IEC 60317-61

Edition 1.0 2012-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Specifications for particular types of winding wires –
Part 61: Polyester glass fibre wound, minimum class 180, resin or varnish impregnated, bare or enamelled rectangular copper wire, temperature index 180

Spécifications pour types particuliers de fils de bobinage –
Partie 61: Fil de section rectangulaire en cuivre nu ou émaillé, guipé de fibres de verre avec polyester de classe d'au moins 180, imprégnées de vernis ou de résine, d'indice de température 180

IEC 60317-61:2012

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FOREWORD

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International Standard IEC 60317-61 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
55/1322/FDIS	55/1335/RVD

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 the IEC 60317-0-8: 2012.

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 the 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- withdrawn,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.

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 61: Polyester glass fibre wound, minimum class 180 resin or varnish impregnated, bare or enamelled rectangular copper wire, temperature index 180

1 Scope

This part of IEC 60317 specifies the requirements of polyester glass fibre wound, impregnated, bare or enamelled rectangular copper winding wire, temperature index 180.

NOTE For this type of wire, the heat shock test is inappropriate and therefore a heat shock temperature cannot be established. Consequently, a class based on the requirements for temperature index and heat shock temperature cannot be specified.

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

– width: min. 2,0 mm; max. 16,0 mm;
– thickness: min. 0,80 mm; max. 5,60 mm.

The specified combinations of width and thickness as well as the specified width/thickness ratio are according to IEC 60317-0-8.

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 60317-0-8:2012, *Specifications for particular types of winding wires – Part 0-8: General requirements – Polyester glass fibre wound, resin or varnish impregnated or not impregnated, bare or enamelled rectangular copper wire*

3 Terms, definitions and 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 60317-0-8:2012 shall apply.

3.2 General notes

3.2.1 Methods of test

See 3.2 of IEC 60317-0-8:2012.

In case of inconsistency between IEC 60317-0-8 and this standard, IEC 60317-61 shall prevail.

3.2.2 Winding wire

The enamelled wire shall have a temperature index of at least 180 and shall be agreed between purchaser and supplier.

The temperature index of the wire is dependent upon the type of impregnating agent used. The impregnating agent applied to the polyester glass fibres shall not contain silicone and shall have a minimum temperature index of 180.

The covering shall have one of the following grades of thickness:

- PG1: one polyester glass fibre covering over a bare conductor;
- PG2: two polyester glass fibre coverings over a bare conductor:
- grade 1 PG1: one polyester glass fibre covering (GL1) over grade 1 enamelled conductor (Grade 1);
- grade 1 PG2: two polyester glass fibre coverings (GL2) over grade 1 enamelled conductor (Grade 1);
- grade 2 PG1: one polyester glass fibre covering (GL1) over grade 2 enamelled conductor (Grade 2);
- grade 2 PG2: two polyester glass fibre coverings (GL2) over grade 2 enamelled conductor (Grade 2).

3.3 Appearance

Subclause 3.3 of IEC 60317-0-8:2012 applies.

4 Dimensions

Clause 4 of IEC 60317-0-8:2012 applies.

5 Electrical resistance

Clause 5 of IEC 60317-0-8:2012 applies.

6 Elongation

Clause 6 of IEC 60317-0-8:2012 applies.

7 Springiness

Clause 7 of IEC 60317-0-8:2012 applies.

8 Flexibility and adherence

Clause 8 of IEC 60317-0-8:2012 applies.

9 Heat shock

Test inappropriate.

10 Cut-through

Test inappropriate.

11 Resistance to abrasion

Test inappropriate.

12 Resistance to solvents

Test inappropriate.

13 Breakdown voltage

Clause 13 of IEC 60317-0-8:2012 applies.

14 Continuity of insulation

Test inappropriate.

15 Temperature index

Clause 15 of IEC 60317-0-8:2012 applies.

16 Resistance to refrigerants

Test inappropriate.

17 Solderability

Test inappropriate.

18 Heat or solvent bonding

Test inappropriate.

19 Dielectric dissipation factor

Test inappropriate.

20 Resistance to transformer oil

Test inappropriate.

23 Pin hole test

Test inappropriate

30 Packaging

Clause 30 of IEC 60317-0-8:2012 applies.