

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Rubber insulated cables – Rated voltages up to and including 450/750 V –
Part 4: Cords and flexible cables**

**Conducteurs et câbles isolés au caoutchouc – Tension assignée au plus égale à
450/750 V –
Partie 4: Câbles souples**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**RUBBER INSULATED CABLES –
RATED VOLTAGES UP TO AND INCLUDING 450/750 V –****Part 4: Cords and flexible cables**

FOREWORD

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International Standard IEC 60245-4 has been prepared by IEC technical committee 20: Electric cables.

This third edition of IEC 60245-4 cancels and replaces the second edition published in 1994, amendment 1 (1997) and amendment 2 (2003). The document 20/1262/FDIS, circulated to the National Committees as amendment 3, led to the publication of this new edition.

The main changes with respect to the previous edition are as follows:

- updating of the normative references;
- updating of Table 3 and Table 5 on dimensions for type 53 and type 57.

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

FDIS	Report on voting
20/1262/FDIS	20/1272/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 standard should be read in conjunction with parts 1 and 2.

A list of all the parts in the IEC 60245 series, published under the general title *Rubber insulated cables* – Rated voltages up to and including 450/750 V, 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- withdrawn,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.

RUBBER INSULATED CABLES – RATED VOLTAGES UP TO AND INCLUDING 450/750 V –

Part 4: Cords and flexible cables

1 General

1.1 Scope

This part of IEC 60245 details the particular specifications for rubber insulated and braided cords and for rubber insulated and rubber or polychloroprene or other equivalent synthetic elastomer sheathed cords and flexible cables of rated voltages up to and including 450/750 V.

All cables should comply with the appropriate requirements given in IEC 60245-1 and the individual types of cables should each comply with the particular requirements of this part.

1.2 Normative references

The following referenced documents are indispensable for the application 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.

NOTE The IEC 60811 series is currently undergoing a revision, which will lead to a restructuring of its parts. A description of this, as well as a cross-reference table between the current and planned parts will be given in IEC 60811-100.

IEC 60228, *Conductors of insulated cables*

IEC 60245-1:2003, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 1: General requirements*
Amendment 1:2007

IEC 60245-2:1994, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 2: Test methods*
Amendment 1:1997
Amendment 2:1997

IEC 60245-8:1998, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 8: Cords for applications requiring high flexibility*
Amendment 1:2004
Amendment 2:2011

IEC 60811-1-1:1993, *Common test methods for insulating and sheathing materials of electric cables and optical cables – Part 1-1: Methods for general application – Measurement of thickness and overall dimensions – Tests for determining the mechanical properties*
Amendment 1:2001

IEC 60811-1-2:1985, *Common test methods for insulating and sheathing materials of electric cables – Part 1: Methods for general application – Section Two: Thermal ageing methods*
Amendment 1:1989
Amendment 2:2000

IEC 60811-1-4:1985, *Common test methods for insulating and sheathing materials of electric cables – Part 1: Methods for general application – Section Four: Tests at low temperature*
Amendment 1:1993
Amendment 2:2001

IEC 60811-2-1:1998, *Insulating and sheathing materials of electric and optical cables – Common test methods – Part 2-1: Methods specific to elastomeric compounds – Ozone resistance, hot set and mineral oil immersion tests*
Amendment 1:2001

2 Braided cord

See Clause 5 of IEC 60245-8:1998, as introduced in Amendment 1 (2004).

3 Ordinary tough rubber sheathed cord

3.1 Code designation

60245 IEC 53.

3.2 Rated voltage

300/500 V.

3.3 Construction

3.3.1 Conductor

Number of conductors: 2, 3, 4 or 5.

The conductors shall comply with the requirements given in IEC 60228 for class 5 conductors. The wires may be plain or tinned.

3.3.2 Separator

A separator of suitable material may be applied around each conductor.

3.3.3 Insulation

The insulation shall be a rubber compound of type IE4 applied around each conductor.

The insulation shall be applied by extrusion.

The insulation thickness shall comply with the specified value given in Table 1, column 2.

3.3.4 Assembly of cores and filler, if any

The cores shall be twisted together.

A centre filler may be used.

3.3.5 Sheath

The sheath shall be rubber compound of type SE3, applied around the cores.

The thickness of sheath shall comply with the specified value given in Table 1, column 3.

The sheath shall be extruded in a single layer and applied in such a way that it fills the spaces between the cores.

The sheath shall be capable of being removed without damage to the cores.