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NSAI Standards

Irish Standard
I.S. EN 13476-3:2018+A1:2020

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

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I.S. EN 13476-3:2018+A1:2020

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This document is based on:	*Published:*
EN 13476-3:2018+A1:2020	2020-06-03

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2020-06-21	23.040.01 93.030
	NOTE: If blank see CEN/CENELEC cover page

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National Foreword

I.S. EN 13476-3:2018+A1:2020 is the adopted Irish version of the European Document EN 13476-3:2018+A1:2020, 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

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13476-3:2018+A1

June 2020

ICS 23.040.01; 93.030

Supersedes EN 13476-3:2018

English Version

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

Systèmes de canalisations en plastique pour les branchements et les collecteurs d'assainissements sans pression enterrés - Systèmes de canalisations à parois structurées en poly(chlorure de vinyle) non plastifié (PVC-U), polypropylène (PP) et polyéthylène (PE) - Partie 3 : Spécifications pour les tubes et raccords avec une surface interne lisse et une surface externe profilée et le système, de Type B

Kunststoff-Rohrleitungssysteme für erdverlegte drucklose Abwasserkanäle und -leitungen - Rohrleitungssysteme mit profilierter Wandung aus weichmacherfreiem Polyvinylchlorid (PVC-U), Polypropylen (PP) und Polyethylen (PE) - Teil 3: Anforderungen an Rohre und Formstücke mit glatter Innen- und profilierter Außenfläche und an das Rohrleitungssystem, Typ B

This European Standard was approved by CEN on 8 February 2018 and includes Amendment 1 approved by CEN on 12 February 2020.

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 CEN-CENELEC Management Centre or to any CEN member.

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European foreword

This document (EN 13476-3:2018+A1:2020) 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 December 2020, and conflicting national standards shall be withdrawn at the latest by December 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN not be held responsible for identifying any or all such patent rights.

This document supersedes ▌A1⟩ EN 13476-3:2018 ⟨A1▌.

This document includes Amendment 1 approved by CEN on 12 February 2020.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ▌A1⟩ ⟨A1▌.

▌A1⟩ The main changes in EN 13476-3:2018 with respect to the previous edition EN 13476-3:2007+A1:2009 are listed below: ⟨A1▌

a) deletion of hint to Amendment 1 in Foreword;

b) deletion of Note 2 in scope;

c) updating of references in Clause 2, Tables 2, 3, 4, 8, 9, 14, 16, 17 and I.1;

d) change denomination 'material' to 'compound / formulation' (entire document);

e) reference for PVC-U adhesives added (4.7);

f) clarification requirement 'sealing rings' (4.5);

g) range nominal sizes extended (7.2.3.1, Table 5);

h) text sequence changed: wall thickness of sockets (7.2.5.3.3);

i) alternative test method for DCM test added in Table 8;

j) footnote d added in Table 9;

k) short sockets added (7.2.4; 11.2.1; 11.2.2)

l) impact strength at 0 °C for large diameter pipes added (Table 14);

m) Annexes A, B, D, E, F, J redrafted:

n) $d_{\text{im min}}$ changed to $d_{\text{im max}}$ in Table G.1;

o) impact test requirements for large diameter pipes added (Annex K);

p) deletion application of recyclate without agreed specification (Annex B, D, E, F and J);

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q) updated with new CEN template (entire document).

This standard is a part of a System Standard for plastics piping systems of particular materials 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 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.

EN 13476 consists of the following Parts under the general title "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;*

— *Part 2: Specifications for pipes and fittings with smooth internal and external surface and the system, Type A;*

— *Part 3: Specifications for pipes and fittings with smooth internal and profiled external surface and the system, Type B* (this standard)*;*

— *Part 4: Guidance for the assessment of conformity* (CEN/TS).

National standards specifically for pipes and fittings for the transport of surface water are not considered to be conflicting with this standard and may thus be allowed to coexist.

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, Turkey and the United Kingdom.

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Introduction

This European Standard provides optional choices for impact resistance (see Annex G, Annex H and Annex K) and ring flexibility (see Annex I).

As appropriate, the individual countries may select between those options in their national forewords.

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1 Scope

This part of EN 13476, together with EN 13476-1, specifies the definitions and requirements for pipes, fittings and the system based on unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) structured-wall piping systems that are intended to be used for non-pressure underground drainage and sewerage systems.

This part is applicable to pipes and fittings with smooth internal and profiled external surfaces, designated as Type B.

It specifies test methods and test parameters as well as requirements.

This part is applicable to:

a) structured-wall pipes and fittings, which are intended to be used buried underground outside the building structure, reflected in the marking of products by “U”;

b) structured-wall pipes and fittings, which are intended to be used buried underground both outside (application area code “U”) and within the building structure (application area code “D”), reflected in the marking of products by “UD”.

This part is applicable to structured-wall pipes and fittings with or without an integral socket with elastomeric ring seal joints as well as welded and fused joints.

This part covers a range of pipe and fitting sizes, materials, pipe constructions, stiffness classes, application classes, and tolerance classes and gives recommendations concerning colours.

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

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 476, *General requirements for components used in drains and sewers*

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

EN 1401-1, *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, *Plastics piping systems for non-pressure underground drainage and sewerage — Polypropylene (PP) — Part 1: Specifications for pipes, fittings and the system*

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

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