



SLOVENSKI STANDARD

SIST-TS CEN/TS 1451-2:2012

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Nadomešča:
SIST ENV 1451-2:2002

Cevni sistemi iz polimernih materialov za (nizko- in visokotemperaturne) odvodne sisteme v zgradbah - Polipropilen (PP) - 2. del: Navodilo za ugotavljanje skladnosti

Plastic piping systems for soil and waste discharge (low and high temperature) within the building structure - Polypropylene (PP) - Part 2: Guidance for the assessment of conformity

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Kunststoff-Rohrleitungssysteme zum Ableiten von Abwasser (niedriger und hoher Temperatur) innerhalb der Gebäudestruktur - Polypropylen (PP) - Teil 2: Empfehlungen für die Beurteilung der Konformität

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Systèmes de canalisations en plastique pour l'évacuation des eaux-vannes et des eaux usées (à basse et à haute température) à l'intérieur de la structure des bâtiments - Polypropylène (PP) - Partie 2: Guide pour l'évaluation de la conformité

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ICS:

23.040.20	Cevi iz polimernih materialov	Plastics pipes
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Supersedes ENV 1451-2:2001

English Version

Plastic piping systems for soil and waste discharge (low and high temperature) within the building structure - Polypropylene (PP) - Part 2: Guidance for the assessment of conformity

Systèmes de canalisations en plastique pour l'évacuation des eaux-vannes et des eaux usées (à basse et à haute température) à l'intérieur de la structure des bâtiments - Polypropylène (PP) - Partie 2: Guide pour l'évaluation de la conformité

Kunststoff-Rohrleitungssysteme zum Ableiten von Abwasser (niedriger und hoher Temperatur) innerhalb der Gebäudestruktur - Polypropylen (PP) - Teil 2: Empfehlungen für die Beurteilung der Konformität

This Technical Specification (CEN/TS) was approved by CEN on 31 October 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.

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Foreword

This document (CEN/TS 1451-2:2012) 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 1451-2:2001.

EN 1451 consists of the following parts, under the general title *Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure — Polypropylene (PP)*

- Part 1: *Specifications for pipes, fittings and the system*
- Part 2: *Guidance for the assessment of conformity* (the present TS)

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.

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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. 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 materials, pipes, fittings, joints or assemblies by manufacturers is given in Figure 1.

