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Irish Standard  
S.R. CEN ISO/TS 22391-7:2011

# Plastics piping systems for hot and cold water installations - Polyethylene of raised temperature resistance (PE-RT) - Part 7: Guidance for the assessment of conformity (ISO/TS 22391-7:2011)

## S.R. CEN ISO/TS 22391-7:2011

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English Version

**Plastics piping systems for hot and cold water installations -  
Polyethylene of raised temperature resistance (PE-RT) - Part 7:  
Guidance for the assessment of conformity (ISO/TS 22391-  
7:2011)**

Systèmes de canalisations en plastique pour les  
installations d'eau chaude et froide - Polyéthylène de  
meilleure résistance à la température (PE-RT) - Partie 7:  
Guide pour l'évaluation de la conformité (ISO/TS 22391-  
7:2011)

Kunststoff-Rohrleitungssysteme für die Warm- und  
Kaltwasserinstallation - Polyethylen erhöhter  
Temperaturbeständigkeit (PE-RT) - Teil 7: Empfehlungen  
für die Beurteilung der Konformität (ISO/TS 22391-7:2011)

This Technical Specification (CEN/TS) was approved by CEN on 14 November 2011 for provisional application.

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## **Foreword**

This document (CEN ISO/TS 22391-7:2011) has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids".

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

**Part 7:  
Guidance for the assessment of  
conformity**

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

*Partie 7: Guide pour l'évaluation de la conformité*





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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.

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.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of normative document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

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/TS 22391-7 was prepared by the European Committee for Standardization (CEN) Technical Committee TC 155, *Plastics piping systems and ducting systems*, in collaboration with ISO 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 accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

ISO 22391 consists of the following parts, 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*
- *Part 7: Guidance for the assessment of conformity* [Technical Specification]

## Introduction

At the date of publication of this part of ISO 22391, System Standards 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)*

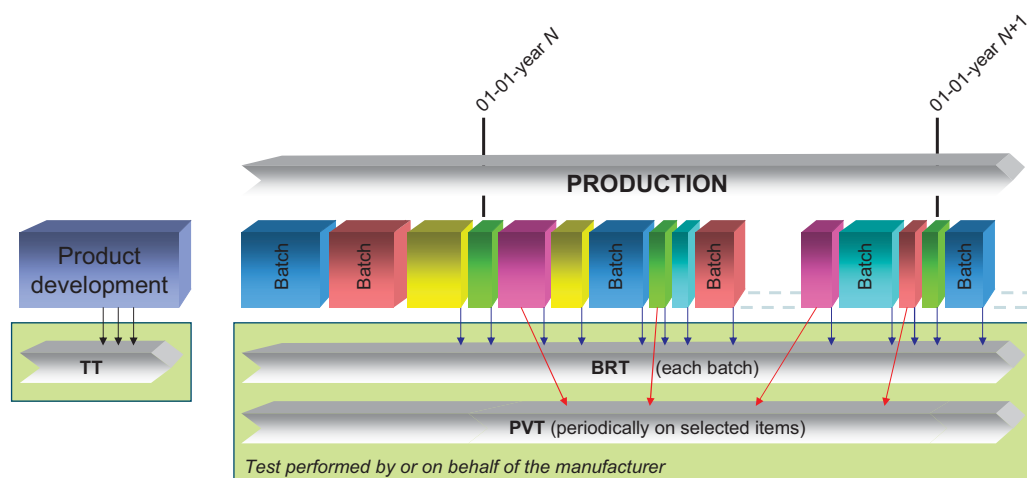
ISO 15875 (all parts), *Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X)*

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)*

Figures 1 and 2 are intended to provide general information on the concept of testing and organization of those tests used for the purpose of the assessment of conformity. For each kind of test, i.e. type test (TT), batch release test (BRT), process verification test (PVT), and audit test (AT), this part of ISO 22391 details the applicable characteristics to be assessed as well as the frequency and sampling of testing.

A typical scheme for the assessment of conformity of pipes, fittings or assemblies by manufacturers is given in Figure 1.

