

Plastics piping systems for non-pressure underground drainage and sewerage - Polypropylene with mineral modifiers (PP-MD) - Part 1: Specifications for pipes, fittings and the system

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 14758-1:2023 sisaldab Euroopa standardi EN 14758-1:2023 ingliskeelset teksti.	This Estonian standard EVS-EN 14758-1:2023 consists of the English text of the European standard EN 14758-1:2023.
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ICS 23.040.05, 93.030

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EUROPEAN STANDARD

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English Version

Plastics piping systems for non-pressure underground
drainage and sewerage - Polypropylene with mineral
modifiers (PP-MD) - Part 1: Specifications for pipes,
fittings and the system

Systèmes de canalisations en plastique pour les
branchements et les collecteurs d'assainissement
enterrés sans pression - Polypropylène avec
modificateurs minéraux (PP-MD) - Partie 1 :
Spécifications pour les tubes, les raccords et le système

Kunststoff-Rohrleitungssysteme für erdverlegte
drucklose Abwasserkanäle und -leitungen -
Polypropylen mit mineralischen Additiven (PP-MD) -
Teil 1: Anforderungen an Rohre, Formstücke und das
Rohrleitungssystem

This European Standard was approved by CEN on 3 March 2023.

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This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

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European foreword

This document (EN 14758-1:2023) 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of an identical text or by endorsement, at the latest by October 2023, and conflicting national standards shall be withdrawn at the latest by October 2023.

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 EN EN 14758-1:2012.

The main changes compared to the previous edition are listed below:

- the Scope has been changed by introducing skin layer;
- updating of the Normative references;
- updating of the Terms and definition with the material definitions in EN 14541-1 and a new definition of the skin;
- the Material clause has been modified by specifying the PP compound used in the skin and defining a minimum content of mineral modifier;
- the maximum thickness of each skin has been introduced;
- the Ring stiffness class SN16 for pipes and fittings has been introduced;
- two alternatives for inside diameter of sockets has been introduced – normal and close tolerance (CT);
- the water tightness test of fabricated fittings has been introduced;
- Annex A Utilization of reworked material and recycle has been modified to be in line with CEN/TS 14541-2;
- a new informative Annex D for testing of PP recyclates with the CRB-method has been added.

System Standards are 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 System Standard.

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

The EN / CEN/TS 14758 series, *Plastics piping systems for non-pressure underground drainage and sewerage - Polypropylene with mineral modifiers (PP-MD)*, consists of the following parts:

- EN 14758, *Part 1: Specifications for pipes, fittings and the system*;
- CEN/TS 14758, *Part 2: Guidance for the assessment of conformity*.

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 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

1 Scope

This document specifies the requirements for solid-wall pipes and fittings with or without internal and/or external skin, and the system of piping systems made from mineral modified polypropylene materials (PP-MD) in the field of non-pressure underground drainage and sewerage outside the building structure (application area code "U"), and non-pressure underground drainage and sewerage for both buried in ground within the building structure and outside the building structure (application area code "UD").

This is reflected in the marking of products by "U" and "UD".

NOTE 1 The skins are made of PP compound without mineral modifier.

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

This document covers a range of nominal sizes, a range of pipe stiffness classes and gives recommendations concerning colours.

NOTE 2 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 or codes.

In conjunction with Part 2 of EN 14758 (see European foreword) it is applicable to PP-MD pipes and fittings, their elastomeric sealing ring joints and to joints with components of other plastics and non-plastics materials intended to be used for buried piping systems for non-pressure underground drainage and sewerage.

This document is applicable to PP-MD pipes with or without an integral socket and fittings with an integral socket.

NOTE 3 The fittings can be manufactured by injection-moulding or be fabricated from pipes and/or mouldings.

NOTE 4 Pipes, fittings and other components conforming to any of the plastics product standards listed in Annex C can be used with pipes and fittings conforming to this document, when they conform to the requirements for joint dimensions given in Clause 7 and to the requirements of Table 11.

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 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 - Material requirements for pipe joint seals used in water and drainage applications - Part 2: Thermoplastic elastomers*

EN 12099, *Plastics piping systems - Polyethylene piping materials and components - Determination of volatile content*

EN ISO 472, *Plastics - Vocabulary (ISO 472)*

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

- EN ISO 1133-1, *Plastics - Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics - Part 1: Standard method (ISO 1133-1)*
- EN ISO 1167 (all parts), *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids - Determination of the resistance to internal pressure (ISO 1167 (all parts))*
- EN ISO 1183-1, *Plastics - Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1)*
- EN ISO 1183-2, *Plastics - Methods for determining the density of non-cellular plastics - Part 2: Density gradient column method (ISO 1183-2)*
- EN ISO 2505:2005, *Thermoplastics pipes - Longitudinal reversion - Test method and parameters (ISO 2505:2005)*
- EN ISO 3126, *Plastics piping systems - Plastics components - Determination of dimensions (ISO 3126)*
- EN ISO 3127, *Thermoplastics pipes - Determination of resistance to external blows - Round-the-clock method (ISO 3127)*
- EN ISO 3451-1, *Plastics - Determination of ash - Part 1: General methods (ISO 3451-1)*
- EN ISO 9969, *Thermoplastics pipes - Determination of ring stiffness (ISO 9969)*
- EN ISO 11173, *Thermoplastics pipes - Determination of resistance to external blows - Staircase method (ISO 11173)*
- EN ISO 11357-6, *Plastics - Differential scanning calorimetry (DSC) - Part 6: Determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT) (ISO 11357-6)*
- EN ISO 13254, *Thermoplastics piping systems for non-pressure applications - Test method for watertightness (ISO 13254)*
- EN ISO 13257:2018, *Thermoplastics piping systems for non-pressure applications — Test method for resistance to elevated temperature cycling (ISO 13257:2018)*
- EN ISO 13259:2020, *Thermoplastics piping systems for underground non-pressure applications — Test method for leaktightness of elastomeric sealing ring type joints (ISO 13259:2020)*
- EN ISO 13263, *Thermoplastics piping systems for non-pressure underground drainage and sewerage - Thermoplastics fittings - Test method for impact strength (ISO 13263)*
- EN ISO 13264, *Thermoplastics piping systems for non-pressure underground drainage and sewerage - Thermoplastics fittings - Test method for mechanical strength or flexibility of fabricated fittings (ISO 13264)*
- EN ISO 13967, *Thermoplastics fittings - Determination of ring stiffness (ISO 13967)*
- EN ISO 13968, *Plastics piping and ducting systems - Thermoplastics pipes - Determination of ring flexibility (ISO 13968)*
- CEN/TS 17627, *Plastics - Recycled plastics - Determination of solid contaminants content*