SLOVENSKI STANDARD
SIST-TS CEN/TS 13598-3:2022

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Nadomešča:
SIST-TS CEN/TS 13598-3:2012

Cevni sistemi iz polimernih materialov za odpadno vodo in kanalizacijo, ki delujejo po težnostnem principu in so položeni v zemljo - Nemehčan polivinilklorid (PVC-U), polipropilen (PP) in polietilen (PE) - 3. del: Ugotavljanje skladnosti

Plastics piping systems for non-pressure underground drainage and sewerage - Unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 3: Assessment of conformity

Kunststoff-Rohrleitungssysteme für erdverlegte drucklose Abwasserkanäle und -leitungen - Weichmacherfreies Polyvinylchlorid (PVC-U), Polypropylen (PP) und Polyethylen (PE) - Teil 3: Empfehlungen für die Beurteilung der Konformität

Systèmes de canalisations en plastique pour les branchements et les collecteurs d'assainissement enterrés sans pression - Poly(chlorure de vinyle) non plastifié (PVCU), polypropylène (PP) et polyéthylène (PE) - Partie 3: Évalution de la conformité

Ta slovenski standard je istoveten z: **CEN/TS 13598-3:2021**

ICS:

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

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English Version

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This Technical Specification (CEN/TS) was approved by CEN on 17 October 2021 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.

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

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European foreword

This document (CEN/TS 13598-3:2021) 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 shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TS 13598-3:2012.

Compared with CEN/TS 13598-3:2012, the following changes have been made:

— this document has been updated to comply with the latest CEN/TC 155 internal guide – Plastics piping systems – Template for documents for the assessment of conformity;

— type testing clauses have been updated to clarify what constitutes a change of material. Examples of a change of design, production processing method, extension of product range and system are also given;

— the applicable characteristics for assessment of conformity testing are now listed under separate Clauses 6 and 7 for EN 13598 parts 1 and 2 respectively;

— the tables in Clauses 6 and 7 have been updated to align the content and references with EN 13598-1:2020 and EN 13598-2:2020.

EN 13598 consists of the following Parts under the general title *Plastics piping systems for non-pressure underground drainage and sewerage — Unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE):*

— Part 1: Specifications for ancillary fittings and shallow chambers;

— Part 2: Specifications for manholes and inspection chambers;

— Part 3: Guidance for assessment of conformity (the present document).

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN/CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document details the applicable characteristics to be assessed for type testing (TT), batch release test (BRT), process verification test (PVT), and audit test (AT), as well as the frequency and sampling for testing.

This document has been prepared using the latest CEN/TC155/WG21 assessment of conformity template N1089.

The concept of testing and organization of those tests used for the assessment of conformity is shown, without or with certification, in Figures 1 and 2.

