

Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Acrylonitrile-butadiene-styrene (ABS) - Part 1: Requirements for pipes, fittings and the system

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1455-1:2000 sisaldab Euroopa standardi EN 1455-1:1999 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1455-1:2000 consists of the English text of the European standard EN 1455-1:1999.</p> <p>This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This standard specifies the requirements for pipes, fittings and the system of ABS and ASA solid-wall piping systems in the field of soil and waste discharge (low and high temperature)</p> <ul style="list-style-type: none">- inside buildings (marked with "B") and- for both inside buildings and buried in ground within the building structure (marked with "BD"). <p>It also specifies the test parameters for the test methods referred to in this standard.</p> <p>This standard is applicable to ABS pipes and fittings, their joints and to joints with components of other plastics and non-plastics materials intended to be used for the following purposes:</p> <ul style="list-style-type: none">a) soil and waste discharge pipework for the conveyance of domestic waste waters (low and high temperature);b) ventilation pipework associated with a);c) rainwater pipework within the building structure.	<p>Scope:</p> <p>This standard specifies the requirements for pipes, fittings and the system of ABS and ASA solid-wall piping systems in the field of soil and waste discharge (low and high temperature)</p> <ul style="list-style-type: none">- inside buildings (marked with "B") and- for both inside buildings and buried in ground within the building structure (marked with "BD"). <p>It also specifies the test parameters for the test methods referred to in this standard.</p> <p>This standard is applicable to ABS pipes and fittings, their joints and to joints with components of other plastics and non-plastics materials intended to be used for the following purposes:</p> <ul style="list-style-type: none">a) soil and waste discharge pipework for the conveyance of domestic waste waters (low and high temperature);b) ventilation pipework associated with a);c) rainwater pipework within the building structure.
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English version

**Plastics piping systems for soil and waste discharge
(low and high temperature) within the building
structure – Acrylonitrile-butadiene-styrene (ABS)**

Part 1: Requirements for pipes, fittings and the system

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 – Acrylonitrile-butadiène-styrène (ABS) – Partie 1: Exigences pour tubes, raccords ainsi que pour le système

Kunststoff-Rohrleitungssysteme zum Ableiten von Abwasser (niedriger und hoher Temperatur) innerhalb der Gebäudestruktur – Acrylnitril-Butadien-Styrol (ABS) – Teil 1: Anforderungen an Rohre, Formstücke und das Rohrleitungssystem

This European Standard was approved by CEN on 1998-11-28.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2000, and conflicting national standards shall be withdrawn at the latest by July 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This European Standard is one Part of EN 1455 for plastics piping systems in the field of soil and waste discharge (low and high temperature) within the building structure made of acrylonitrile-butadiene-styrene (ABS), which consists of the following parts:

Part 1: Specifications for pipes, fittings and the system

Part 2: Guidance for the assessment of conformity

Following a decision of CEN/TC 155 after the CEN enquiry, this draft is the result of merging of the following parts of prEN 1455:

Part 1: General (submitted for CEN enquiry as prEN 1455-1);

Part 2: Pipes (submitted for CEN enquiry as prEN 1455-2);

Part 3: Fittings (submitted for CEN enquiry as prEN 1455-3);

Part 5: Fitness for purpose of the system (submitted for CEN enquiry as prEN 1455-5);

Part 6: "*Recommended practice for installation*" (published for CEN enquiry as prEN 1455-6) is intended to be included in a merged document for the recommended practice for installation of plastics piping systems in the field of soil and waste discharge (low and high temperature) within the building structure. For this document the type of publication as European Prestandard (ENV) was approved by the CEN members.

For Part 7 *Assessment of conformity* (published for CEN enquiry as prEN 1455-7) the type of publication as European Prestandard ENV 1455-2 "*Assessment of conformity*" was approved by the CEN members.

This standard series is based on the results of the work 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 Standard.

This Part of EN 1455 includes the following annex:

- Annex A (informative): General characteristic of ABS pipes and fittings

1 Scope

This European standard specifies the requirements for pipes, fittings and the system of acrylonitrile-butadiene-styrene (ABS) and acrylonitrile-styrene-acrylester (ASA) solid-wall piping systems in the field of soil and waste discharge (low and high temperature)

- inside buildings (marked with "B")
- for both inside buildings and buried in ground within the building structure (marked with "BD").

NOTE 1 The application area "inside buildings" according to this standard, applies to the interior area of the building only. The application area "within the building structure" conforms to the requirements for "inside buildings" according to prEN 12056-1.

It also specifies the test parameters for the test methods referred to in this standard.

This standard is applicable to ABS pipes and fittings, their joints and to joints with components of other plastics and non-plastics materials intended to be used for the following purposes:

- a) soil and waste discharge pipework for the conveyance of domestic waste waters (low and high temperature);
- b) ventilation pipework associated with a);
- c) rainwater pipework within the building structure.

