
Plastics piping systems for hot and cold water installations - Crosslinked polyethylene (PE-X) - Part 7: Guidance for the assessment of conformity (ISO/TS 15875-7:2003)

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Kunststoff-Rohrleitungssysteme für die Warm- und Kaltwasserinstallation - Vernetztes Polyethylen (PE-X) - Teil 7: Empfehlungen für die Beurteilung der Konformität (ISO/TS 15875-7:2003)

Systemes de canalisations en plastique pour les installations d'eau chaude et froide - Polyéthylène réticulé (PE-X) - Partie 7: Guide pour l'évaluation de la conformité (ISO/TS 15875-7:2003)

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Plastics piping systems for hot and cold water installations -
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Systèmes de canalisations en plastique pour les
installations d'eau chaude et froide – Polyéthylène réticulé
(PE-X) – Partie 7: Guide pour l'évaluation de la conformité
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Kaltwasserinstallation – Vernetztes Polyethylen (PE-X) –
Teil 7: Empfehlungen für die Beurteilung der Konformität
(ISO/TS 15875-7:2003)

This Technical Specification (CEN ISO/TS) was approved by CEN on 9 February 2003 for provisional application.

The period of validity of this CEN ISO/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN ISO/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN ISO/TS in the same way as for an EN and to make the CEN ISO/TS available. It is permissible to keep conflicting national standards in force (in parallel to the CEN ISO/TS) until the final decision about the possible conversion of the CEN ISO/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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CEN ISO/TS 15875-7:2003 (E)

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Foreword

This document (CEN ISO TS 15875-3:2003) 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".

This Technical Specification can be used to support elaboration of national third party certification procedures for products conforming to the applicable Part(s) of EN ISO 15875.

This Technical Specification is a Part of a System Standard for plastics piping systems of a particular material for a specified application. There are a number of such System Standards.

System Standards are based on the results of the work undertaken in ISO/TC 138 "*Plastics pipes, fittings and valves for the transport of fluids*", which is a Technical Committee of the International Organization for Standardization (ISO).

They are supported by separate standards on test methods to which references are made throughout the System Standard.

The System Standards are consistent with general standards on functional requirements and on recommended practice for installation.

This series consists of the following Parts ¹⁾, under the general title *Plastics piping systems for hot and cold water installations – Crosslinked polyethylene (PE-X)*

- 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 (this Technical Specification)

This Technical Specification includes a bibliography.

At the date of publication of this Technical Specification, System Standards for piping systems of other plastics materials used for the same application are the following:

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

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

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

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1) This System Standard does not incorporate Part 4: *Ancillary equipment* and Part 6: *Guidance for installation*. For ancillary equipment separate standards can apply. For guidance for installation reference is made to separate documents.

NOTE A 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^[1].

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Introduction

This series specifies the requirements for a piping system when made from crosslinked polyethylene (PE-X). 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 product covered by EN ISO 15875:

- This Technical Specification provides no information as to whether the product may be used without restriction in any of the Member States of the EU or EFTA;
- It should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

Requirements and test methods for material and components are specified in Part 1 to Part 3 of EN ISO 15875. Characteristics for fitness for purpose (mainly for joints) are covered in Part 5.

This Technical Specification gives guidance for the assessment of conformity of materials, components, joints and assemblies and it is intended to be used by certification bodies, inspection bodies, testing laboratories and manufacturers.

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1 Scope

This Technical Specification gives guidance for the assessment of conformity to be included in the manufacturer's quality plan as part of his quality system.

This Technical Specification includes:

- a) requirements for materials, components, joints and assemblies given in the applicable Part(s) of EN ISO 15875;
- b) requirements for the manufacturer's quality system;

NOTE 1 It is recommended that the quality system conforms to EN ISO 9001:2000^[2].

- c) definitions and procedures to be applied if third party certification is involved.

NOTE 2 If third party certification is involved, it is recommended that the certification body is accredited to EN 45011^[3] or EN 45012^[4], as applicable.

In conjunction with the other parts of EN ISO 15875 (see Foreword), this Technical Specification is applicable to crosslinked polyethylene (PE-X) piping systems intended to be used for hot and cold water installations within buildings for the conveyance of water, whether or not intended for human consumption (domestic systems) and for heating systems, under design pressures and temperatures appropriate to the class of application (see Table 1 of EN ISO 15875:2003).

