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**Cevni sistemi iz polimernih materialov za odvodnjavanje in kanalizacijo, ki delujejo po težnostnem principu in so položeni v zemljo - Cevni sistemi s strukturirano steno iz nemehčane polivinilklorida (PVC-U), polipropilena (PP) in polietilena (PE) - 4. del: Navodilo za ugotavljanje skladnosti**

Plastics piping systems for non-pressure underground drainage and sewerage - Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 4: Guidance for the assessment of conformity

Kunststoff-Rohrleitungssysteme für erdverlegte drucklose Abwasserkanäle und -leitungen - Rohrleitungssysteme mit profilierter Wandung aus weichmacherfreiem Polyvinylchlorid (PVC-U), Polypropylen (PP) und Polyethylen (PE) - Teil 4: Empfehlungen für die Beurteilung der Konformität

Systèmes de canalisations en plastique pour les branchements et les collecteurs d'assainissement sans pression enterrés - Systèmes de canalisations à parois structurées en poly(chlorure de vinyle) non plastifié (PVC-U), polypropylène (PP) et polyéthylène (PE) - Partie 4 : Partie 4 : Guide pour l'évaluation de la conformité

**Ta slovenski standard je istoveten z: FprCEN/TS 13476-4**

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**ICS:**

23.040.05	Cevovodi za zunanje sisteme za odpadno vodo in njihovi deli	Pipeline and its parts for external sewage systems
91.140.80	Drenažni sistemi	Drainage systems
93.030	Zunanji sistemi za odpadno vodo	External sewage systems

**kSIST-TS FprCEN/TS 13476-4:2019** en,fr,de

**ITeH STANDARD PREVIEW**  
(standards.iteh.ai)

Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/3133053e-11da-4e4d-8e4d-cc4fbc4f50e3/ksist-ts-fprcen-ts-13476-4-2019>

TECHNICAL SPECIFICATION  
SPÉCIFICATION TECHNIQUE  
TECHNISCHE SPEZIFIKATION

**FINAL DRAFT**  
**FprCEN/TS 13476-4**

June 2019

ICS

Will supersede CEN/TS 13476-4:2013

English Version

Plastics piping systems for non-pressure underground drainage and sewerage - Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 4: Guidance for the assessment of conformity

Systèmes de canalisations en plastique pour les branchements et les collecteurs d'assainissement sans pression enterrés - Systèmes de canalisations à parois structurées en poly(chlorure de vinyle) non plastifié (PVC-U), polypropylène (PP) et polyéthylène (PE) - Partie 4 : Partie 4 : Guide pour l'évaluation de la conformité

Kunststoff-Rohrleitungssysteme für erdverlegte drucklose Abwasserkanäle und -leitungen - Rohrleitungssysteme mit profilierter Wandung aus weichmacherfreiem Polyvinylchlorid (PVC-U), Polypropylen (PP) und Polyethylen (PE) - Teil 4: Empfehlungen für die Beurteilung der Konformität

This draft Technical Specification is submitted to CEN members for Vote. It has been drawn up by the Technical Committee CEN/TC 155.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

**Warning** : This document is not a Technical Specification. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a Technical Specification.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

<b>Contents</b>	<b>Page</b>
European Foreword.....	3
Introduction .....	4
1 Scope .....	6
2 Normative references .....	6
3 Terms and definitions .....	6
4 Abbreviated terms .....	10
5 General.....	10
6 Testing and inspection .....	10
6.1 Material specification PVC-U.....	10
6.2 Material specifications PP .....	11
6.3 Material specifications PE.....	12
6.4 External non-virgin materials - validation .....	12
6.5 Grouping.....	12
6.5.1 General.....	12
6.5.2 Size groups.....	12
6.5.3 Fitting groups .....	12
6.6 Type testing.....	13
6.7 Batch release tests .....	17
6.8 Process verification tests .....	18
6.9 Audit tests .....	19
6.10 Indirect tests.....	22
6.11 Test records .....	22
Annex A (informative) Survey of test regime .....	23
Bibliography.....	25

## European Foreword

This document (FprCEN/TS 13476-4:2019) has been prepared by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems”, the secretariat of which is held by NEN.