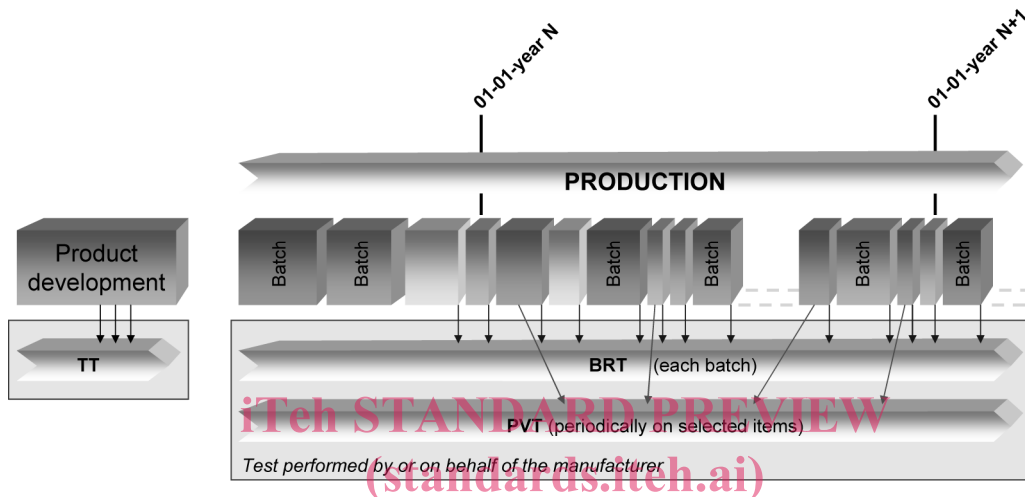


Figure 1 — Typical scheme for the assessment of conformity by a manufacturer

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

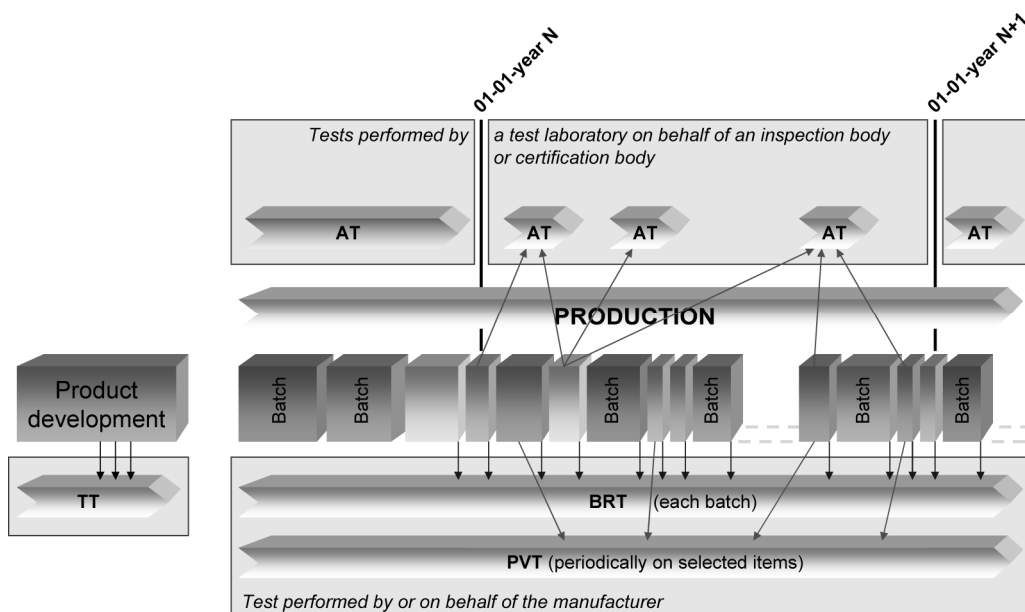


Figure 2 — Typical scheme for the assessment of conformity by a manufacturer, including a third-party certification

1 Scope

This Technical Specification gives guidance for the assessment of conformity of materials, products, joints and assemblies in accordance with the applicable part(s) of EN 1451 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 to EN ISO 9001 [1].

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

NOTE 3 In order to help the readers, a summary of the test regime is given in Annex A.

In conjunction with EN 1451-1 this document is applicable to piping systems made of polypropylene (PP) intended to be used:

- for soil and waste discharge systems (low and high temperature) inside buildings (application area code "B") and,
- for soil and waste discharge systems (low and high temperature) for both inside buildings and buried in ground within the building structure (application area code "BD")

This is reflected in the marking of products by "B" or "BD".

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2 Normative references (standards.iteh.ai)

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 1451-1, *Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure — Polypropylene (PP) — Part 1: Specifications for pipes, fittings and the system*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1451-1 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: A inspection body is preferably accredited to EN ISO/IEC 17020 [5].

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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 1451, the materials 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
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 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 materials or products, which has to be satisfactorily completed before the batch can be released

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3.8
process verification test
PVT
test performed by or on behalf of the manufacturer on materials, products or joints 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 materials 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 material, 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

CEN/TS 1451-2:2012 (E)**3.21****joint**

connection between two products

3.22**assembled product**

assembled final product using two or more single parts

3.23**thermoplastics fabricated fitting**

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

3.24**assembly**

product that can be dismantled into a set of components

EXAMPLE A test piece consisting of various products.

3.25**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.

3.26**product type**

generic description of a product

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

3.27**cavity**

(moulding) 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

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	Freigabepfung einer Charge
IT	indirect test	essai indirect	indirekte Prüfung
PVT	process verification test	essai de vérification du procédé de fabrication	Prozessüberprüfung
TT	type test	essai de type	Typprüfung
WT	witness testing	essai témoin	Prüfung unter Aufsicht

5 General

5.1 Materials, products, joints and assemblies shall conform to the requirements given in EN 1451-1.

5.2 Products and assemblies shall be produced by the manufacturer under a quality management system which includes a quality plan.

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

6 Testing and inspection

6.1 Material specification

For the purposes of this Technical Specification, the material specification consists of a compound/formulation comprising a polypropylene (PP) compound/formulation with specific trade name and additives with known dosage level.

6.2 Grouping

6.2.1 General

For the purposes of this Technical Specification, the groups specified in 6.2.2 to 6.2.3 apply.

6.2.2 Size groups

Three size groups are defined for pipes and fittings, as given in Table 1.

For testing purposes, one individual nominal diameter, d_n , shall be selected from each group.

Table 1 — Size groups

Size group	Nominal diameter, d_n mm
1	$d_n < 75$
2	$75 \leq d_n < 200$
3	$200 \leq d_n \leq 315$

For testing purposes of rainwater piping systems, the entire size range from 50 mm to 160 mm inclusive shall be considered as a single group.

6.2.3 Fitting groups

Three groups of fittings each having a similar design are defined, as given in Table 2.

For testing purposes, one individual fitting shall be selected from each group.