



SLOVENSKI STANDARD SIST EN 60317-0-10:2017

01-oktober-2017

Specifikacije za posebne vrste navijalnih žic - 0-10. del: Splošne zahteve - Bakrena žica z okroglim prerezom, ovita s poliesterskim steklenim vlaknom in impregnirana s silikonsko smolo ali lakom, gola ali emajlirana (IEC 60317-0-10:2017)

Specifications for particular types of winding wires - Part 0-10: General requirements - Polyester Glass fibre wound, resin or varnish impregnated, bare or enamelled round copper wire (IEC 60317-0-10:2017)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60317-0-10:2017](https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80d-13230d76ef00/sist-en-60317-0-10-2017)

<https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80d-13230d76ef00/sist-en-60317-0-10-2017>

Ta slovenski standard je istoveten z: EN 60317-0-10:2017

ICS:

29.060.10	Žice	Wires
77.150.30	Bakreni izdelki	Copper products

SIST EN 60317-0-10:2017

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60317-0-10:2017](https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80d-13230d76ef00/sist-en-60317-0-10-2017)

<https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80d-13230d76ef00/sist-en-60317-0-10-2017>

EUROPEAN STANDARD

EN 60317-0-10

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2017

ICS 29.060.10

English Version

Specifications for particular types of winding wires -
Part 0-10: General requirements - Polyester glass-fibre wound
fused, unvarnished, or resin or varnish impregnated,
bare or enamelled round copper wire
(IEC 60317-0-10:2017)

Spécifications pour types particuliers de fils de bobinage -
Partie 0-10: Exigences générales - Fil de section circulaire
en cuivre nu ou émaillé, guipé de fibres de verre polyester
fondues, non vernies ou imprégnées de vernis ou de résine
(IEC 60317-0-10:2017)

Technische Lieferbedingungen für bestimmte Typen von
Wickeldrähten - Teil 0-10: Allgemeine Anforderungen -
Mit unbeschichteten Polyesterfasern umwickelt und
verschmolzen oder mit Harz oder Lack imprägnierter
blanker oder lackisolierter Runddraht aus Kupfer
(IEC 60317-0-10:2017)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

This European Standard was approved by CENELEC on 2017-06-08. 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.

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 CENELEC member.

<https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603->

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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN 60317-0-10:2017**European foreword**

The text of document 55/1601/FDIS, future edition 1 of IEC 60317-0-10, prepared by IEC/TC 55 "Winding wires" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60317-0-10:2017.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-03-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-06-08

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

iTeh STANDARD PREVIEW
Endorsement notice
(standards.iteh.ai)

The text of the International Standard IEC 60317-0-10:2017 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60264	NOTE	Harmonized in EN 60264 series.
IEC 60317	NOTE	Harmonized in EN 60317 series.
IEC 60317-70	NOTE	Harmonized as EN 60317-70.
IEC 60317-71	NOTE	Harmonized as EN 60317-71.
IEC 60317-72	NOTE	Harmonized as EN 60317-72.
IEC 60851-6:2012	NOTE	Harmonized as EN 60851-6:2012 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60851	series	Winding wires - Test methods	EN 60851	series
IEC 60851-5	2008	Winding wires - Test methods - Part 5: Electrical properties	EN 60851-5	2008
ISO 3	-	Preferred numbers - Series of preferred numbers	-	-

[SIST EN 60317-0-10:2017](https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80d-13230d76ef00/sist-en-60317-0-10-2017)

<https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80d-13230d76ef00/sist-en-60317-0-10-2017>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60317-0-10:2017](#)

<https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80d-13230d76ef00/sist-en-60317-0-10-2017>



IEC 60317-0-10

Edition 1.0 2017-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Specifications for particular types of winding wires –
Part 0-10: General requirements – Polyester glass-fibre wound fused,
unvarnished, or resin or varnish impregnated, bare or enamelled round copper
wire**

[SIST EN 60317-0-10:2017](https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80b-2776d10f65e9/sist-60317-0-10:2017)

