

SLOVENSKI STANDARD

SIST-TS CEN/TS 1401-2:2012

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Nadomešča:
SIST ENV 1401-2:2001

Cevni sistemi iz polimernih materialov za odpadno vodo in kanalizacijo, ki delujejo po težnostnem principu in so položeni v zemljo - Nemehčan polivinilklorid (PVC-U) - 2. del: Navodilo za ugotavljanje skladnosti

Plastics piping systems for non-pressure underground drainage and sewerage - Unplasticized poly(vinyl chloride) (PVC-U) - Part 2: Guidance for assessment of conformity

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Kunststoff-Rohrleitungssysteme für erdverlegte Abwasserkanäle und -leitungen - Weichmacherfreies Polyvinylchlorid (PVC-U) - Teil 2: Empfehlungen für die Beurteilung der Konformität

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Systèmes de canalisations en plastique pour les branchements et les collecteurs d'assainissement enterrés sans pression - Poly(chlorure de vinyle) non plastifié (PVC-U) - Partie 2 : Guide pour l'évaluation de la conformité

Ta slovenski standard je istoveten z: CEN/TS 1401-2:2012

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
SPÉCIFICATION TECHNIQUE
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CEN/TS 1401-2

May 2012

ICS 23.040.01; 93.030

Supersedes ENV 1401-2:2000

English Version

**Plastics piping systems for non-pressure underground drainage
and sewerage - Unplasticized poly(vinyl chloride) (PVC-U) - Part
2: Guidance for assessment of conformity**

Systèmes de canalisations en plastique pour les
branchements et les collecteurs d'assainissement enterrés
sans pression - Poly(chlorure de vinyle) non plastifié (PVC-
U) - Partie 2 : Guide pour l'évaluation de la conformité

Kunststoff-Rohrleitungssysteme für erdverlegte drucklose
Abwasserkanäle und -leitungen - Weichmacherfreies
Polyvinylchlorid (PVC-U) - Teil 2: Empfehlungen für die
Beurteilung der Konformität

This Technical Specification (CEN/TS) was approved by CEN on 6 September 2011 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 promptly at national level in an appropriate form. 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, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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Foreword

This document (CEN/TS 1401-2:2012) has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NEN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes ENV 1401-2:2000.

Compared with ENV 1401-2:2000, the following changes have been made:

- a) Use of the template drafted by CEN/TC 155/WG 21 for assessment of conformity documents (change of "Terms and definitions" and addition of 1 column "Sampling procedures" in Tables);
- b) Introduction of "Limits of addition of PVC reprocessed and recycled material" in a separate table (Table 2);
- c) Addition of an informative Annex A: Basic test matrix.

EN 1401, *Plastics piping systems for non-pressure underground drainage and sewerage — Unplasticized poly(vinyl chloride) (PVC-U)*, consists of the following Parts:

— *Part 1: Specifications for pipes, fittings and the system;*

— *Part 2: Guidance for the assessment of conformity.*

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

Introduction

Figures 1 and 2 are intended to provide general information on the concept of testing and organisation of those tests used for the purpose of the assessment of conformity. This part of EN 1401 details the applicable characteristics to be assessed as well as the frequency and sampling of testing for each type of test, i.e. type testing (TT), batch release test (BRT), process verification test (PVT) and audit test (AT).