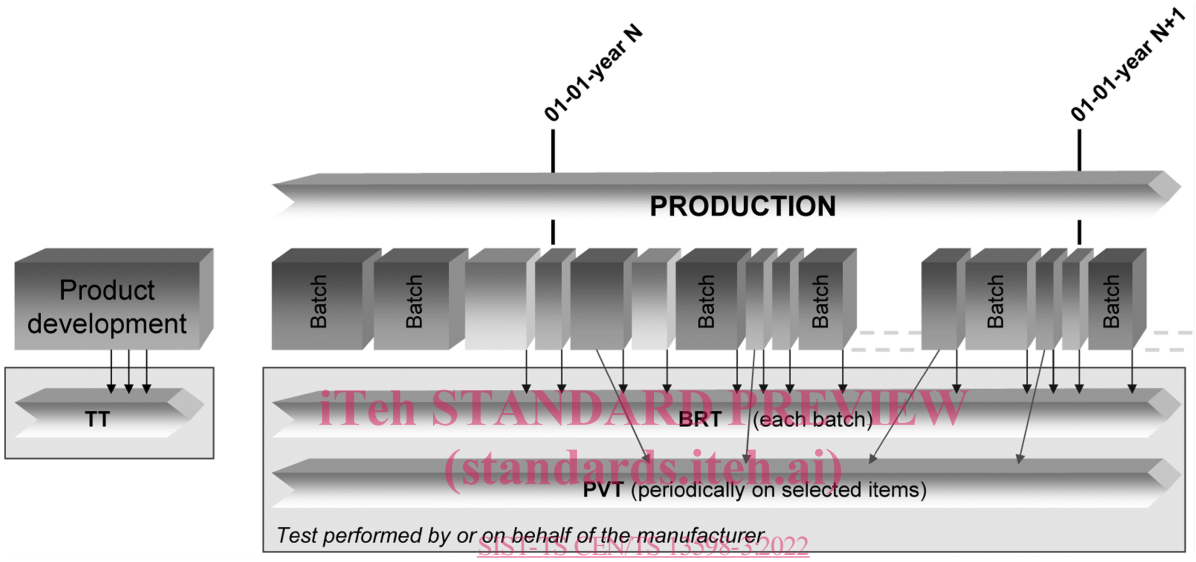

Figure 1 — Typical scheme for the assessment of conformity by a manufacturer, without certification

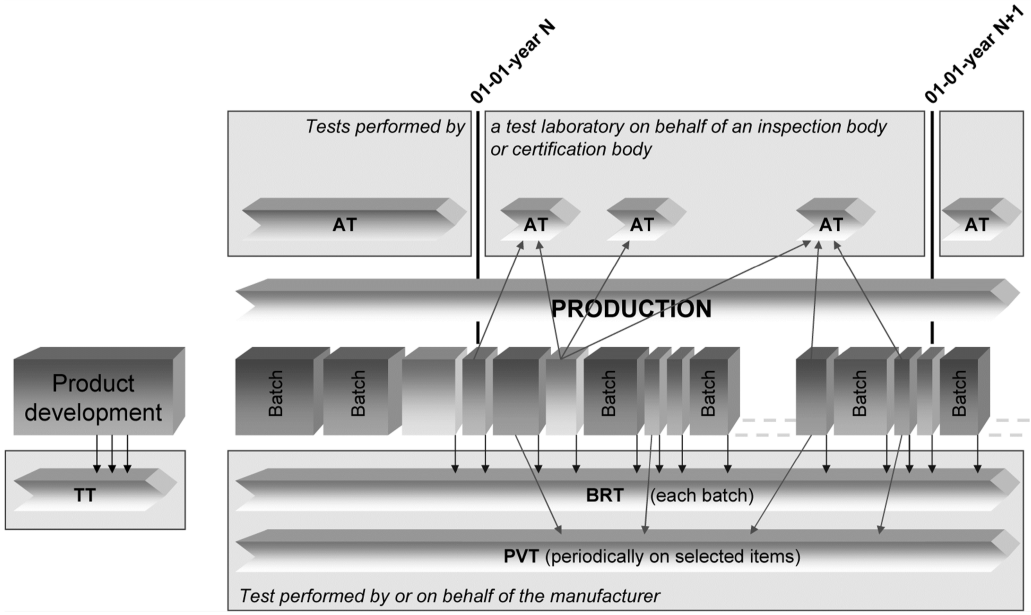

Figure 2 — Typical scheme for the assessment of conformity by a manufacturer, including certification

1 Scope

This document gives guidance for requirements for the assessment of conformity of materials (compounds/formulations), products, joints and assemblies in accordance with the applicable part(s) of EN 13598-1 and EN 13598-2 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 of EN ISO 9001 [1].

NOTE 2 If certification is involved, the certification body is expected to be compliant with EN ISO/IEC 17065 [5].

NOTE 3 A basic test matrix provides an overview of the testing scheme in Annex A.

In conjunction with EN 13598-1 and EN 13598-2 (see Foreword) this document is applicable to ancillary fittings including shallow chambers and manholes and inspection chambers.

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 13598-1:2020, *Plastics piping systems for non-pressure underground drainage and sewerage - Unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 1: Specifications for ancillary fittings and shallow chambers*

EN 13598-2:2020, *Plastics piping systems for non-pressure underground drainage and sewerage - Unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 2: Specifications for manholes and inspection chambers*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13598-1 and EN 13598-2 and the following apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
certification body
impartial body, governmental or non-governmental, possessing the necessary competence to carry out certification of conformity according to given rules of procedure and management

Note 1 to entry: In this document, certification is understood as third-party certification.

