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Specifications for particular types of winding wires – Part 15: Polyesterimide enamelled round aluminium wire, class 180

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SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 15: Polyesterimide enamelled round aluminium wire, class 180

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IEC 60317-15 edition 3.2 contains the third edition (2004-08) [documents 55/908/FDIS and 55/914/RVD], its amendment 1 (2010-06) [documents 55/1121/CDV and 55/1149/RVC] and its amendment 2 (2024-06) [documents 55/1984/CDV and 55/2020/RVC].

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 60317-15 has been prepared by IEC technical committee 55: Winding wires.

This third edition of IEC 60317-15 cancels and replaces the second edition published in 1990 and amendment 1 (1997). This edition constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

– new requirements for appearance, Subclause 3.2, added;
– springiness test, Clause 7, determined to be inappropriate;
– cut-through test, Clause 10, determined to be inappropriate;
– high temperature failure test, Clause 22, deleted;
– new pin hole test, Clause 23, added.

This International Standard is to be read in conjunction with IEC 60317-0-3.

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

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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);
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 15: Polyesterimide enamelled round aluminium wire, class 180

1 Scope

This part of IEC 60317 specifies the requirements of enamelled round aluminium winding wire of class 180 with a sole coating based on polyesterimide resin, which may be modified providing 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.

Class 180 is a thermal class that requires a minimum temperature index of 180 and a heat shock temperature of at least 200 °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.

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

– grade 1: 0,400 mm up to and including 1,600 mm;
– grade 2: 0,400 mm up to and including 5,000 mm.

The nominal conductor diameters are specified in Clause 4 of IEC 60317-0-3.

2 Normative references

The following ~~referenced~~ documents are ~~indispensable for~~ referred to in the ~~application~~ 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 60317-0-3[1]:2008, *Specifications for particular types of winding wires – Part 0-3: General requirements – Enamelled round aluminium wire*
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IEC 60317-0-3:2008/AMD2:2019

[1] There exists a consolidated edition 3.2:2019 that includes IEC 60317-0-3:2008, its Amendment 1:2013 and its Amendment 2:2019.

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