

7 Yj b]g]ghYa]]n'dc`ja Yfb] `a UHf]Ucj ždcXnYa b]`]b`bUXnYa b]žnUñU bY`j cXcj cXY
gd`cýbYbUa Ya Vbcgh]žcXj cXb`Uj Ub`Y]b`_UbU]nUW]c`È`Dc`]Yñ] Yb`fD9Ł!`+`"XY.
BUj cX]c`nU i [cHj `Ub`Y`g`UXbcgh]

Plastics piping systems for buried and above-ground pressure systems for water for general purposes, drainage and sewerage - Polyethylene (PE) - Part 7: Guidance for the assessment of conformity

STANDARD PREVIEW

Kunststoff-Rohrleitungssysteme für erd- und oberirdisch verlegte Druckrohrleitungen für Brauchwasser, Entwässerung und Abwasser - Polyethylen (PE) - Teil 7: Empfehlungen für die Beurteilung der Konformität

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Systemes de canalisations en plastiques pour les applications générales de transport d'eau, de branchement et de collecteurs d'assainissement, enterrés sous pression - Polyéthylène (PE) - Partie 7: Guide pour l'évaluation de la conformité

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ICS:

23.040.01	Deli cevovodov in cevovodi na splošno	Pipeline components and pipelines in general
93.030	Zunanji sistemi za odpadno vodo	External sewage systems

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TECHNICAL SPECIFICATION
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CEN/TS 13244-7

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Plastics piping systems for buried and above-ground pressure systems for water for general purposes, drainage and sewerage — Polyethylene (PE) — Part 7: Guidance for the assessment of conformity

Systèmes de canalisations en plastique pour les applications générales de transport d'eau, de branchement et de collecteurs d'assainissement, enterrés sous pression — Polyéthylène (PE) — Partie 7: Guide pour l'évaluation de la conformité

Kunststoff-Rohrleitungssysteme für erd- und oberirdisch verlegte Druckrohrleitungen für Brauchwasser, Entwässerung und Abwasser — Polyethylen (PE) — Teil 7: Empfehlungen für die Beurteilung der Konformität

This Technical Specification (CEN/TS) was approved by CEN on 9 October 2002 for provisional application.

The period of validity of this CEN/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/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/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/TS 13244-7:2003 (E)

Contents

Foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms, definitions, symbols and abbreviations	6
3.1 Terms and definitions	6
3.2 Abbreviations	8
4 Requirements	9
4.1 General	9
4.2 Testing and inspection	9
Annex A (normative) Change of PE compound	23
Annex B (normative) Change of design	25
Bibliography	26

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[SIST-TS CEN/TS 13244-7:2004](https://standards.iteh.ai/catalog/standards/sist/8ad9af19-6533-402c-aea4-4b5a5b1e4895/sist-ts-cen-ts-13244-7-2004)

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Foreword

This document CEN/TS 13244-7:2003 has been prepared by Technical Committee CEN /TC 155, "Plastics piping systems and ducting systems", the secretariat of which is held by NEN.

This Technical Specification can be used to support the elaboration of national third party certification procedures for products conforming to the applicable Parts of EN 13244.

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 being 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 standards on general functional requirements and standards on recommended practice for installation.

EN 13244 consists of the following Parts, under the general title "Plastics piping systems for buried and above-ground pressure systems for water for general purposes, drainage and sewerage — Polyethylene (PE)".

- *Part 1: General*
- *Part 2: Pipes*
- *Part 3: Fittings*
- *Part 4: Valves*
- *Part 5: Fitness for purpose of the system*
- *Part 7: Guidance for the assessment of conformity (this technical specification)*

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NOTE It was decided not to publish a Part 6: Recommended practice for installation. Instead, existing national installation practices would be applicable.

This Technical Specification includes the following annexes.

- Annex A (Normative) Change of PE compound.
- Annex B (Normative) Change of design.
- Bibliography.

System Standards for piping systems of other plastics materials used for the conveyance of water, drainage and sewerage under pressure include the following:

EN 1456, *Plastics piping systems for buried and above- ground drainage and sewerage under pressure – Unplasticized poly(vinyl chloride) (PVC-U)*

prEN 14364, *Plastics piping systems for pressure and non-pressure drainage and sewerage — Glass-reinforced thermosetting (GRP) plastics based on polyester resin (UP)*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this CEN 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.

CEN/TS 13244-7:2003 (E)**Introduction**

The System Standard, of which this is Part 7, specifies the requirements for a piping system and its components made from polyethylene (PE). It is intended to be used for buried and above-ground pressure systems for water for general purposes, drainage and sewerage.

This Part of EN 13244 gives guidance for the procedures and requirements for the assessment of conformity of materials, components, joints and assemblies and is intended to be used by certification bodies, inspection bodies, testing laboratories and manufacturers.

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1 Scope

This Part of EN 13244 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 Parts 1 to 5 of EN 13244;
- b) requirements for the manufacturer's quality system;

NOTE 1 It is recommended that the quality system conforms to EN ISO 9001 [1]

- 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 [2] or EN 45012 [3], as applicable.

In conjunction with one or more Parts of EN 13244 (see Foreword) it is applicable to polyethylene (PE) piping systems intended to be used for buried and above-ground pressure systems for water for general purposes, drainage and sewerage.

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 13244-1:2002, *Plastics piping systems for buried and above-ground pressure systems for water for general purposes, drainage and sewerage — Polyethylene (PE) — Part 1: General.*

EN 13244-2:2002, *Plastics piping systems for buried and above-ground pressure systems for water for general purposes, drainage and sewerage — Polyethylene (PE) — Part 2: Pipes.*

EN 13244-3:2002, *Plastics piping systems for buried and above-ground pressure systems for water for general purposes, drainage and sewerage — Polyethylene (PE) — Part 3: Fittings.*

EN 13244-4:2002, *Plastics piping systems for buried and above-ground pressure systems for water for general purposes, drainage and sewerage — Polyethylene (PE) — Part 4: Valves.*

EN 13244-5:2002, *Plastics piping systems for buried and above-ground pressure systems for water for general purposes, drainage and sewerage — Polyethylene (PE) — Part 5: Fitness for purpose of the system.*

EN ISO 6259-1:2001, *Thermoplastics pipes — Determination of tensile properties – Part 1: General test method (ISO 6259-1:1997).*

EN ISO 12162:1995, *Thermoplastics materials for pipes and fittings for pressure applications — Classification and designation — Overall service (design) coefficient (ISO 12162:1995).*

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

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

CEN/TS 13244-7:2003 (E)

ISO 6259-3:1997, *Thermoplastics pipes — Determination of tensile properties — Part 3: Polyolefin pipes.*

ISO 13954:1997, *Plastics pipes and fittings — Peel decohesion test for polyethylene (PE) electrofusion assemblies of nominal outside diameter greater than or equal to 90 mm.*

ISO 13955:1997, *Plastics pipes and fittings — Crushing decohesion test for polyethylene (PE) electrofusion assemblies.*

ISO/DIS 13956:1996, *Plastics pipes and fittings — Determination of cohesive strength — Tear test for polyethylene (PE) assemblies.*

3 Terms, definitions, symbols and abbreviations

For the purposes of this Technical Specification the terms, definitions, symbols and abbreviations given in Part 1 and Part 3 to Part 5 of EN 13244, apply together with the following.

3.1 Terms and 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

3.1.2**inspection body**

impartial organisation or company, approved by a certification body as possessing the necessary competence to verify and/or to carry out initial type testing, witness 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 management system**

organisational structure, responsibilities, procedures, processes and resources for implementing quality management (see EN ISO 9000 [4])

3.1.5**quality management 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)**

tests 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 that 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 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 an inspection or 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 inspection or certification body, qualified in testing

3.1.14**material batch**

clearly identifiable quantity of a particular material

3.1.15**compound batch**

clearly identifiable quantity of a given homogeneous compound manufactured under uniform conditions. The compound batch is defined and identified by the compound manufacturer

3.1.16**production batch**

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

3.1.17**pipe batch**

number of pipes, all of them the same nominal diameter and nominal wall thickness, extruded from the same compound on the same machine. The pipe batch is defined and identified by the pipe manufacturer

CEN/TS 13244-7:2003 (E)**3.1.18****fitting or valve batch**

number of fittings or valves of the same type, identical dimensional characteristics, all the same nominal diameter and wall thickness, from the same compound. The fitting or valve batch is defined and identified by the fitting or valve manufacturer

3.1.19**lot**

clearly identifiable sub-division of a batch for inspection purposes

3.1.20**sample**

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

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

3.1.21**acceptable quality level (AQL)**

when a continuous series of lots or batches is considered, the quality level which for 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 non-conforming unit of product.

3.1.22**inspection level**

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

3.1.23**group**

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

3.1.24**product type**

pipe or an individual fitting or valve or their main parts, of the same design, from a particular compound

3.1.25**body type**

valve body which can have different end connections

3.1.26**cavity**

part of the injection mould which gives the form to the injection moulded product

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.

NOTE 2 In the French language the abbreviation for "acceptable quality level (AQL)" is NQA, however for the purpose 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: Freigabeproofung einer Charge
IT	en: indirect test fr: essai indirect de: indirekte Prüfung
ITT	en: initial type testing fr: essais de type initiaux de: Erst-Typprüfung
PTT	en: preliminary type testing fr: essais de type préliminaire de: vorausgehende Typprüfung
PVT	en: process verification test fr: essai de vérification du procédé de fabrication de: Prozessüberprüfung
TT	en: type test fr: essai de type de: Typprüfung
WT	en: witness testing fr: essais témoin de: Prüfung unter Aufsicht

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4 Requirements

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4.1 General

4.1.1 Materials, components, joints and assemblies shall conform to the requirements given in Parts 1 to 5 of EN 13244, as applicable.

4.1.2 Components and/or assemblies shall be produced by the manufacturer under a quality system which includes a quality plan.

4.2 Testing and inspection

4.2.1 Grouping

For purpose of this Technical Specification the following groups for pipes, fittings and valves given in Table 1 shall apply.

Table 1 — Size groups for pipes, fittings and valves

	Size group			
	1	2	3	4
Nominal outside diameter d_n	≥ 32 and < 75	≥ 75 and < 250	≥ 250 and < 710	≥ 710