SLOVENSKI STANDARD
oSIST prEN 50626-1:2020

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Nadomešča:
SIST EN 61386-24:2010

Podzemni kanalski sistem za zaščito in upravljanje izoliranih električnih ali komunikacijskih kablov - 1. del: Splošne zahteve

Conduit systems buried underground for the protection and management of insulated electrical cables or communication cables - Part 1: General requirements

Erdverlegte Elektroinstallationsrohrsysteme für den Schutz und die Führung isolierter elektrischer Kabel oder Fernmeldekabel – Teil 1: Allgemeine Anforderungen

Systèmes de conduits enterrés dans le sol pour la protection et la gestion des câbles électriques isolés ou des câbles de communication - Partie 1: Exigences générales

Ta slovenski standard je istoveten z: **prEN 50626-1**

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29.120.10	Inštalacijske cevi za električne namene	Conduits for electrical purposes

oSIST prEN 50626-1:2020 **en**

EUROPEAN STANDARD

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Will supersede EN 61386-24:2010 and all of its amendments and corrigenda (if any)

English Version

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This draft European Standard is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2020-09-17.

It has been drawn up by CLC/TC 213.

If this draft becomes a European Standard, CENELEC 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.

This draft European Standard was established by CENELEC in three official versions (English, French, German).
A version in any other language made by translation under the responsibility of a CENELEC 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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Contents

Page

European foreword

This document (prEN 50626-1:2020) has been prepared by CLC/TC 213, “Cable management systems”.

This document is currently submitted to the second Enquiry.

The following dates are proposed:

• latest date by which the existence of this document has to be announced at national level	(doa)	dor + 6 months
• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	dor + 12 months
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	dor + 36 months (to be confirmed or modified when voting)

This document will supersede EN 61386-24:2010 and all of its amendments and corrigenda (if any).

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

Introduction

CENELEC TC 213 is responsible for the development of the EN 50626 series, which consists of two separate parts, each covering different products/applications.

This document covers requirements and tests for conduit systems buried underground for the protection and management of insulated conductors and/or power cables or communication cables.

prEN 50626-2 covers requirements and tests for conduit systems buried underground for the protection and management of insulated conductors and/or power cables or communication cables having a specified performance time and which are leak-tight solid wall conduit systems and manufactured in PE, PP and PVC-U.

A conduit system buried underground that conforms to this document is deemed to be safe for use.

This is a European Standard for cable management products used for electro-technical purposes. It relates to the Council Directives on the approximation of laws, regulations and administrative provisions of the Member States relating to Low Voltage Directive 2014/35/EU through consideration of the essential requirements of this directive.

This document is supported by separate standards to which references are made.

1 Scope

This document specifies requirements and tests for conduit systems with circular cross section buried underground for the protection and management of insulated conductors and/or power cables or communication cables installed individually or installed as a part of an assembly where the cable is installed by pulling or pushing.

This document does not include requirements for leak-tightness according to EN ISO 13259 and performance time.

NOTE 1 prEN 50626-2 specifies requirements and tests for performance time and leak-tightness for solid wall conduit systems made of PE, PP and PVC-U buried underground where the cables are installed by blowing or floating or conduits are installed by trenchless methods.

NOTE 2 It is the responsibility of the purchaser or specifier to take into account any relevant national regulations and installation practices or codes when selecting the products to be installed, based on the characteristics specified in this document.

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 60529:1991,[1] *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN 60695-2-11:2014, *Fire hazard testing — Part 2-11: Glowing/hot-wire based test methods — Glow-wire flammability test method for end-products (GWEPT) (IEC 60695-2-11:2014)*

EN 60695-11-2:2014, *Fire hazard testing — Part 11-2: Test flames — 1 kW nominal pre-mixed flame — Apparatus, confirmatory test arrangement and guidance (IEC 60695-11-2:2013)*

ISO 2768-1:1989, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
conduit system
cable management system consisting of conduits and conduit fittings for the protection and management of insulated conductors and/or cables in electrical or communication installations, allowing them to be drawn in and/or replaced, but not to be inserted laterally

3.2
conduit
part of conduit system of circular cross-section for insulated conductors and/or cables in electrical or communication installations, allowing them to be drawn in and/or replaced

[1] As impacted by EN 60529:1991/A1:2000 and EN 60529:1991/A2:2013.

3.3
conduit fitting
device designed to join components of a conduit system, or for them to change direction

3.4
terminating conduit fitting
conduit fitting that terminates a conduit system

3.5
metallic conduit and/or conduit fitting
conduit or conduit fitting which consists of metal only

3.6
non-metallic conduit and/or conduit fitting
conduit or conduit fitting which consists uniquely of non-metallic material and which has no metallic components whatsoever

3.7
composite conduit and/or conduit fitting
conduit or conduit fitting comprising both metallic and non-metallic materials

3.8
non-flame propagating conduit and/or conduit fitting
conduit or conduit fitting which is liable to catch fire as a result of an applied flame, but in which the flame does not propagate, and which extinguishes itself within a limited time after the flame is removed

3.9
plain conduit
conduit in which the profile is even in the longitudinal section

Note 1 to entry: Both annular and helical corrugated conduits are permissible, and a combination of both corrugated and plain conduit is possible.

