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IEC 60317-0-4

Edition 4.0 2020-04
REDLINE VERSION

INTERNATIONAL STANDARD

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Specifications for particular types of winding wires – Part 0-4: General requirements – Glass-fibre wound, resin or varnish impregnated, bare or enamelled rectangular copper wire

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 0-4: General requirements – Glass-fibre wound, resin or varnish impregnated, bare or enamelled rectangular copper wire

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International Standard IEC 60317-0-4 has been prepared by IEC technical committee 55: Winding wires.

This fourth edition cancels and replaces the third edition published in 2015. This edition constitutes a technical revision.

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

a) addition of dimensional requirements for grade 1 enamelled wire in Table 4;
b) addition of dielectric breakdown requirements for grade 1 enamelled wire in Table 7.
c) addition of requirement for the adherence test in 8.2.1 and 8.2.2.

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

FDIS	Report on voting
55/1835A/FDIS	55/1852/RVD

Full information on the voting for the approval of this document 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 standard is to be read in conjunction with the IEC 60851 series. The clause numbers used in this standard are identical with the respective test numbers of the IEC 60851 series.

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

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.

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.

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INTRODUCTION

This part of IEC 60317 belongs to a series of standards which deals with insulated wires used for windings in electrical equipment. It is composed of the following series:

1) *Winding wires – Test methods* (IEC 60851 series);
2) *Specifications for particular types of winding wires* (IEC 60317 series);
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SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 0-4: General requirements – Glass-fibre wound, resin or varnish impregnated, bare or enamelled rectangular copper wire

1 Scope

This part of IEC 60317 specifies general requirements of glass-fibre wound, resin or varnish impregnated, bare or enamelled rectangular copper wire.

The range of nominal conductor dimensions is given in 4.1 and the relevant specification sheet.

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.

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

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

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

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

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Edition 4.0 2020-04

INTERNATIONAL STANDARD

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Specifications for particular types of winding wires – Part 0-4: General requirements – Glass-fibre wound, resin or varnish impregnated, bare or enamelled rectangular copper wire

Spécifications pour types particuliers de fils de bobinage – Partie 0-4: Exigences générales – Fil de section rectangulaire en cuivre nu ou émaillé, guipé de fibres de verre imprégnées de vernis ou de résine

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 0-4: General requirements – Glass-fibre wound, resin or varnish impregnated, bare or enamelled rectangular copper wire

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SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 0-4: General requirements – Glass-fibre wound, resin or varnish impregnated, bare or enamelled rectangular copper wire

1 Scope

This part of IEC 60317 specifies general requirements of glass-fibre wound, resin or varnish impregnated, bare or enamelled rectangular copper wire.

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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SPÉCIFICATIONS POUR TYPES PARTICULIERS DE FILS DE BOBINAGE –

Partie 0-4: Exigences générales – Fil de section rectangulaire en cuivre nu ou émaillé, guipé de fibres de verre imprégnées de vernis ou de résine

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Cette quatrième édition annule et remplace la troisième édition parue en 2015. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) ajout des exigences dimensionnelles pour le fil émaillé de grade 1 dans le Tableau 4;

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b) ajout des exigences de claquage diélectrique pour le fil émaillé de grade 1 dans le Tableau 7;

c) ajout des exigences pour l'essai d'adhérence en 8.2.1 et en 8.2.2.

Le texte de cette publication est issu des documents suivants:

FDIS	Rapport de vote
55/1835A/FDIS	55/1852/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de ce document.

Cette publication a été rédigée selon les Directives ISO/IEC, Partie 2.

La présente norme doit être lue conjointement avec la série IEC 60851. Les numéros d'articles utilisés dans la présente norme sont identiques aux numéros des essais correspondants de la série IEC 60851.

En cas de divergences entre l'IEC 60851 et la présente norme, cette dernière prévaut.

La numérotation des articles dans la présente norme n'est pas continue entre les Articles 21 et 30 afin de permettre l'introduction éventuelle d'exigences futures concernant les fils avant celles concernant le conditionnement des fils.

Une liste de toutes les parties de la série IEC 60317, publiées sous le titre général *Spécifications pour types particuliers de fils de bobinage*, peut être consultée sur le site web de l'IEC.

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INTRODUCTION

La présente partie de l'IEC 60317 fait partie d'une série de normes traitant des fils isolés utilisés pour les enroulements à l'intérieur des appareils électriques. Elle comprend les séries suivantes:

1) *Fils de bobinage – Méthodes d'essai* (série IEC 60851);
2) *Spécifications pour types particuliers de fils de bobinage* (série IEC 60317);
3) *Conditionnement des fils de bobinage* (série IEC 60264).

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SPÉCIFICATIONS POUR TYPES PARTICULIERS DE FILS DE BOBINAGE –

Partie 0-4: Exigences générales – Fil de section rectangulaire en cuivre nu ou émaillé, guipé de fibres de verre imprégnées de vernis ou de résine

1 Domaine d'application

La présente partie de l'IEC 60317 spécifie les exigences générales relatives aux fils de section rectangulaire en cuivre nus ou émaillés, guipés de fibres de verre imprégnées de vernis ou de résine.

La gamme des dimensions nominales des conducteurs est indiquée en 4.1 et dans la feuille de spécifications correspondante.

2 Références normatives

Les documents suivants cités dans le texte constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60851 (toutes les parties), *Fils de bobinage – Méthodes d'essai*

ISO 3, *Nombres normaux – Séries de nombres normaux*

EN 1977, *Cuivre et alliages de cuivre – Fil machine en cuivre*

ISO 1190-1, *Cuivre et alliages de cuivre – Code de désignation – Partie 1: Désignation des matériaux*

ASTM B49, *Standard Specification for Copper Rod for Electrical Purposes* (disponible en anglais seulement)