

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

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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 22 January 2012.

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Foreword

This document (EN 14758-1:2012) 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of an identical text or by endorsement, at the latest by September 2012, and conflicting national standards shall be withdrawn at the latest by September 2012.

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 14758-1:2005+A1:2009.

In this revised document the following changes are made:

- relevant test methods are changed from EN to ISO versions;
- the long term durability test are removed.

The 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).

The System Standards 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.

EN 14758 consists of the following parts under the general title *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

Part 2: Guidance for the assessment of conformity (published as CEN/Technical Specification)

Part 3: Guidance for installation (published as CEN/Technical Specification).

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, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the requirements for solid-wall pipes, fittings 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 (application area code "D") and outside the building structure.

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

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

This European Standard covers a range of nominal sizes, a range of pipe series/stiffness classes and gives recommendations concerning colours.

NOTE 1 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 and Part 3 of EN 14758 (see 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 European Standard is applicable to PP-MD pipes with or without an integral socket.

NOTE 2 The fittings can be manufactured by injection-moulding or be fabricated from pipes and/or mouldings.

NOTE 3 Requirements and limiting values for application area code "D" are given in Table 4, Table 7 and Table 13.

NOTE 4 Pipes, fittings and other components conforming to any of the plastics product standards listed in Annex B can be used with pipes and fittings conforming to this European Standard, when they conform to the requirements for joint dimensions given in Clause 6 and to the requirements of Table 13.

2 Normative references

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 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 ISO 472:2001, *Plastics — Vocabulary (ISO 472:1999)*

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

EN ISO 1167 (all parts), *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure*

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 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)*

EN ISO 9969, *Thermoplastics pipes — Determination of ring stiffness (ISO 9969)*

ISO 3127, *Thermoplastics pipes — Determination of resistance to external blows — Round-the-clock method*

ISO 11173, *Thermoplastics pipes — Determination of resistance to external blows — Staircase method*

ISO 13257, *Thermoplastics piping systems for non-pressure applications — Test method for resistance to elevated temperature cycling*

ISO 13259, *Thermoplastics piping systems for underground non-pressure applications — Test method for leaktightness of elastomeric sealing ring type joints*

ISO 13263, *Thermoplastics piping systems for non-pressure underground drainage and sewerage — Thermoplastics fittings — Test method for impact strength*

ISO 13264, *Thermoplastics piping systems for non-pressure underground drainage and sewerage — Thermoplastics fittings — Test method for mechanical strength or flexibility of fabricated fittings*

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

For the purposes of this European Standard, the terms, definitions and symbols given in EN ISO 472:2001 and EN ISO 1043-1:2001 and the following apply.

3.1.1

application area code

code used in the marking of pipes and fittings to indicate the application area for which they are intended, as follows:

- U: code for the area more than 1 m from the building to which the buried piping system is connected;
- D: code for the area under and within 1 m from the building where the pipes and the fittings are buried in ground and are connected to the soil and waste discharge system of the building

Note 1 to entry: In code D application areas, the existence of hot water discharge in addition to the external forces from the surroundings is usual.

3.1.2 Geometrical definitions

3.1.2.1

nominal size

DN

numerical designation of the size of a component, which is a convenient round number approximately equal to the manufacturing dimension, in millimetres