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CONSOLIDATED VERSION

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Part 0-1: General requirements - Enamelled round copper wire

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 0-1: General requirements – Enamelled round copper wire

FOREWORD

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This consolidated version of the official IEC Standard and its amendments has been prepared for user convenience.

IEC 60317-0-1 edition 4.2 contains the fourth edition (2023-10) [documents 55/1409/FDIS and 55/1430/RVD], its amendment 1 (2019-08) [documents 55/1782/FDIS and 55/1799/RVD] and its amendment 2 (2026-08) [documents 55/2088/FDIS and 55/2115/RVD].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendments 1 and 2. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 60317-0-1 has been prepared by IEC technical committee 55: Winding wires.

This fourth edition constitutes a technical revision.

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

– revision to the definition of nominal conductor dimension;
– new subclause containing general notes on winding wire, formerly a part of the scope;
– revision to elongation requirements in Table 4;
– revisions to Clause 13, Breakdown voltage, to include new requirements for intermediate wire diameters;
– revision to continuity of insulation requirements in Table 13;
– revision to the introduction of Annex A;
– revision to B.2 of Annex B;
– revision to Table C.1 of Annex C.

This standard is to be read in conjunction with the IEC 60851 series. The clause numbers used in this part of IEC 60317 are identical with the respective test numbers of the IEC 60851 series.

In case of inconsistencies between IEC 60851 and this part of IEC 60317, the latter prevails.

This publication 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 committee has decided that the contents of the base publication and its amendment 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.

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);
2) Specifications for particular types of winding wires (IEC 60317);
3) Packaging of winding wires (IEC 60264).

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 0-1: General requirements – Enamelled round copper wire

1 Scope

This part of IEC 60317 specifies general requirements of enamelled round copper winding wires with or without bonding layer.

The range of nominal conductor diameters is given in the relevant specification sheet.

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 60172, *Test procedure for the determination of the temperature index of enamelled winding wires*

IEC 60851 (all parts), *Winding wires – Test methods*

ISO 3, *Preferred numbers – Series of preferred numbers*

ISO 1190-1, *Copper and copper alloys – Code of designation – Part 1: Designation of materials*

ASTM B49-17, *Standard Specification for Copper Rod for Electrical Purposes*

EN 1977:2013, *Copper and copper alloys – Copper drawing stock (wire rod)*

3 Terms, definitions, general notes and appearance

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

3.1 Terms and definitions

3.1.1
bonding layer
material which is deposited on an enamelled wire and which has the specific function of bonding wires together

3.1.2
class
thermal performance of a wire expressed by the temperature index and the heat shock temperature