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Electrical resistance wires, ribbons and sheets for general use

ICS 29.060.10

Descriptors : sheet materials, resistors, electric wires, electrical resistance materials, alloys, filaments, materials by form

Reference number : **JIS C 2532 : 1999 (E)**

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law:

Date of Establishment: 1976-11-01

Date of Revision: 1999-12-20

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Divisional Council on Non-Ferrous Metals

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In the event of any doubts arising as to the contents, the original JIS is to be the final authority.

Electrical resistance wires, ribbons and sheets for general use

Introduction This Japanese Industrial Standard has been prepared based on the first edition of **IEC 60182-4** *Basic dimensions of winding wires—Part 4 : Diameters of conductors for round resistance wires* issued in 1971 without modifying its technical contents. Particular requirements not specified in the relevant **IEC** Standard are given as JIS requirements in the clauses (2 to 5 and 7 to 12). The dotted-underlined descriptions (Attached Tables 2 and 3) are not contained in the corresponding International Standard.

In addition, **IEC 60182-4** was withdrawn in 1990 and replaced by **IEC 60317-0-1** *Specifications for particular types of winding wires—Part 0 : General requirements—Section 1 : Enamelled round copper wire*. This Standard has no corresponding relations with the said International Standard, in order that the scope is different from that of this Standard.

1 Scope This Standard specifies alloy wires, ribbons and sheets for electrical resistance (hereafter referred to as "wires, ribbons and sheets") having volume resistivity of 1.5 $\mu\Omega \cdot m$ or under.

Remarks : The corresponding International Standard is as follows:

IEC 60182-4 : 1971 *Basic dimensions of winding wires—Part 4 : Diameters of conductors for round resistance wires*

2 Normative references The standards given in Attached Table 1 contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions of the standards shall be applied.

3 Definitions The definitions of the major terms used in this Standard shall be as follows:

a) **ribbon** Coiled metals obtained by cutting sheets in longitudinal direction.

b) **volume resistivity** Electrical resistance per unit cross section and unit length ($\Omega \cdot m$).

c) **mean temperature coefficient** The value obtained in a manner which relative variation in electrical resistance of an electrical conductor due to temperature is divided by the temperature difference between two given temperatures. Generally, it is given in $\bar{\alpha}$.

d) **conductor resistance** The electrical resistance per unit length in longitudinal direction of a conductor having a uniform cross section (Ω). Unit length is usually 1 m or 1 km and the conductor resistance is respectively given in Ω/m or Ω/km.

4 Classification and symbol The classifications and symbols shall be as shown in Table 1.