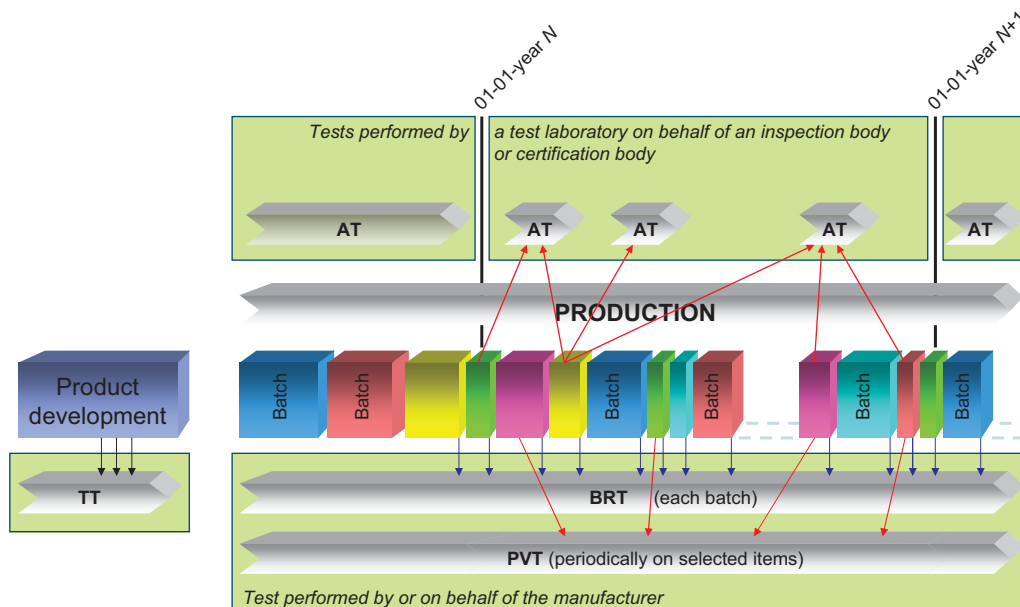


### Key

- BRT batch release test
- PVT process verification test
- TT type testing

**Figure 1 — Typical scheme for the assessment of conformity by a manufacturer**

A typical scheme for the assessment of conformity of pipes, fittings or assemblies by manufacturers, including certification, is given in Figure 2.



# Key

AT	audit test
BRT	batch release test
PVT	process verification test
TT	type testing

**Figure 2 — Typical scheme for the assessment of conformity by a manufacturer, including certification**

This part of ISO 22391 specifies the requirements for a piping system when made from polyethylene (PE-RT). The piping system is intended to be used for hot and cold water installations and heating system installations.

See the foreword for a complete listing of all available parts of ISO 22391.

This part of ISO 22391 gives guidance for the assessment of conformity of materials, components, joints, and assemblies. It is intended for use by certification bodies, inspection bodies, testing laboratories, and manufacturers.

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

## Part 7: Guidance for the assessment of conformity

### 1 Scope

This part of ISO 22391 gives guidance on the assessment of conformity of products and assemblies in accordance with other applicable part(s) of ISO 22391 intended to be included in the manufacturer's quality plan as part of the quality management system and for the establishment of certification procedures.

In conjunction with the other parts, this part of ISO 22391 is applicable to hot and cold water installations within buildings for the conveyance of water, whether or not intended for human consumption (domestic systems), under design pressures and temperatures appropriate to the class of application.

### 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 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 3951-1, *Sampling procedures for inspection by variables — Part 1: Specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection for a single quality characteristic and a single AQL*

ISO 3951-2, *Sampling procedures for inspection by variables — Part 2: General specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection of independent quality characteristics*

ISO 3951-3, *Sampling procedures for inspection by variables — Part 3: Double sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 3951-5, *Sampling procedures for inspection by variables — Part 5: Sequential sampling plans indexed by acceptance quality limit (AQL) for inspection by variables (known standard deviation)*

ISO 22391-1:2009, *Plastics piping systems for hot and cold water installations — Polyethylene of raised temperature resistance (PE-RT) — Part 1: General*

ISO 22391-2:2009, *Plastics piping systems for hot and cold water installations — Polyethylene of raised temperature resistance (PE-RT) — Part 2: Pipes*

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

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