It applies to pipes and fittings, marked with "B", which are intended to be used inside buildings and outside buildings fixed onto the wall.

It applies to pipes and fittings, marked with "BD", which are intended to be used for both inside buildings and buried in ground within the building structure.

NOTE 2 Only components (marked with "BD") are intended for use buried in ground within the building structure with a nominal ring stiffness of at least SN 4 and nominal outside diameters equal to or greater than 75 mm.

NOTE 3 Pipes and fittings of the pipe series S 25 are intended to be used for application area "B" only.

This standard is applicable to ABS pipes and fittings of the following types:

- plain-ended,
- with integral elastomeric ring seal socket,
- with integral solvent cement socket,
- with integral dual purpose socket for elastomeric ring seal joints and/or solvent cement joints,

whereby the fittings can be manufactured by injection-moulding or be fabricated from pipes and/or mouldings.

NOTE 4 Components conforming to any of the System Standards listed in Annex B (informative) can be used with pipes and fittings conforming to this standard, provided they conform to the requirements for joint dimensions and to the functional requirements given in this standard.

This standard covers a range of nominal sizes, a range of pipe series and gives recommendations concerning colours.

NOTE 5 It is the responsibility of the purchaser or specifier to make the appropriate selection from these aspects, taking into account their particular requirements and any relevant national regulations and installation practices codes.

2 Normative references

This Standard 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 Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

prEN 496, *Plastics piping systems — Plastics pipes and fittings — Measurements of dimensions and visual inspection of surfaces*

EN 681-1, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 1: Vulcanized rubber*

- prEN 681-2, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 2: Thermoplastic elastomers*
- EN 727, *Plastics piping and ducting systems — Thermoplastics pipes and fittings — Determination of Vicat softening temperature (VST)*
- EN 743:1994, *Plastics piping and ducting systems — Thermoplastics pipes — Determination of the longitudinal reversion*
- EN 744:1995, *Plastics piping and ducting systems — Thermoplastics pipes — Test method for resistance to external blows by the round-the-clock method*
- EN 763:1994, *Plastics piping and ducting systems — Injection-moulded thermoplastics fittings — Test method for visually assessing effects of heating*
- EN 921, *Plastics piping systems — Thermoplastics pipes — Determination of resistance to internal pressure at constant temperature*
- EN 1053, *Plastics piping systems — Thermoplastics piping systems for non-pressure applications — Test methods for watertightness*
- EN 1054, *Plastics piping systems — Thermoplastics piping systems for soil and waste discharge — Test method for airtightness of joints*
- EN 1055: 1996, *Plastics piping systems — Thermoplastics piping systems for soil and waste discharge inside buildings — Test method for resistance to elevated temperature cycling*
- EN 1277: 1996, *Plastics piping systems — Thermoplastics piping systems for buried non-pressure applications — Test methods for leaktightness of elastomeric sealing ring type joints*
- EN 1411:1996, *Plastics piping and ducting systems — Thermoplastics pipes — Determination of resistance to external blows by the staircase method*
- prEN 1455-7, *Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure — Acrylonitrile-butadiene-styrene (ABS) — Part 7: Assessment of conformity (will be published as EN 1455-2, see Foreword)*
- prEN 1989, *Thermoplastics piping and ducting systems — Joints for buried non-pressure applications — Test method for long-term sealing performance of joints with thermoplastic elastomer (TPE) seals by estimating the sealing pressure*
- EN ISO 9969:1995, *Thermoplastics pipes — Determination of ring stiffness (ISO 9969: 1994)*
- ISO 265-1: 1988, *Pipes and fittings of plastics materials — Fittings for domestic and industrial waste pipes — Basic dimensions: Metric series — Part 1: Unplasticized poly(vinyl chloride) (PVC-U)*
- ISO 472: 1988, *Plastics — Vocabulary*
- ISO 1043-1: 1997, *Plastics — Symbols — Part 1: Basic polymers and their special characteristics*
- ISO 4065: 1996, *Thermoplastics pipes — Universal wall thickness table*
- ISO 7245: 1984, *Pipes and fittings of acrylonitrile-butadiene-styrene (ABS) — General specification for moulding and extrusion materials*
- ISO 7246: 1984, *Pipes and fittings of acrylonitrile- styrene- acrylester (ASA) — General specification for moulding and extrusion materials*
- ISO 8361-1: 1991, *Thermoplastics pipes and fittings — Water absorption — Part 1: General test method*

3 Definitions, symbols and abbreviations

For the purposes of this standard, the following definitions, symbols and abbreviations apply.

3.1 Definitions

The definitions given in ISO 472: 1988 and ISO 1043-1: 1997 and the following apply: