Maa-alused surveta drenaaži ja kanalisatsiooni plasttorustikud. Plastifitseerimata polüvinüülkloriid (PVC-U), polüpropüleen (PP) ja polüetüleen (PE). Osa 1: Torustiku hooldusliitmike, sealhulgas madalate kontrollkaevude spetsifikatsioonid

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 including shallow inspection chambers

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA	NATIONAL FOREWORD
See Eesti standard EVS-EN 13598-1:2010 sisaldab Euroopa standardi EN 13598-1:2010 ingliskeelset teksti.	This Estonian standard EVS-EN 13598-1:2010 consists of the English text of the European standard EN 13598-1:2010.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 08.12.2010.	Date of Availability of the European standard is 08.12.2010.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

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 including shallow inspection chambers

Systèmes de canalisations en plastique pour les branchements et les collecteurs d'assainissement enterrés sans pression - Poly(chlorure de vinyle) non plastifié (PVC-U), polypropylène (PP) et polyéthylène (PE) - Partie 1: Spécifications pour raccords auxiliaires y compris les boîtes de branchement

Kunststoff-Rohrleitungssysteme für erdverlegte drucklose Abwasserkanäle und -leitungen - Weichmacherfreies Polyvinylchlorid (PVC-U), Polypropylen (PP) und Polyethylen (PE) - Teil 1: Anforderungen an Schächte und Zubehörteile

This European Standard was approved by CEN on 23 October 2010.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 13598-1:2010) has been prepared by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems”, the secretariat of which is held by NEN.

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 June 2011, and conflicting national standards shall be withdrawn at the latest by June 2011.

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 EN 13598-1:2003.

The main changes compared to the previous edition are:

a) the opening of the standard to allow the controlled use of external reclaim materials (Annex A);

b) increased testing detail for mechanical saddles (Annex B).

This European Standard is a supplementary standard for System Standards for plastics piping systems of a particular material for a specified application. There are a number of such System Standards.

System Standards are based on the results of the work being undertaken in ISO/TC 138 “Plastics pipes, fittings and valves for the transport of fluids”, which is a Technical Committee of the International Organisation for Standardisation (ISO).

They are supported by separate standards on test methods and by European Standards for thermoplastic underground drainage and sewerage systems, to which references are made throughout the System Standard.

The System Standards are consistent with general standards on functional requirements and on recommended practice for installation.

This European Standard 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 including shallow inspection chambers* (this standard);

— *Part 2: Specifications for manholes and inspection chambers in traffic areas and deep underground installations*;

— *Part 3: Guidance for the assessment of conformity* (a Technical Specification is under preparation).

This document includes a bibliography.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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 and the United Kingdom.

1 Scope

This European Standard specifies the definitions and requirements for ancillary fittings of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP), and polyethylene (PE) intended to be used in non-pressure underground drainage and sewerage systems, conforming to EN 476:

a) outside the building structure (application area code “U”), reflected in the marking of products by “U”, and

b) 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”.

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

The ancillary fittings covered by this standard are the following:

— sealed access fittings;

— rodding point covers;

— rodding tees;

— mechanical saddles;

— inspection chambers for shallow non-roadway applications to a maximum depth of 1,25 m.

NOTE 1 Inspection chambers as defined in 6.1.3 of EN 476:1997 have a riser with a DN/ID less than 800 mm.

NOTE 2 Deep inspection chambers and manholes for application area U are specified in Part 2 of this standard.

The fittings can be manufactured by various methods e.g. injection moulding, rotational moulding, spiral winding or fabricated from components made to other standards.

The jointing can be with:

— elastomeric ring seal joint;

— cemented joint for PVC-U;

— welded joint for PP and PE.

NOTE 3 Pipes, fittings and other components conforming to any of the plastics products standards listed in Clause 2 can be used with ancillary fittings conforming to this standard, provided they conform to the requirements for joint dimensions given in Clause 6 and to the requirements of Table 6.