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

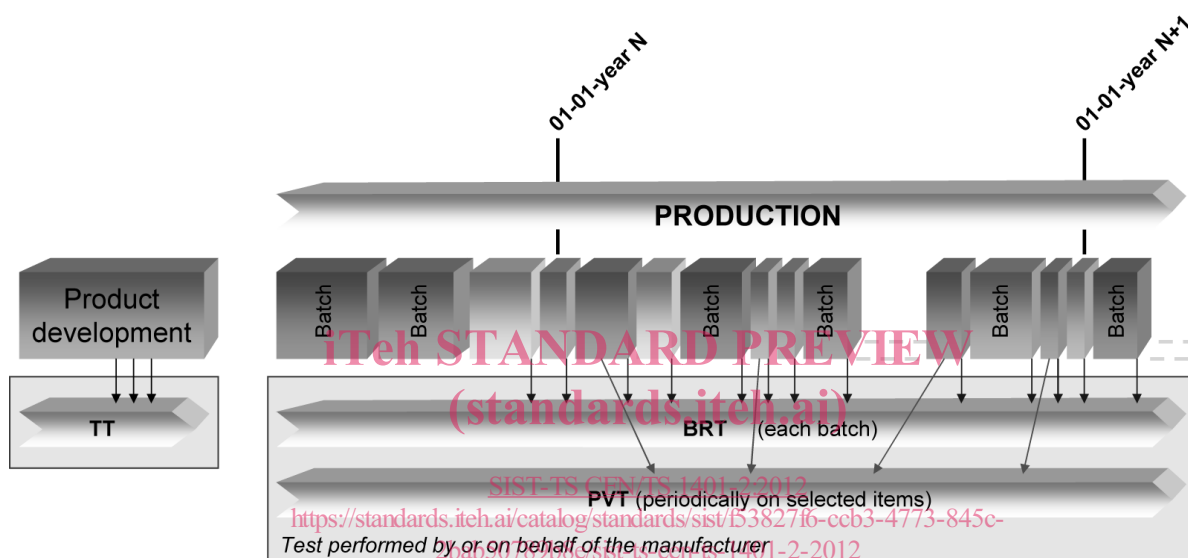


Figure 1 — Typical scheme for the assessment of conformity by a manufacturer

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

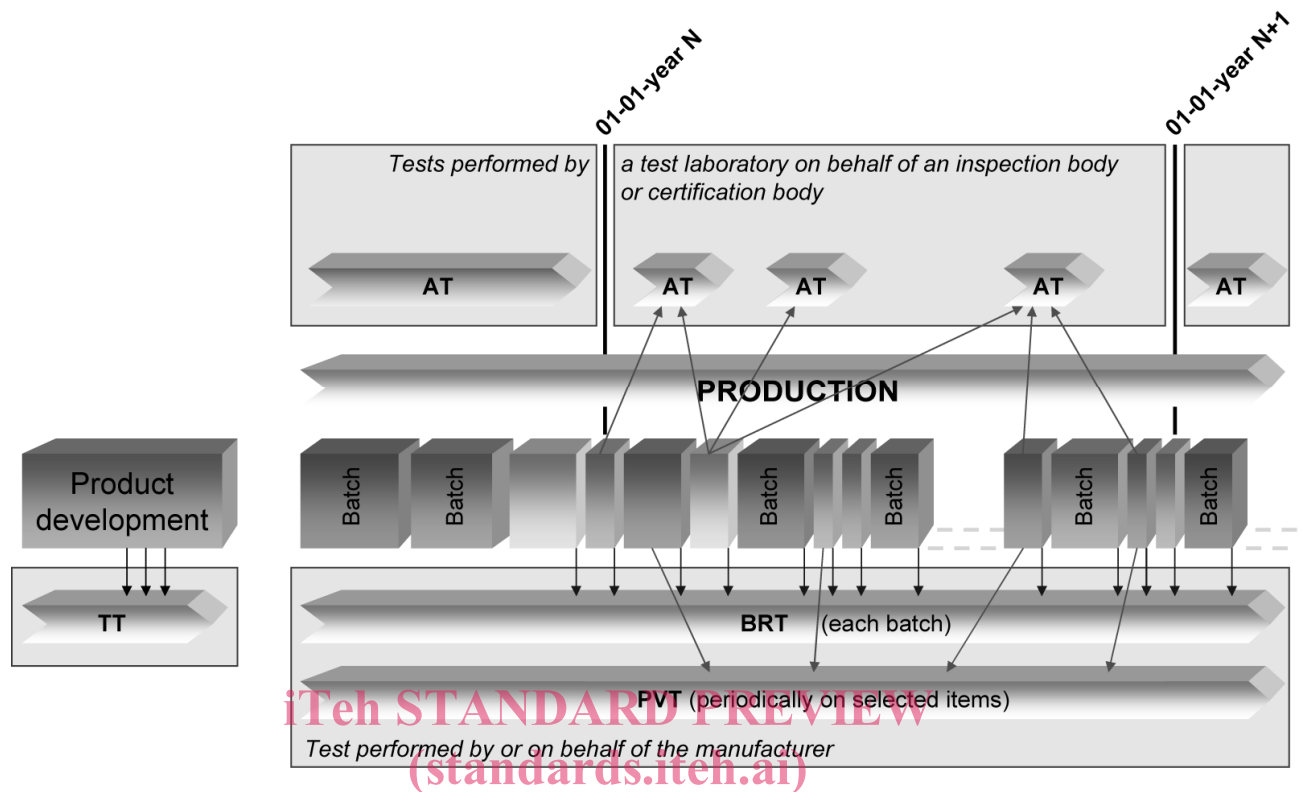


Figure 2 — Typical scheme for the assessment of conformity by a manufacturer, including a third-party certification

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1 Scope

This Technical Specification gives guidance for the assessment of conformity of compounds/formulations, products and assemblies in accordance with EN 1401-1. It applies to those compounds/formulations, products and assemblies intended to be included in the manufacturer's quality plan as part of the quality management system and for the establishment of third-party certification procedures.

