polyethylene (PE) pipes and fittings for water supply – Part 1: General*. It was adopted by the Mauritius Standards Bureau in 2007 on the recommendation of the **Building and Construction Standards Committee** and approved by the **Standards Council** on 05 November 2008. It was notified in the Government Gazette on **06 December 2008** *.

This first edition, together with MS ISO 4427-2, cancels and replaces MS ISO 4427:1996 of which it constitutes a technical revision.

For the purposes of this standard the following changes should be made:

(i) the words 'International Standard' should be replaced by 'Mauritian Standard';
(ii) the "decimal comma" should be replaced by "decimal point".

The following Mauritian Standards are identical to the International Standards, which are referenced in the adopted standard:

International Standards	**Corresponding Mauritian Standards**
ISO 4427-2,	**MS ISO 4427-2**, *Plastics piping systems – Polyethylene (PE) pipes and fittings for water supply – Part 2: Pipes*
ISO 4427-3,	**MS ISO 4427-3**, *Plastics piping systems – Polyethylene (PE) pipes and fittings for water supply – Part 3: Fittings*
ISO 4427-5,	**MS ISO 4427-5**, *Plastics piping systems – Polyethylene (PE) pipes and fittings for water supply – Part 5: Fitness for purpose of the system*

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Contents

Page

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 4427-1 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 2, *Plastics pipes and fittings for water supplies*.

This first edition, together with ISO 4427-2, cancels and replaces ISO 4427:1996, of which it constitutes a technical revision.

ISO 4427 consists of the following parts, under the general title *Plastics piping systems — Polyethylene (PE) pipes and fittings for water supply*:

— *Part 1: General*

— *Part 2: Pipes*

— *Part 3: Fittings*

— *Part 5: Fitness for purpose of the system*

Introduction

ISO 4427, the system standard, specifies the requirements for a piping system and its components when made from polyethylene (PE). The piping system is intended to be used for water supply intended for human consumption, including the conveyance of raw water prior to treatment and that of water for general purposes.

In respect of potential adverse effects on the quality of water intended for human consumption caused by the products covered by ISO 4427:

a) ISO 4427 provides no information as to whether the products may be used without restriction;

b) existing national regulations concerning the use and/or the characteristics of these products are in force.

NOTE Guidance for assessment of conformity can be found in Bibliographical references [9] and [10].

Plastics piping systems — Polyethylene (PE) pipes and fittings for water supply —

Part 1: General

1 Scope

This part of ISO 4427 specifies the general aspects of polyethylene (PE) piping systems (mains and service pipes) intended for the conveyance of water for human consumption, including raw water prior to treatment and water for general purposes.

It also specifies the test parameters for the test methods to which it refers.

In conjunction with the other parts of ISO 4427, it is applicable to PE pipes, fittings, their joints and to mechanical joints with components of other materials, intended to be used under the following conditions:

a) a maximum operating pressure (MOP) up to and including 25 bar[1)];

b) an operating temperature of 20 °C as the reference temperature.

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

NOTE 2 ISO 4427 covers a range of maximum operating pressures and gives requirements concerning colours and additives. It is the responsibility of the purchaser or specifier to make the appropriate selections from these aspects, taking into account their particular requirements and any relevant national guidance or regulations and installation practices or codes.

2 Normative references

The following referenced documents are indispensable for the application 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 3:1973, *Preferred numbers — Series of preferred numbers*

ISO 472, *Plastics — Vocabulary*

ISO 1043-1, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics*

ISO 1133:2005, *Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics*

1) 1 bar = 0,1 MPa = 10^5 Pa; 1 MPa = 1 N/mm^2.