This document is currently submitted to the Vote on TS.

This document will supersede CEN/TS 13476-4:2013.

The main change compared to the previous version concerns the compliance with the latest version of the template for assessment of conformity, including the addition of the new test method for large diameter pipes.

EN 13476 consists of the following Parts under the general title *Plastics piping systems for non-pressure underground drainage and sewerage — Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE)*:

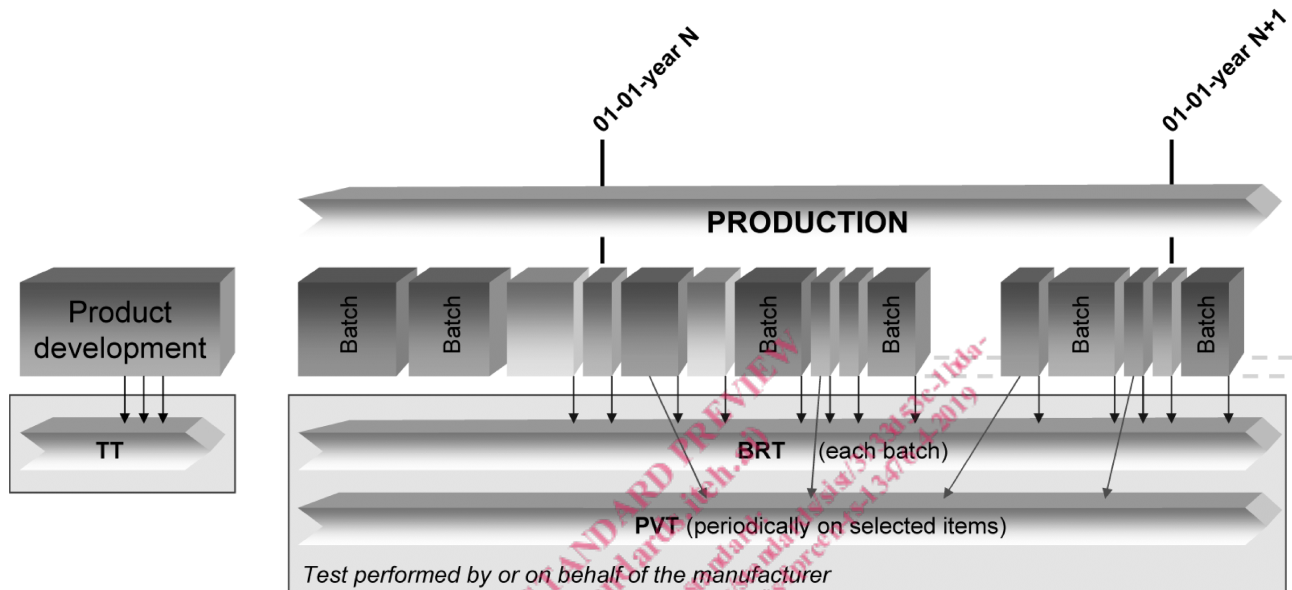
- Part 1: *General requirements and performance characteristics*;
- Part 2: *Specifications for pipes and fittings with smooth internal and external surface and the system, Type A*;
- Part 3: *Specifications for pipes and fittings with smooth internal and profiled external surface and the system, Type B*;
- Part 4: *Guidance for the assessment of conformity* (the present TS).

**TECHNICAL STANDARD PREVIEW**  
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Full standard:  
http://standards.iteh.ai/catalog/standards/sist/3523153c-11ba-4e4d-8e4d-cc4fbc450e3/kSIST-TS-FprCEN/TS-13476-4-2019

## Introduction

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 type of test, i.e. type testing (TT), batch release test (BRT), process verification test (PVT), and audit test (AT), this document 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 compounds/formulations, pipes, fittings, joints or assemblies by manufacturers is given in Figure 1.



