IEC 60317-4

Edition 4.0 2015-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Specifications for particular types of winding wires – Part 4: Solderable polyurethane enamelled round copper wire, class 130

Spécifications pour types particuliers de fils de bobinage – Partie 4: Fil brasable de section circulaire en cuivre émaillé avec polyuréthane, classe 130

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SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 4: Solderable polyurethane enamelled round copper wire, class 130

FOREWORD

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International Standard IEC 60317-4 has been prepared by IEC technical committee 55: Winding wires.

This fourth edition cancels and replaces the third edition published in 1990, Amendment 1:1997 and Amendment 2:1999. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

– new 3.2.2 containing general notes on winding wire, formerly a part of the scope;
– new 3.2.3 containing requirements for appearance;
– revision to references to IEC 60317-0-1:2013 to clarify that their application is normative;
– consolidation of 17.1 and 17.2 of the solderability requirements;
– revision to Clause 19, dielectric dissipation factor;
– new Clause 23, pin hole test.

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

CDV	Report on voting
55/1459/CDV	55/1498/RVC

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

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

This International Standard is to be read in conjunction with IEC 60317-0-1:2013.

The numbering of clauses in this standard is not continuous from Clauses 20 and 30 in order to reserve space for possible future wire requirements prior to those for wire packaging.

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

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- withdrawn,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

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INTRODUCTION

This part of IEC 60317 is one of a series which deals with insulated wires used for windings in electrical equipment. The series has three groups describing:

1) Winding wires – Test methods (IEC 60851 series);
2) Specifications for particular types of winding wires (IEC 60317 series);
3) Packaging of winding wires (IEC 60264 series).

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SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 4: Solderable polyurethane enamelled round copper wire, class 130

1 Scope

This part of IEC 60317 specifies the requirements of solderable enamelled round copper winding wire of class 130 with a sole coating based on polyurethane resin, which may be modified provided it retains the chemical identity of the original resin and meets all specified wire requirements.

NOTE A modified resin is a resin that has undergone a chemical change, or contains one or more additives to enhance certain performance or application characteristics.

The range of nominal conductor diameters covered by this standard is:

– Grade 1: 0,018 mm up to and including 2,000 mm;
– Grade 2: 0,020 mm up to and including 2,000 mm.

The nominal conductor diameters are specified in Clause 4 of IEC 60317-0-1:2013.

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.

IEC 60317-0-1:2013, *Specifications for particular types of winding wires – Part 0-1: General requirements – Enamelled round copper wire*

3 Terms, definitions, general notes and appearance

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in 3.1 of IEC 60317-0-1:2013 apply.

3.2 General notes

3.2.1 Methods of test

Subclause 3.2 of IEC 60317-0-1:2013 applies. In case of inconsistencies between IEC 60317-0-1 and this standard, IEC 60317-4 shall prevail.

3.2.2 Winding wire

Class 130 is a thermal class that requires a minimum temperature index of 130 and a heat shock temperature of at least 155 °C.

The temperature in degrees Celsius corresponding to the temperature index is not necessarily that at which it is recommended that the wire be operated and this will depend on many factors, including the type of equipment involved.

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