2 Normative references

This Technical Specification incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to, or revisions of, any of these publications apply to this Technical Specification only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 15875-1:2003, *Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X) — Part 1: General*

EN ISO 15875-2:2003, *Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X) — Part 2: Pipes*

EN ISO 15875-3:2003, *Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X) — Part 3: Fittings*

EN ISO 15875-5:2003, *Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X) — Part 5: Fitness for purpose of the system*

ISO 2859-1:1999, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptable quality limit (AQL) for lot-by-lot inspection*

ISO 3951:1989, *Sampling procedures and charts for inspection by variables for percent nonconforming*

3 Definitions, symbols and abbreviations

For the purposes of this Technical Specification, the definitions, symbols and abbreviations given in Part 1 and Part 3 of EN ISO 15875:2003 apply, together with the following.

3.1 Definitions

3.1.1

certification body

impartial body, governmental or non-governmental, possessing the necessary competence and responsibility to carry out certification of conformity according to given rules of procedure and management

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3.1.2**inspection body**

impartial organization or company, approved by a certification body as possessing the necessary competence to verify and/or to carry out initial type testing, audit testing and inspection of the manufacturer's factory production control in accordance with the relevant European Standard

3.1.3**testing laboratory**

laboratory which measures, tests, calibrates or otherwise determines the characteristics of the performance of materials and products

3.1.4**quality system**

organizational structure, responsibilities, procedures, processes and resources for implementing quality management (see EN ISO 8402^[5])

3.1.5**quality plan**

document setting out the specific quality practices, resources and sequence of activities relevant to a particular product or range of products

3.1.6**type testing (TT)**

testing performed to prove that the material, component, joint or assembly is capable of conforming to the requirements given in the relevant standard

3.1.7**preliminary type testing (PTT)**

type testing carried out by or on behalf of the manufacturer

3.1.8**initial type testing (ITT)**

type testing carried out by or on behalf of a certification body for certification purposes

3.1.9**batch release test (BRT)**

test performed by the manufacturer on a batch of components, which has to be satisfactorily completed before the batch can be released

3.1.10**process verification test (PVT)**

test performed by the manufacturer on materials, components, joints or assemblies at specific intervals to confirm that the process continues to be capable of producing components conforming to the requirements given in the relevant standard

NOTE Such tests are not required to release batches of components and are carried out as a measure of process control.

3.1.11**audit test (AT)**

test performed by or on behalf of a certification body to confirm that the material, component, joint or assembly continues to conform to the requirements given in the relevant standard and to provide information to assess the effectiveness of the quality system

3.1.12**indirect test (IT)**

test performed by the manufacturer, different from that specified for that particular characteristic, having verified its correlation with the specified test

3.1.13**witness testing (WT)**

testing accepted by a certification body for initial type testing and/or audit testing, which is carried out by or on behalf of the manufacturer and supervised by a representative of the certification body, qualified in testing

3.1.14**material or compound batch**

clearly identifiable quantity of a particular material or compound

3.1.15**production batch**

clearly identifiable collection of units, manufactured consecutively or continuously under the same conditions, using material or compound conforming to the same specification

3.1.16**lot**

clearly identifiable sub-division of a batch for inspection purposes

3.1.17**sample**

one or more units of product drawn from a batch or lot, selected at random without regard to their quality

NOTE The number of units of product in the sample is the sample size.

3.1.18**acceptable quality level (AQL)**

when a continuous series of lots or batches is considered, the quality level which for the purpose of sampling inspection is the limit of a satisfactory process average [see ISO 2859-1:1999 and ISO 3951:1989]

NOTE The designation of an AQL does not imply that a manufacturer has the right knowingly to supply any nonconforming unit of product.

3.1.19**inspection level**

relationship between the lot or batch size and the sample size [see ISO 2859-1:1999]

3.1.20**group**

collection of similar components from which samples are selected for testing purposes

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3.2 Abbreviations

NOTE 1 For reasons of avoiding misunderstanding the following abbreviations are kept the same in each of the languages. For the same reason the terms are given in the three languages (en: English, fr: French, de: German).

NOTE 2 In the French language the abbreviation AQL for "acceptable quality level" is NQA, however for the purposes of this Technical Specification for all three languages the same abbreviation (AQL) is used.

AQL en : acceptable quality level

fr : niveau de qualité acceptable

de : annehmbare Qualitätsgrenzlage

AT en : audit test

fr : essai d'audit

de : Überwachungsprüfung

BRT en : batch release test

fr : essai de libération de campagne de fabrication

de : Freigabepfung einer Charge

IT en : indirect test

fr : essai indirect

de : indirekte Prüfung

ITT en : initial type testing

fr : essai de type initial

de : Erst-Typprüfung

PTT en : preliminary type testing

fr : essai de type préliminaire

de : vorausgehende Typprüfung