2 Normative references

The following referenced documents are indispensable for the application 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 295-3:1991, *Vitrified clay pipes and fittings and pipe joints for drains and sewers — Part 3: Test methods*

EN 476:1997, *General requirements for components used in discharge pipes, drains and sewers for gravity systems*

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

EN 681-2, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 2: Thermoplastic elastomers*

EN 681-3, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 3: Cellular materials of vulcanized rubber*

EN 681-4, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 4: Cast polyurethane sealing elements*

EN 728, *Plastics piping and ducting systems – Polyolefin pipes and fittings – Determination of oxidation induction time*

EN 922, *Plastics piping and ducting systems — Pipes and fittings of unplasticized poly(vinylchloride)(PVC-U) — Specimen preparation for determination of the viscosity number and calculation of the K-value*

EN 1053, *Plastics piping systems — Thermoplastics piping systems for non-pressure applications — Test method for watertightness*

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 1253-1:2003*, Gullies for buildings — Part 1: Requirements*

EN 1253-2:2003*, Gullies for buildings — Part 2: Test methods*

EN 1277:2003, *Plastics piping systems — Thermoplastics piping systems for buried non-pressure applications — Test methods for leaktightness of elastomeric sealing ring type joints*

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*

EN 1852-1:2009, *Plastics piping systems for non-pressure underground drainage and sewerage — Polypropylene (PP) — Part 1: Specifications for pipes, fittings and the system*

EN 12256*, Plastics piping systems — Thermoplastics fittings — Test method for mechanical strength or flexibility of fabricated fittings*

EN 12666-1:2005, *Plastics piping systems for non-pressure underground drainage and sewerage — Polyethylene (PE) — Part 1: Specifications for pipes, fittings and the system*

EN 13476-1:2007, *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 13476-2:2007, *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 13476-3:2007+A1:2009, *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*

EN 14680, *Adhesives for non-pressure thermoplastic piping systems — Specifications*

EN 14758-1:2005+A1:2009, *Plastics piping systems for non-pressure underground drainage and sewerage — With mineral modifiers (PP-MD) — Part 1: Specifications for pipes, fittings and the system*

EN 14830, *Thermoplastics inspection chamber and manhole bases — Test methods for buckling resistance*

EN 14982, *Plastics piping and ducting systems — Thermoplastics shafts or risers for inspection chambers and manholes — Determination of ring stiffness*

EN ISO 580:2005, *Plastics piping and ducting systems — Injection-moulded thermoplastics fittings — Methods for visually assessing the effects of heating (ISO 580:2005)*

EN ISO 1043-1:2001, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics (ISO 1043-1:2001)*

EN ISO 1133, *Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of the thermoplastics (ISO 1133:2005)*

EN ISO 1183-1, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pyknometer method and titration method (ISO 1183-1:2004)*

EN ISO 1183-2, *Plastics — Methods for determining the density of non-cellular plastics — Part 2: Density gradient column method (ISO 1183-2:2004)*

EN ISO 3126, *Plastics piping systems — Plastics components — Determination of dimensions (ISO 3126:2005)*

3 Terms, definitions, symbols and abbreviations

For the purposes of this document, the terms, definitions and abbreviations given in EN 1401-1:2009, EN 1852-1:2009, EN 12666-1:2005, EN 13476-1:2007, EN 13476-2:2007, EN 13476-3:2007+A1:2009, EN 14758-1:2005+A1:2009, EN ISO 1043-1:2001 and the following apply.

3.1 Terms and definitions

3.1.1
sealed access fitting
fitting that permits entry into the system for rodding or inspection and that has a sealed cover

3.1.2
rodding point cover
fitting which is installed at ground level with a removable cover that permits the introduction of equipment for inspection and the clearance of blockages, and the riser shafts connected to which do not exceed 200 mm outside diameter and are not less than 100 mm inside diameter

3.1.3
rodding tee
fitting which is installed in a drainage or sewerage system that connects to a rodding point at ground level by means of a vertical shaft that permits the introduction of equipment for the clearance of blockages, and also equipment for the inspection of the connecting pipe work in one or more directions, and the riser shafts connected to which do not exceed 200 mm outside diameter and are not less than 100 mm inside diameter

3.1.4
mechanical saddle
fitting that enables a branch connection to be made to buried drainage/sewerage systems of larger diameter by cutting a hole in the larger pipe and is retained in position by mechanical means

3.1.5
inspection chamber – shallow
drainage and sewerage fitting:

— which is used for connecting drainage or sewerage installations and/or for changing the direction of drainage/sewerage runs,