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

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

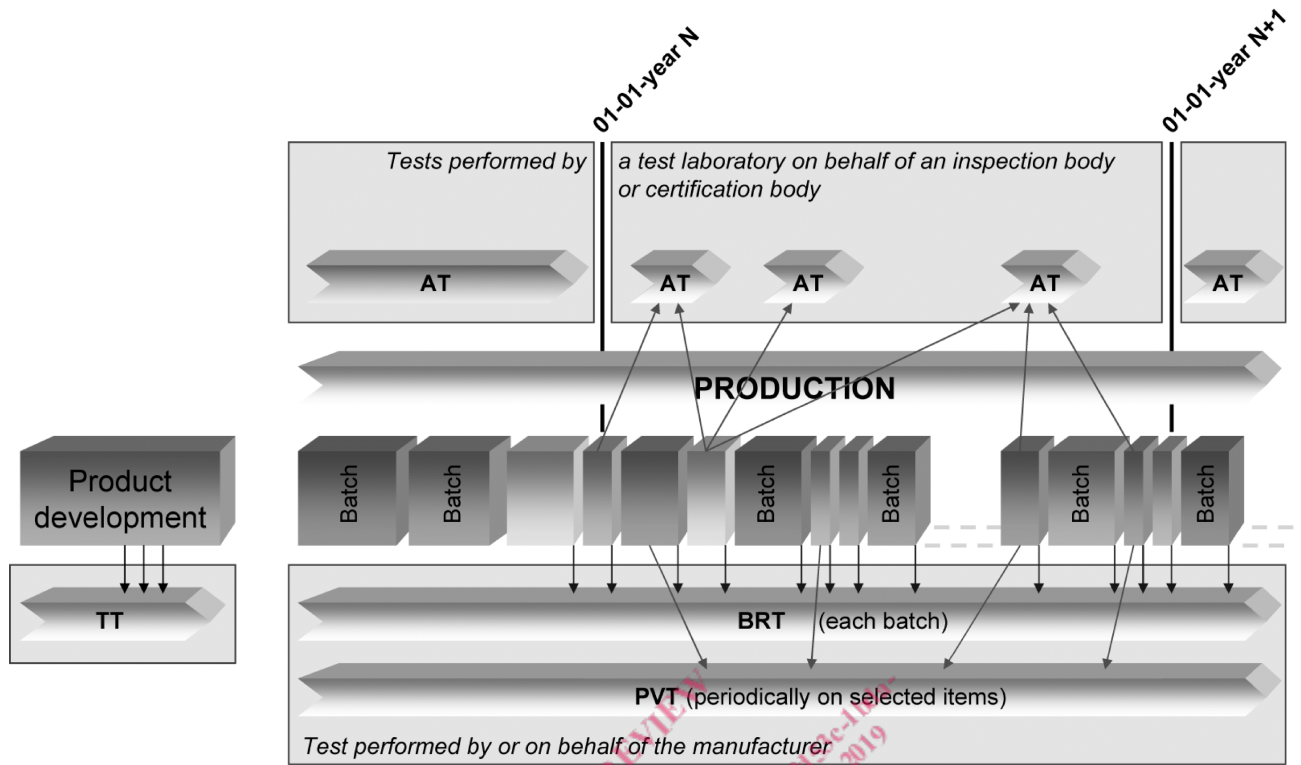


Figure 2 — Typical scheme for the assessment of conformity by a manufacturer, including certification

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**FprCEN/TS 13476-4:2019 (E)****1 Scope**

This document gives guidance for the assessment of conformity of materials, products, joints and assemblies in accordance with the applicable part(s) of EN 13476 intended to be included in the manufacturer's quality plan as part of the quality management system and for the establishment of certification procedures.

NOTE 1 The quality management system is expected to conform to or be no less stringent than the relevant requirements to EN ISO 9001 [1].

NOTE 2 If third-party certification is involved, the certification body can be accredited to EN ISO/IEC 17065 [2] or EN ISO/IEC 17021 [3], as applicable.

NOTE 3 In order to help the reader, a basic test matrix is given in Annex A.

