

(PREVIEW)

Indian Standard

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES

PART 39 GLASS-FIBRE BRAIDED, POLYESTER OR POLYESTERIMIDE VARNISH-TREATED, BARE OR ENAMELLED RECTANGULAR COPPER WIRE, TEMPERATURE INDEX 180

1 Scope

This part of IEC 317 specifies the requirements of glass-fibre braided, polyester or polyesterimide varnish-treated, 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 enamelled wire shall be based on one of the following standards and shall be agreed between purchaser and supplier.

IEC 317-16 : 1990, *Specifications for particular types of winding wires - Part 16: Polyester enamelled rectangular copper wire, class 155.*

IEC 317-28 : 1990, *Specifications for particular types of winding wires - Part 28: Polyesterimide enamelled rectangular copper-wire, class 180.*

IEC 317-29 : 1990, *Specifications for particular types of winding wires - Part 29: Polyester or polyesterimide overcoated with polyamide-imide enamelled rectangular copper wire, class 200.*

IEC 317-30 : 1990, *Specifications for particular types of winding wires - Part 30: Polyimide enamelled rectangular copper wire, class 220.*

When an enamelled wire is used, it must have a minimum class of 155.

The temperature index of the glass-fibre braided varnish-treated wire is dependent upon the type of varnish used. The varnish applied to the glass-fibre is based upon polyester or polyesterimide resin and shall have a minimum temperature index of 180. The method of test is to be agreed between purchaser and supplier. The maximum service temperature shall be determined by experience.

The covering shall consist of a single braid of glass-fibre in two grades of thickness:

- grade G1 and grade G2 or bare covered wires;
- grade 1G1 and grade 1G2 or grade 1 enamelled wires, and
- grade 2GI and grade 2G2 or grade 2 enamelled wires.

The range of nominal conductor dimensions covered by this part 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 given in IEC 317-0-5.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid international standards.

IEC 317-0-5 : 1992, *Specifications for particular types of winding wires - Part 0: General requirements - Section 5: Glass- fibre braided bare or enamelled rectangular copper wire*.

IEC 317-16 : 1990, *Specifications for particular types-of winding wires - Part 16: Polyester enamelled rectangular copper wire, class 155*.

IEC 317-28 : 1990, *Specifications for particular types of winding wires - Part 28: Polyesterimide enamelled rectangular copper wire, class 180*.

IEC 317-29 : 1990, *Specifications for particular types of winding wires - Part 29: Polyester or polyesterimide overcoated with polyamide-imide enamelled rectangular copper wire, class 200*.

IEC 317-30 : 1990, *Specifications for particular types of winding wires - Part 30: Polyimide enamelled rectangular copper wire, class 220*.