[https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-](https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80b-2776d10f65e9/sist-60317-0-10:2017)

**Spécifications pour types particuliers de fils de bobinage –
Partie 0-10: Exigences générales – Fil de section circulaire en cuivre nu ou
émaillé, guipé de fibres de verre polyester fondues, non vernies ou imprégnées
de vernis ou de résine**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 29.060.10

ISBN 978-2-8322-4261-2

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms, definitions, general notes and appearance.....	7
3.1 Terms and definitions.....	7
3.2 General notes	8
3.2.1 Methods of test.....	8
3.2.2 Winding wire.....	9
3.3 Appearance	9
4 Dimensions.....	9
4.1 Conductor diameter	9
4.2 Out of roundness of conductor	11
4.3 Minimum increase in diameter due to the covering	11
4.4 Maximum overall diameter	11
5 Electrical resistance	12
6 Elongation	12
7 Springiness	12
7.1 Nominal conductor diameters up to and including 1,600 mm	12
7.2 Nominal conductor diameters over 1,600 mm.....	12
8 Flexibility and adherence.....	12
8.1 Mandrel winding test.....	12
8.2 Adherence test.....	12
9 Heat shock	13
10 Cut-through	13
11 Resistance to abrasion	13
12 Resistance to solvents.....	13
13 Breakdown voltage	13
13.1 Polyester glass fibre covered bare round copper wire	13
13.2 Polyester glass fibre covered enamelled round copper wire	13
14 Continuity of insulation	14
15 Temperature index	14
16 Resistance to refrigerants.....	14
17 Solderability	14
18 Heat or solvent bonding.....	14
19 Dielectric dissipation factor.....	14
20 Resistance to transformer oil	14
21 Loss of mass	14
23 Pin hole test	15
30 Packaging	15
Annex A (informative) Diameters for intermediate nominal conductor diameters (R40).....	16
Annex B (informative) Resistance	18
B.1 Determination of nominal resistance	18
Annex C (informative) High temperature failure.....	19

Bibliography.....	20
Table 1 – Dimensional requirements of (single) polyester glass-fibre wound fused and unvarnished or resin or varnish impregnated over grade 1 or grade 2 enamelled round copper winding wire (R20)	10
Table 2 – Dimensional requirements of (double) polyester glass-fibre wound fused and unvarnished or resin or varnish impregnated over bare, grade 1, or grade 2 enamelled round copper winding wire (R20).....	11
Table 3 – Elongation	12
Table 4 – Mandrel winding	12
Table 5 – Breakdown voltage for bare round copper wire	13
Table 6 – Breakdown voltage for enamelled round copper wire	14
Table A.1 – Diameters for single polyester glass-fibre wound fused and unvarnished or resin or varnish impregnated over grade 1 or grade 2 enamelled round copper wire (R40)	16
Table A.2 – Diameters for double polyester glass-fibre wound fused and unvarnished or resin or varnish impregnated over bare, grade 1 or grade 2 enamelled round copper wire (R40).....	17
Table B.1 – Electrical resistance	18

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 60317-0-10:2017](https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80d-13230d76ef00/sist-en-60317-0-10-2017)

<https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80d-13230d76ef00/sist-en-60317-0-10-2017>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

**Part 0-10: General requirements –
Polyester glass-fibre wound fused, unvarnished, or resin
or varnish impregnated, bare or enamelled round copper wire**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60317-0-10 has been prepared by IEC technical committee 55: Winding wires.

The text of this standard is based on the following documents:

FDIS	Report on voting
55/1601/FDIS	55/1608/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60317 series, published under the general title *Specifications for particular types of winding wires*, can be found on the IEC website.

The numbering of clauses in this standard is not continuous from Clauses 21 through 30 in order to reserve space for possible future wire requirements prior to those for wire packaging.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 60317-0-10:2017](https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80d-13230d76ef00/sist-en-60317-0-10-2017)

<https://standards.iteh.ai/catalog/standards/sist/62a9d313-b4d2-4603-b80d-13230d76ef00/sist-en-60317-0-10-2017>