Note 2 to entry: For assessment purposes, the certification body may delegate tasks to an inspection body or a testing laboratory.

3.2
inspection body
body that performs examination of a product, process, service, or installation or their design and determination of its conformity with specific requirements or, on the basis of professional judgment, with general requirements

[SOURCE: EN ISO/IEC 17020:2012 [2], definition 3.5 combined with definition 3.1 modified – Notes to entry 1, 2, 3 and 4 are not included]

Note 1 to entry: An inspection body is, either an organization or a part of an organization, mandated by the certification body.

Note 2 to entry: An inspection body is preferably compliant with EN ISO/IEC 17020 [2].

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 document, the materials and products can be subjected to type testing, batch release testing, process verification testing and audit testing, as applicable.

Note 2 to entry: A testing laboratory is preferably compliant with EN ISO/IEC 17025 [3].

3.4
quality management system
part of a management system with regard to quality

[SOURCE: EN ISO 9000:2015 [4], 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, responsibilities, resources and sequence of activities relevant to a particular product or range of products

3.6
type testing
TT
test performed to prove that the material, component, product, joint or assembly is capable of conforming to the requirement(s) given in the relevant standard

3.7
batch release test
BRT
test performed on a batch of material, components products, joints or assemblies which has to be satisfactorily completed before the batch can be released

Note 1 to entry: A batch release test may be performed by the manufacturer or outsourced on behalf of the manufacturer.

3.8
process verification test
PVT
test performed on material, component, product, joint or assembly 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: Process verification tests are not required to release batches of material, product, but are carried out as a measure of process control.

Note 2 to entry: Process verification tests may be performed by the manufacturer or outsourced on behalf of the manufacturer.

Note 3 to entry: Process verification tests are regularly performed to demonstrate that the product remains.

compliant with the type test results

3.9
audit test
AT
test performed on behalf of a certification body

Note 1 to entry: Audit tests are generally required 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
batch release test performed which differs from that specified test for that particular characteristic, having previously verified its correlation with the specified test

Note 1 to entry: Indirect tests may be performed by the manufacturer or outsourced on behalf of the manufacturer.

3.11
witness test
type test or audit test which is performed in the presence of a representative of the certification body

3.12
material
generic term for compounds/formulations grouped by families, expressed by generic names

Note 1 to entry: Examples of generic names are PVC-U, polypropylene and EPDM.

3.13
substance
monomer, additive, element or chemical compound as used in compounds/formulations

3.14
compound/formulation
clearly defined homogenous mixture of substances used for the manufacture of the product as defined in the referring product standard

Note 1 to entry: In general, the term “compound” is used for polyolefins and the term “formulation” for PVC.

Note 2 to entry: The term “composition” is often used instead of compound/formulation for metals and when dealing with water and food contact regulations.

3.15
material batch
clearly identified quantity of a given homogeneous compound/formulation manufactured under uniform conditions and defined and identified by the compound/formulation manufacturer

3.16
product
item as defined in the scope of the standard, e.g. fitting, manhole or inspection chamber

3.17
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

3.18
sample
one or more components or products drawn from the same production batch selected at random without regard to their quality

3.19
group
defined collection of similar components/products from which samples are selected for testing purposes

3.20
component
part of a product

Note 1 to entry: Depending on the context, components may be considered as products and be individually approved (e.g. o-ring, gasket) or they are tested as integral part of a finished product (e.g. in a valve).

3.21
joint
connection between two products

3.22
assembled product
final product comprising two or more components

3.23
fabricated fitting
fitting produced by welding, thermoforming or solvent-cementing from pipes and/or from injection-moulded [or rotomoulded] fittings

3.24
assembly
set of various products assembled together for the purpose of testing

3.25
cavity
space within a mould to be filled to form the moulded product

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

4 Abbreviated terms and symbols

To avoid misunderstanding, the abbreviations in this Clause are defined as being the same in each language. For the same reason, the terms are given in the three languages, English, French and German.

