

ISO/FDIS 15875-2:2025(en)

ISO/TC 138/SC 2

Secretariat: SNV

Date: 2025-04-30/07-14

Plastics piping systems for hot and cold water installations. —
Crosslinked polyethylene (PE-X) —

Part 2:

Pipes

Systèmes de canalisations en plastique pour les installations d'eau chaude et froide — Polyéthylène réticulé (PE-X) —

Partie 2: Tubes

ISO/FDIS 15875-2

<https://standards.itch.ai/catalog/standards/iso/acc1f179-52bd-4658-b86a-c98f4db04c05/iso-fdis-15875-2>

FDIS stage

Edited DIS - MUST BE USED FOR FINAL DRAFT

Formatted: Left

Style Definition

Formatted: zzCover large

Formatted: Right: 1.5 cm, Bottom: 1 cm, Gutter: 0 cm, Section start: New page, Header distance from edge: 1.27 cm, Footer distance from edge: 1.27 cm

Formatted: Font color: Auto

Formatted: Font color: Auto

Formatted: Font color: Auto

Formatted: Regular, French (Switzerland)

Formatted: Cover Title_A2

Formatted

Formatted: Left

© ISO 2025

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
GP 401 Ch. de Blandonnet 9
CH-1214 Vernier, Geneva
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: + 41 22 749 01 11
Email: copyright@iso.org

E-mail: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Formatted: HeaderCentered

Formatted: Font: Bold

Formatted: Default Paragraph Font, French (Switzerland)

Formatted: French (Switzerland)

Formatted: Default Paragraph Font, French (Switzerland)

Formatted: French (Switzerland)

Formatted: French (Switzerland)

Formatted: French (Switzerland)

Formatted: zzCopyright address, Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

iTeh Standards (<https://standards.iteh.ai>) Document Preview

ISO/FDIS 15875-2

<https://standards.iteh.ai/catalog/standards/iso/acc1f179-52bd-4658-b86a-a98f4db04c05/iso-fdis-15875-2>

Formatted: FooterPageRomanNumber

Contents

Foreword.....	v
Introduction.....	vii
1 Scope.....	1
2 Normative references	1
3 Terms, definitions and symbols.....	2
4 Generic requirements, instructions and explanations.....	5
5 Material	6
6 General characteristics.....	12
7 Geometrical characteristics.....	13
8 Mechanical characteristics.....	17
9 Physical and chemical characteristics.....	18
10 Performance requirements.....	19
11 Marking.....	19
Annex A (normative) Pipe construction	21
Annex B (normative) Derivation of $S_{calc,max}$ values.....	25
Annex C (normative) Proof of the thermal stability of the barrier layer material resp. adhesive layer material resp. outer layer material — Test procedure.....	27
Bibliography	31
Foreword.....	v
Introduction.....	vii
1 Scope.....	1
2 Normative references	1
3 Terms and definitions and symbols	2
3.1 Terms and definitions.....	2
3.2 Symbols.....	5
4 Generic requirements, instructions and explanations.....	5
4.1 Designation PE-X.....	5
4.2 Application classes, design pressures and pipe dimension classes restrictions	6
4.3 Application classes—Responsibility of the purchaser or specifier.....	6
4.4 Use of the parts of the system series.....	6
4.5 PE-X pipes provided with a thin barrier layer	6
4.6 Completeness of tests.....	6
4.7 Test result interchangeability restriction.....	6
5 Material	6
5.1 Pipe material.....	6
5.2 Evaluation of σ_{LPL} -curves.....	7
5.3 Reference lines.....	7
5.4 Influence on water intended for human consumption.....	8
5.5 Barrier layer material.....	9
5.5.1 General.....	9

Formatted: HeaderCentered, Left

Formatted: Font: Bold, English (United Kingdom)

Formatted: Font: Bold

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Formatted: Font: 10 pt

Formatted: FooterCentered, Left, Space Before: 0 pt, Tab stops: Not at 17.2 cm

Formatted: Font: 10 pt

Formatted: Font: 10 pt

Formatted: Font: 11 pt

Formatted: FooterPageRomanNumber, Left, Space After: 0 pt, Tab stops: Not at 17.2 cm

5.5.2 Thermal stability of the barrier layer material	9
5.5.3 Thermal stability of the adhesive layer material	9
5.5.4 Thermal stability of the outer layer material	9
6 General characteristics	10
6.1 Pipe construction	10
6.2 Appearance	10
6.3 Opacity	10
6.4 Oxygen permeability	10
7 Geometrical characteristics	11
7.1 Pipes without barrier layer(s) - General	11
7.2 Pipes without barrier layer - Dimensions of pipes	11
7.2.1 Outside diameters	11
7.2.2 Wall thicknesses and their tolerances	11
7.3 Pipes with barrier layer - Dimensions of pipes	14
7.3.1 General	14
7.3.2 Option I - Dimensional integration of the barrier layer	14
7.3.3 Option II - Barrier layer on top	14
8 Mechanical characteristics	15
9 Physical and chemical characteristics	16
10 Performance requirements	17
11 Marking	17
11.1 General requirements	17
11.2 Minimum required marking	17
Annex A (normative) Pipe construction	19
Annex B (normative) Derivation of $S_{calc,max}$ values	22
Annex C (normative) Proof of the thermal stability of the barrier layer material resp. adhesive layer material resp. outer layer material (test procedure)	24
Bibliography	27

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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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, fittings and valves for the transport of fluids*, Subcommittee SC 2, *Plastics pipes and fittings for water supplies*, 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 second edition cancels and replaces the first edition (ISO 15875-2:2003), which has been technically revised. It also incorporates the Amendments ISO 15875-2:2003/Amd 1:2007 and ISO 15875-2:2003/Amd 2:2020.

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

- the normative references have been updated;
- a new clause 4.1 "Generic requirements, instructions and explanations" has been added and subsequent clauses have been renumbered;
- pipe material has been specified more precisely;
- a Formula 0 for the 110 °C reference curve has been added;
- a new subclause 5.3.3 "Reference lines" has been added;
- a new subclause 5.5.0 "Barrier layer material" has been added;

Formatted: Font: Bold, English (United Kingdom)

Formatted: HeaderCentered, Left

Formatted: Font: Bold

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Formatted: English (United Kingdom)

Formatted: English (United Kingdom)

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: English (United Kingdom)

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 0.7 cm + 1.4 cm + 2.1 cm + 2.8 cm + 3.5 cm + 4.2 cm + 4.9 cm + 5.6 cm + 6.3 cm + 7 cm

Formatted: Font: 10 pt

Formatted: FooterCentered, Left, Space Before: 0 pt, Tab stops: Not at 17.2 cm

Formatted: Font: 10 pt

Formatted: Font: 10 pt

Formatted: Font: 11 pt

Formatted: FooterPageRomanNumber, Left, Space After: 0 pt, Tab stops: Not at 17.2 cm