



NSAI
Standards

Irish Standard

I.S. EN ISO 22391-3:2009&A1:2020

Plastics piping systems for hot and cold water installations - Polyethylene of raised temperature resistance (PE-RT) - Part 3: Fittings (ISO 22391-3:2009)

I.S. EN ISO 22391-3:2009&A1:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

EN ISO 22391-3:2009/A1:2020

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Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN ISO 22391-3:2009&A1:2020 is the adopted Irish version of the European Document EN ISO 22391-3:2009, Plastics piping systems for hot and cold water installations - Polyethylene of raised temperature resistance (PE-RT) - Part 3: Fittings (ISO 22391-3:2009)

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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN ISO 22391-3:2009/A1

December 2020

ICS 23.040.45; 91.140.60

English Version

Plastics piping systems for hot and cold water installations
- Polyethylene of raised temperature resistance (PE-RT) -
Part 3: Fittings - Amendment 1 (ISO 22391-3:2009/Amd
1:2020)

Systèmes de canalisations en plastique pour les
installations d'eau chaude et froide - Polyéthylène de
meilleure résistance à la température (PE-RT) - Partie
3: Raccords - Amendement 1 (ISO 22391-3:2009/Amd
1:2020)

Kunststoff-Rohrleitungssysteme für die Warm- und
Kaltwasserinstallation - Polyethylen erhöhter
Temperaturbeständigkeit (PE-RT) - Teil 3: Formstücke
- Änderung 1 (ISO 22391-3:2009/Amd 1:2020)

This amendment A1 modifies the European Standard EN ISO 22391-3:2009; it was approved by CEN on 12 October 2020.

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

EN ISO 22391-3:2009/A1:2020 (E)

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European foreword

This document (EN ISO 22391-3:2009/A1:2020) 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 Amendment to the European Standard EN ISO 15841:2014 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2021, and conflicting national standards shall be withdrawn at the latest by June 2021.

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Endorsement notice

The text of ISO 22391-3:2009/Amd 1:2020 has been approved by CEN as EN ISO 22391-3:2009/A1:2020 without any modification.

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 22391-3

December 2009

ICS 23.040.45; 91.140.60; 93.025

English Version

**Plastics piping systems for hot and cold water installations -
Polyethylene of raised temperature resistance (PE-RT) - Part 3:
Fittings (ISO 22391-3:2009)**

Systèmes de canalisations en plastique pour les
installations d'eau chaude et froide - Polyéthylène de
meilleure résistance à la température (PE-RT) - Partie 3:
Raccords (ISO 22391-3:2009)

Kunststoff-Rohrleitungssysteme für die Warm- und
Kaltwasserinstallation - Polyethylen erhöhter
Temperaturbeständigkeit (PE-RT) - Teil 3: Formstücke
(ISO 22391-3:2009)

This European Standard was approved by CEN on 4 November 2009.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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EN ISO 22391-3:2009 (E)

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Foreword

This document (EN ISO 22391-3:2009) 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.

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The text of ISO 22391-3:2009 has been approved by CEN as a EN ISO 22391-3:2009 without any modification.

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INTERNATIONAL STANDARD

ISO
22391-3

Second edition
2009-12-01

Plastics piping systems for hot and cold water installations — Polyethylene of raised temperature resistance (PE-RT) —

Part 3: Fittings

*Systèmes de canalisations en plastique pour les installations d'eau
chaude et froide — Polyéthylène de meilleure résistance à la
température (PE-RT) —*

Partie 3: Raccords



Reference number
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ISO 22391-3:2009(E)

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.

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ISO 22391-3 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 second edition cancels and replaces the first edition (ISO 22391-3:2007), which is extended from only dealing with PE-RT material (referred to as Type I) to cover PE-RT materials Type I and Type II.

ISO 22391 consists of the following parts¹⁾, under the general title *Plastics piping systems for hot and cold water installations — Polyethylene of raised temperature resistance (PE-RT)*:

- *Part 1: General*
- *Part 2: Pipes*
- *Part 3: Fittings*
- *Part 5: Fitness for purpose of the system*

1) This System Standard does not incorporate a Part 4: Ancillary equipment or a Part 6: Guidance for installation. For ancillary equipment, separate standards can apply. Guidance for installation of plastics piping systems made from different materials, intended to be used for hot and cold water installations, is covered by ENV 12108.

Introduction

The System Standard, of which this is Part 3, specifies the requirements for a piping system and its components when made from polyethylene of raised temperature resistance (PE-RT). The piping system is intended to be used for hot and cold water installations.

In respect of potential adverse effects on the quality of water intended for human consumption caused by the products covered by ISO 22391, the following are relevant.

- a) This part of ISO 22391 provides no information as to whether the products can be used without restriction.
- b) Existing national regulations concerning the use and/or characteristics of the products remain in force.

This part of ISO 22391 specifies the general aspects of the plastics piping system. At the date of publication of this part of ISO 22391, System Standards Series for piping systems of other plastics materials used for the same application are the following:

ISO 15874 (all parts), *Plastics piping systems for hot and cold water installations — Polypropylene (PP)*

ISO 15875 (all parts), *Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X)*

ISO 15876 (all parts), *Plastics piping systems for hot and cold water installations — Polybutylene (PB)*

ISO 15877 (all parts), *Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C)*

Plastics piping systems for hot and cold water installations — Polyethylene of raised temperature resistance (PE-RT) —

Part 3: Fittings

1 Scope

This part of ISO 22391 specifies the characteristics of fittings for piping systems made of

- polyethylene of raised temperature resistance (PE-RT), Type I, and
- polyethylene of raised temperature resistance (PE-RT), Type II,

intended to be used for hot and cold water installations within buildings for the conveyance of water, whether or not the water is intended for human consumption (domestic systems) and for heating systems, under the design pressures and temperatures appropriate to the class of application according to ISO 22391-1.

This part of ISO 22391 covers a range of service conditions (classes of application), design pressures and pipe dimension classes, and also specifies test parameters and test methods. In conjunction with the other parts of ISO 22391, it is applicable to fittings made of PE-RT, as well as to those made of other materials, intended to be fitted to pipes conforming to ISO 22391-2 for hot and cold water installations, the joints of which are in accordance with ISO 22391-5.

This part of ISO 22391 is applicable to the following types of fitting:

- mechanical fittings;
- socket fusion fitting;
- electrofusion fittings;
- fittings with incorporated inserts.

It is not applicable to values of design temperature, maximum design temperature or malfunction temperature in excess of those specified in ISO 22391-1.

NOTE 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 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 7-1, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*

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