IEC 60811-503

Edition 1.1 2023-11
CONSOLIDATED VERSION

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Electric and optical fibre cables – Test methods for non-metallic materials – Part 503: Mechanical tests – Shrinkage test for sheaths

Câbles électriques et à fibres optiques – Méthodes d'essai pour les matériaux non métalliques – Partie 503: Essais mécaniques – Essai de rétraction des gaines



IEC 60811-503:2012-03+AMD1:2023-11 CSV(en-fr)



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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 29.035.01, 29.060.20

ISBN 978-2-8322-7791-1

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REDLINE VERSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 503: Mechanical tests – Shrinkage test for sheaths

FOREWORD

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This consolidated version of the official IEC Standard and its amendment has been prepared for user convenience.

IEC 60811-503 edition 1.1 contains the first edition (2012-03) [documents 20/1299/FDIS and 20/1348/RVD] and its amendment 1 (2023-11) [documents 20/2129/FDIS and 20/2139/RVD].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 60811-503 has been prepared by IEC technical committee 20: Electrical cables.

This Part 503 of IEC 60811 cancels and replaces Clause 11 of IEC 60811-1-3:1993, which is withdrawn. Full details of the replacements are shown in Annex A of IEC 60811-100:2012.

There are no specific technical changes with respect to the previous edition, but see the Foreword to IEC 60811-100: 2012.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This part of IEC 60811 shall be used in conjunction with IEC 60811-100.

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 document and its amendment will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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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.

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

Part 503: Mechanical tests – Shrinkage test for sheaths

1 Scope

This Part 503 of IEC 60811 gives the test method for the shrinkage for sheaths.

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 60811-100:2012, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 100: General*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60811-100 apply.

4 Test method

4.1 General

This part of IEC 60811 shall be used in conjunction with IEC 60811-100.

4.2 Test equipment

The test equipment shall be as follows:

– an air oven, electrically heated, capable of maintaining the test temperature;
– a measuring tape with a scale division of 1 mm.

4.3 Sampling

The cable to be tested shall be stored for at least 24 h at room temperature before the test.

One ~~test piece~~ sample of complete cable of length "L" as given in the cable standard or, if not given in the cable standard, then (500 ± 5) mm in length, shall be taken at least 2 m away from the end of the cable length.

4.4 Preparation of ~~test pieces~~ the sample

The sheath shall not be removed from the cable sample. The initial length of the sheath (L_1) shall be determined~~,~~ immediately after cutting of the cable sample, as the mean ~~value~~ of two measurements. These shall be made longitudinally and parallel to the cable sample axis between diametrically opposite marks on the ends of the sample. If the sample is bent, these measurements shall be taken on the inside and outside of the bend.