3.10
corrugated conduit
conduit in which the profile is corrugated in the longitudinal section

Note 1 to entry: Both annular and helical corrugated conduits are permissible, and a combination of both corrugated and plain conduit is possible.

3.11
rigid conduit
conduit which cannot be bent, or which can only be bent with the help of a mechanical aid, with or without special treatment

3.12
pliable conduit
conduit which can be bent by hand with reasonable force, and which is not intended for frequent flexing

3.13
external influence
factors which could affect the conduit system

Note 1 to entry: Examples of such factors are a presence of water, oil or building materials, low and high temperatures, and corrosive or polluting substances.

3.14
hygroscopic material
material having the characteristic of enabling attraction or holding water greater than 1,0 % by weight of the material from the surrounding environment at 23 °C and 50 % relative humidity

4 General requirements

4.1 Conduit and conduit fittings shall be so designed and constructed that in normal use their performance is reliable and they provide protection to the user or surroundings.

When assembled in accordance with manufacturer's instructions as part of a conduit system, conduits and conduit fittings shall provide mechanical and, where required, electrical protection of the insulated conductors and cables contained therein.

4.2 The protective properties of the joint between the conduit and conduit fitting shall not be less than that declared for the conduit system.

4.3 Conduit and conduit fittings shall withstand the stresses likely to occur during transport, storage, recommended installation practice and application.

4.4 Compliance is checked by carrying out all specified tests.

5 General conditions for tests

Tests in accordance with this document are type tests. Conduit systems, having the same classification, which can vary in colour only, shall be the same product type.

Where the conduit entries are part of the detachable or loose type conduit fitting, the detachable conduit fitting shall be capable of being assembled again, after the test, according to the manufacturer's instructions without loss of the declared properties according to Clause 6.

When toxic or hazardous processes are used, precautions shall be taken to safeguard the test personnel.

Unless otherwise specified in this document,

— three samples are subjected to the tests and the requirements are satisfied if the tests are met. If only one of the samples does not satisfy a test, due to an assembly or a manufacturing defect, that test and any preceding one which could have influenced the result of the test shall be repeated, and also the tests which follow shall be carried out in the required sequence on another full set of samples, all of which shall comply with the requirements;

NOTE 1 If the additional set of samples is not submitted at the same time, a failure of one sample will entail a rejection. The applicant, when submitting the first set of samples, can also submit an additional set of samples which can be used, if one sample fails. The testing station will then, without further request, test the additional set of samples and will reject them only if a further failure occurs.

— the tests shall be carried out within 1 min after conditioning and at an ambient temperature of (20 ± 5) °C;

— each test shall be made on three new samples, which may be taken from one length;

NOTE 2 Certain tests, for instance the checking of dimensions, do not affect a change in the property of the samples; therefore, these samples are considered as new samples and can be used for further tests.

— samples of conduits and conduit fittings shall be conditioned for at least 24 h, at a temperature of (23 ± 2) °C. Samples of conduits and conduit fittings made of material with hygroscopic behaviour shall be conditioned for at least 240 h, at a temperature of (23 ± 2) °C and a relative humidity between 40 % and 60 %;

— the samples for each test shall be in a clean and new condition, with all parts in place and mounted as in normal use. After checking dimensions in accordance with Clause 8, and unless otherwise specified in the relevant test, the conduit fittings shall be assembled with the lengths of conduit of the type for which they are intended, as defined in the relevant test. Due regard shall be taken of the manufacturer's instructions, especially where force is required in the assembly of the joint.

NOTE 3 Where similarities are claimed, the selection of representative fittings for test purposes can be agreed between the manufacturer, or responsible vendor, and the testing station.

6 Classification

6.1 According to mechanical properties

6.1.1 Resistance to compression

6.1.1.1 Type 250 (code 250)

NOTE A conduit system according to 6.1.1.1 is intended to be installed with additional precautions as specified in the relevant national regulations.

6.1.1.2 Type 450 (code 450)

NOTE A conduit system according to 6.1.1.2 is intended to be directly buried underground without additional precautions.

6.1.1.3 Type 750 (code 750)

NOTE A conduit system according to 6.1.1.3 is intended to be directly buried underground without additional precautions.

6.1.2 Resistance to impact

6.1.2.1 Light (code L)

6.1.2.2 Normal (code N)

6.1.3 Resistance to bending

6.1.3.1 Rigid

6.1.3.2 Pliable

6.2 According to resistance to external influences

6.2.1 Protection against ingress of solid objects

Minimum of IP3X

6.2.2 Protection against ingress of water

Minimum of IPX0