

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Electric and optical fibre cables – Test methods for non-metallic materials –  
Part 100: General**

**Câbles électriques et à fibres optiques – Méthodes d'essai pour les matériaux  
non-métalliques –  
Partie 100: Généralités**



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IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
Fax: +41 22 919 03 00  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRIC AND OPTICAL FIBRE CABLES –  
TEST METHODS FOR NON-METALLIC MATERIALS –****Part 100: General****FOREWORD**

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International Standard IEC 60811-100 has been prepared by IEC technical committee 20: Electric cables.

This first edition of IEC 60811-100 collects together general matters that apply to the restructured IEC 60811 series. A detailed explanation is provided in the Introduction. Annex A provides full information on the relation between the current and the previous series.

This revised series of IEC 60811 is based upon the principle of "one test – one part". One significant technical change that now applies throughout the series is a defined minimum scheme for the presentation of test reports.

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

FDIS	Report on voting
20/1279/FDIS	20/1328/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.

A list of all the parts in the IEC 60811 series, published under the general title *Electric and optical fibre cables – Test methods for non-metallic materials*, 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- withdrawn,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

The IEC 60811 series specifies the test methods to be used for testing non-metallic materials of all types of cables. These test methods are intended to be referenced in standards for cable construction and for cable materials.

NOTE 1 Non-metallic materials are typically used for insulating, sheathing, bedding, filling or taping within cables.

NOTE 2 These test methods are accepted as basic and fundamental and have been developed and used over many years principally for the materials in all energy cables. They have also been widely accepted and used for other cables, in particular optical fibre cables, communication and control cables and cables for ships and offshore applications.

Each test method is contained in a separately numbered part. These respective parts are identified in Table A.1 of Annex A, with the corresponding clauses from the previous version of this part given for information. Table A.2 of Annex A lists the clauses of the previous version, to facilitate location of the corresponding part in the current version.

# ELECTRIC AND OPTICAL FIBRE CABLES – TEST METHODS FOR NON-METALLIC MATERIALS –

## Part 100: General

### 1 Scope

This Part 100 of IEC 60811 describes general requirements and considerations that are applicable to all the test methods given in the particular parts, unless otherwise specified.

### 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 60050-461, *International Electrotechnical Vocabulary – Part 461: Electric cables*

IEC 60502-1, *Power cables with extruded insulation and their accessories for rated voltages from 1 kV ( $U_m = 1,2$  kV) up to 30 kV ( $U_m = 36$  kV) – Part 1: Cables for rated voltages of 1 kV ( $U_m = 1,2$  kV) and 3 kV ( $U_m = 3,6$  kV)*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-461, together with the following, apply.

#### 3.1

##### **median value**

when several test results have been obtained and ordered in an increasing (or decreasing) succession, the median value is the middle value if the number of available values is odd, and the mean of the two middle values if the number is even

### 4 Test values

Full test conditions (such as temperatures, durations, etc.) and full test requirements are not specified in the particular parts of IEC 60811. It is intended that they should be specified by the standard dealing with the relevant type of cable.

Rounding rules as specified in IEC 60502-1 shall be used, unless specified in particular parts.

Any test requirements which are given in the particular parts of IEC 60811 may be modified by the relevant cable standard to suit the needs of a particular type of cable.

### 5 Applicability

Conditioning values and testing parameters are specified where appropriate for the most common types of insulating and sheathing compounds and of cables.