In conjunction with EN 13476-1, EN 13476-2 and EN 13476-3 this document is applicable to Plastics piping systems for non-pressure underground drainage and sewerage — Structural-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE):

- for non-pressure underground drainage and sewerage outside the building structure (application area code "U") reflected in the marking of products by "U", and
- for non-pressure underground drainage and sewerage for both buried in ground within the building structure (application area code "D" and outside the building structure (application area code "U") reflected in the marking of products by "UD".

**2 Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 13476-1:2018, *Plastics piping systems for non-pressure underground drainage and sewerage — Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) — Part 1: General requirements and performance characteristics*

EN 13476-2:2018, *Plastics piping systems for non-pressure underground drainage and sewerage — Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) — Part 2: Specifications for pipes and fittings with smooth internal and external surface and the system, Type A*

EN 13476-3:2018, *Plastics piping systems for non-pressure underground drainage and sewerage — Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) — Part 3: Specifications for pipes and fittings with smooth internal and profiled external surface and the system, Type B*

**3 Terms and definitions**

For the purposes of this document, the following terms and definitions given in EN 13476-1, EN 13476-2 and EN 13476-3 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>



### 3.1

#### **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

Note 1 to entry: A certification body is preferably accredited to EN ISO/IEC 17065 [7]

### 3.2

#### **inspection body**

impartial organisation or company, approved by the 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 standard

Note 1 to entry: An inspection body is preferably accredited to EN ISO/IEC 17020 [5].

### 3.3

#### **testing laboratory**

laboratory which measures, tests, calibrates or otherwise determines the characteristics of the performance of compound / formulation and products

Note 1 to entry: In the context of this part of EN 13476, the compound / formulation and products can be subjected to type testing, batch release testing, process verification testing, audit testing, and witness testing, as applicable.

Note 2 to entry: A testing laboratory is preferably accredited to EN ISO/IEC 17025 [6].

### 3.4

#### **quality management system**

part of a management system with regard to quality

[Source: EN ISO 9000:2015 [6], definition 3.5.4]

Note 1 to entry: Requirements for quality management systems are given in EN ISO 9001 [1].

### 3.5

#### **quality plan**

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

### 3.6

#### **type testing**

##### **TT**

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

Note 1 to entry: The type test results remain valid until there is a change in the material or product or assembly provided that the process verification tests are done regularly.

### 3.7

#### **batch release test**

##### **BRT**

test performed by or on behalf of the manufacturer on a batch of formulation/ compound or products, which has to be satisfactorily completed before the batch can be released

**FprCEN/TS 13476-4:2019 (E)****3.8****process verification test****PVT**

test performed by or on behalf of the manufacturer on formulation/compound or products, joints or assemblies at specific intervals to confirm that the process continues to be capable of producing products which conform to the requirements given in the relevant standard

Note 1 to entry: Such tests are not required to release batches of formulation/compound or products and are carried out as a measure of process control.

**3.9****audit test****AT**

test performed by a test laboratory on behalf of an inspection body or certification body to confirm that the formulation / compound, product, 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 management system

**3.10****indirect test****IT**

test performed by or on behalf of the manufacturer, different from that specified test for that particular characteristic, having previously verified its correlation with the specified test

**3.11****witness test****WT**

test accepted by an inspection or a certification body for 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

**3.12****material**

generic term for compositions compounds/formulations grouped by families, expressed by generic names

EXAMPLE: Examples of generic names are polypropylene, stainless steel, brass or EPDM.

Note 1 to entry: Definition from European Commission, Directorate-General for Enterprise and Industry, Sub-group on Product Testing Procedures (EC, DG ENT and IND, SG PTP).

**3.13****compound / formulation**

clearly defined homogenous mixture of base polymer with additives, i.e. antioxidants, pigments, stabilizers and others, at a dosage level necessary for the processing and the intended use of the final product

Note 1 to entry: Compound is used for polyolefins and formulation is used for PVC-U.

**3.14****material batch**

clearly identified quantity of a given homogeneous compound/formulation manufactured under uniform conditions and defined and identified by the compound/formulation manufacturer