	EN	FR	DE
AT	audit test	essai d'audit	Überwachungsprüfung
BRT	batch release test	essai de libération de campagne de fabrication	Freigabeprüfung einer Charge
PVT	process verification test	essai de vérification du procédé de fabrication	Prozessüberprüfung
TT	type test	essai de type	Typprüfung

5 General

Materials, products and fitness for purpose shall conform to the requirements given in EN 13598-1 and EN 13598-2.

Materials and products shall be produced by the manufacturer under a quality management system which includes a quality plan.

6 Testing (EN 13598-1)

6.1 Group

6.1.1 General

For the purposes of this document, the groups specified in 6.1.2 and 6.1.3 apply.

6.1.2 Size groups

For ancillary fittings the size groups are defined in Table 1 and for shallow chambers in Table 2.

The nominal diameter of ancillary fittings (excluding mechanical saddles) shall be that of the pipe which can be connected to its outlet.

Mechanical saddles are sized by the nominal diameter of the main pipe that they are intended to joint to.

Table 1 — Size groups for ancillary fittings

Size group	Nominal outside diameter, d_n mm
1	$d_n \leq 200$
2	$200 < d_n \leq 500$
3	$d_n > 500$

For shallow chambers, size relates to the nominal internal diameter (DN/ID) of the riser (see Table 2).

Table 2 — Size groups for shallow chambers

Size group	Nominal inside diameter, d_n mm
1	$180 < d_n \leq 450$
2	$450 < d_n < 800$

6.1.3 Fitting groups

For ancillary fittings and shallow chambers, the fitting groups are defined in Table 3.

Table 3 — Fitting groups for ancillary fittings and shallow chambers

Fitting group	Type of fitting
1	Sealed access fittings
2	Rodding point covers
3	Rodding tees
4	Mechanical saddles
5	Shallow chambers

Each group shall consist of a range of products of the same material and design.

6.2 Type testing

6.2.1 General

Type testing is intended to demonstrate the ability of the product to fulfil the intended use and characteristics detailed in the referring product standard.

Type testing shall be performed as described in Table 7 and Table 8 whenever there is:

a. a new system (N);

b. a change in design (D);

c. a change in material (M);

d. a change in production processing method (P), other than routine in-process adjustments;

e. and an extension of the product range (E).

NOTE 1 Type testing may need to be revalidated as a result of deviation of process verification test (see 6.4).

— An example of a new system (N) would be understood as a manufacturer's first application for a new fitting group in accordance with EN 13598-1 or a change to more than one of the other categories.

— An example of a change in design (D) would be understood as changes that only have an influence on the jointing and/or performance characteristics of the fittings.

— An example of a change in production processing method (P) would be understood as a change in production method from e.g. injection moulding to rotational moulding.

— An example of an extension of the product range (E) would be understood as an extension with a new size group.

For a change of material (M), Clauses 6.2.2 to 6.2.4 apply. A change of generic material (e.g. PP to PE) is considered as a new system (N).

When a change of production site occurs, the manufacturer shall determine which type tests need to be revalidated.

Unless any of the conditions a) to e) above occurs, the type test results remain valid.

A type test may be performed by the manufacturer or outsourced on behalf of the manufacturer.

NOTE 2 If certification is involved, the certification body may request the location of the test.

Type tests shall demonstrate that the products conform to all requirements for the characteristics given in Tables 7 and 8, as applicable.

6.2.2 Change of material – PVC-U

Each formulation, including if applicable non-virgin material, shall be specified by the manufacturer in the quality plan, including the ingredients and their tolerances.

If the dosage level in the formulation exceeds the tolerance band given in Table 4, or if there is a change of type, this variation is considered to be a change in material.

In Table 4, for the virgin part of the formulation the values of the parts X added to 100 parts by mass of PVC shall be specified by the manufacturer in the quality plan.

For the non-virgin part of the formulation (if applicable) the part X_7 shall be given as a % of the mass of the virgin part.