NOTE 1 It is recommended that the quality management system conforms to or is no less stringent than the relevant requirements of EN ISO 9001 [1].

NOTE 2 If third-party certification is involved, it is recommended that the certification body is accredited to either EN 45011 [2], EN 45012 [3] or EN ISO/IEC 17021 [4], as applicable.

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

In conjunction with EN 1401-1 (see Foreword), this Technical Specification is applicable to piping systems made of unplasticized poly(vinyl chloride) (PVC-U) used for the following purposes:

- for non pressure underground drainage and sewerage outside the building structure (application area code "U"), reflected in the marking of products by "U";
- 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".

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2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1401-1:2009, *Plastics piping systems for non-pressure underground drainage and sewerage — Unplasticized poly(vinyl chloride) (PVC-U) — Part 1: Specifications for pipes, fittings and the system*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1401-1:2009 and the following apply.

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 45011 [2].

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 materials and products

Note 1 to entry: In the context of this part of EN 1401, the materials and products can be subjected to type testing, batch release testing, process verification testing, audit testing and/or 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**

management system to direct and control an organization with regard to quality

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 verify 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**

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

3.8**process verification test****PVT**

test performed by or on behalf of the manufacturer on compound/formulation, 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 compound/formulation or products; rather, they 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 compound/formulation, 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

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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 compounds/formulations grouped by families, expressed by generic names, e.g. polypropylene, stainless steel, brass or EPDM

[SOURCE: 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. anti-oxidants, pigments, stabilizers and others, at a dosage level necessary for the processing and the intended use of the final product

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

3.15

product

pipe or fitting, of a clearly identified type, intended to be a part of a piping system which the manufacturer puts on the market

3.16

product batch

clearly identified collection of products, manufactured consecutively or continuously under the same conditions, using the same compound/formulation conforming to the same specification

Note 1 to entry: The production batch is defined and identified by the product manufacturer.

3.17

lot

clearly identifiable sub-division of a batch set apart for inspection purposes

3.18

sample

one or more products drawn from the same production batch or lot, selected at random without regard to their quality

Note 1 to entry: The number of products in the sample are the sample size.

3.19

acceptable quality limit**AQL**

quality level that is the worst tolerable process average when a continuing series of lots is submitted for acceptance sampling

Note 1 to entry: See ISO 2859-1, ISO 3951-1 [8], ISO 3951-2 [9], ISO 3951-3 [10] and ISO 3951-5 [11].

Note 2 to entry: The designation of an AQL does not imply that a manufacturer has the right, knowingly, to supply any non-conforming unit of product.

3.20**inspection level**

relationship between the lot or batch size and the sample size

Note 1 to entry: See ISO 2859-1.

3.21**limiting quality**

(acceptance sampling) quality level, when a lot is considered in isolation, which, for the purposes of acceptance sampling inspection, is limited to a low probability of acceptance

Note 1 to entry: See ISO 2859-2 [7].

3.22**group**

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

3.23**component**

product manufactured out of a specific compound/formulation, brought to the market as part of another product or as a spare part

3.24**joint**

connection between two products

3.25**assembled product**

assembled final product using two or more single parts

3.26**thermoplastics fabricated fitting**

fitting produced from pipe and/or from injection-moulded fittings by thermoforming, solvent-cementing or welding

3.27**assembly**

product that can be dismantled into a set of components

EXAMPLE A test piece consisting of various products.

3.28**sampling plan**

specification of the type of sampling to be used combined with the operational specification of the entities or increments to be taken, the samples to be constituted and the measurements or tests to be made

EXAMPLE A specific plan which indicates the number of units of products or assemblies to be inspected.

3.29**product type**

generic description of a product

EXAMPLE A pipe or fitting or their main parts, of the same design, from a particular compound.

3.30**cavity**

(moulding) space within a mould to be filled to form the moulded product

EXAMPLE That part of the injection mould which gives the form to the injection moulded product.

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