

# INTERNATIONAL STANDARD

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**Rubber insulated cables - Rated voltages up to and including 450/750 V -  
Part 1: General requirements**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**Rubber insulated cables -  
Rated voltages up to and including 450/750 V -  
Part 1: General requirements**

**FOREWORD**

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IEC 60245-1 has been prepared by IEC technical committee TC 20: Electric cables. It is an International Standard.

This fifth edition cancels and replaces the fourth edition published in 2003, and Amendment 1:2007. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) reference to IEC 60245-2 for the tests has been deleted and replaced by IEC 63294;
- b) reference to lift cable according to IEC 60245-5 has been deleted;
- c) normative references have been updated.

The text of this International Standard is based on the following documents:

| Draft        | Report on voting |
|--------------|------------------|
| 20/2271/FDIS | 20/2280/RVD      |

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

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 document will remain unchanged until the stability date indicated on the IEC website under [webstore.iec.ch](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

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## 1 Scope

This part of IEC 60245 applies to rigid and flexible cables with insulation, and sheath if any, based on vulcanized rubber of rated voltages  $U_0/U$  up to and including 450/750 V used in power installations of nominal voltage not exceeding 450/750 V AC.

Particular types of cables are specified in IEC 60245-3, IEC 60245-4, IEC 60245-6, IEC 60245-7, IEC 60245-8. The code designations of these types of cables are provided in Annex A of this document.

The test methods specified in Part 1 to Part 8 of the IEC 60245 series are given in IEC 63294 and in the relevant parts of IEC 60811.

## 2 Normative references

The following documents are referred to in the 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 60228, *Conductors of insulated cables*

IEC 60245-3, *Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 3: Heat resistant silicone insulated cables*

IEC 60245-4, *Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 4: Cords and flexible cables*

IEC 60245-6, *Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 6: Arc welding electrode cables*

IEC 60245-7, *Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 7: Heat resistant ethylene-vinyl-acetate rubber insulated cables*

IEC 60245-8, *Rubber insulated cables - Rated voltages up to and including 450/750 V - Part 8: Cords for applications requiring high flexibility*

IEC 60811-401, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 401: Miscellaneous tests - Thermal ageing methods - Ageing in an air oven*

IEC 60811-403, *Electric and optical fibre cables - Test methods for non-metallic materials - Miscellaneous tests - Ozone resistance test on cross-linked compounds*

IEC 60811-404, *Electric and optical fibre cables - Test methods for non-metallic materials - Miscellaneous tests - Mineral oil immersion tests for sheaths*

IEC 60811-412, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 412: Miscellaneous tests - Thermal ageing methods - Ageing in an air bomb*

IEC 60811-501, *Electric and optical fibre cables - Test methods for non-metallic materials - Mechanical tests - Tests for determining the mechanical properties of insulating and sheathing compounds*

IEC 60811-504, *Electric and optical fibre cables - Test methods for non-metallic materials - Mechanical tests - Bending tests at low temperature for insulation and sheaths*