

This is a preview of "ISO 4427-2:2007". [Click here to purchase the full version from the ANSI store.](#)

First edition  
2007-08-01

---

---

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

### Part 2: Pipes

*Systèmes de canalisations en plastique — Tubes et raccords en  
polyéthylène (PE) destinés à l'alimentation en eau —*

*Partie 2: Tubes*



Reference number  
ISO 4427-2:2007(E)

© ISO 2007

This is a preview of "ISO 4427-2:2007". [Click here to purchase the full version from the ANSI store.](#)

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2007

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

This is a preview of "ISO 4427-2:2007". Click here to purchase the full version from the ANSI store.

## Contents

Page

Foreword.....	iv
Introduction .....	v
1 Scope .....	1
2 Normative references .....	2
3 Terms, definitions, symbols and abbreviated terms.....	2
4 Material .....	3
4.1 Compound .....	3
4.2 Identification compound .....	3
5 General characteristics .....	3
5.1 Appearance .....	3
5.2 Colour .....	3
5.3 Effect on water quality.....	3
6 Geometrical characteristics.....	3
6.1 Measurements.....	3
6.2 Mean outside diameter and out-of-roundness (ovality).....	3
6.3 Wall thicknesses and their tolerances.....	5
6.4 Coiled pipe.....	10
6.5 Lengths .....	10
7 Mechanical characteristics .....	10
7.1 Conditioning.....	10
7.2 Requirements .....	10
7.3 Retest in case of failure at 80 °C .....	12
8 Physical characteristics .....	12
8.1 Conditioning.....	12
8.2 Requirements .....	12
9 Chemical characteristics of pipes in contact with chemicals.....	14
10 Performance requirements .....	14
11 Marking .....	14
11.1 General.....	14
11.2 Minimum required marking of pipes.....	14
Annex A (normative) Layered pipes.....	15
Annex B (informative) Relationship between PN, MRS, S and SDR .....	17
Bibliography .....	18

## 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 4427-2 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 4427-1, 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*

This is a preview of "ISO 4427-2:2007". [Click here to purchase the full version from the ANSI store.](#)

## 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 [5] and [6].