

**Elektrilised kaablid ja optilised kiudkaablid.
Mittemetallmaterjalide katsetusviisid. Osa 504:
Mehaanilised katsetused. Isolatsiooni ja mantlite
katsetamine paindele madalal temperatuuril**

Electric and optical fibre cables - Test methods for non-metallic materials - Part 504: Mechanical tests - Bending tests at low temperature for insulation and sheaths

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60811-504:2012 sisaldab Euroopa standardi EN 60811-504:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 60811-504:2012 consists of the English text of the European standard EN 60811-504:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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**Electric and optical fibre cables -
Test methods for non-metallic materials -
Part 504: Mechanical tests -
Bending tests at low temperature for insulation and sheaths
(IEC 60811-504:2012)**

Câbles électriques et à fibres optiques -
Méthodes d'essai pour les matériaux
non-métalliques -
Partie 504: Essais mécaniques -
Essais d'enroulement à basse
température pour les enveloppes isolantes
et les gaines
(CEI 60811-504:2012)

Kabel, isolierte Leitungen
und Glasfaserkabel -
Prüfverfahren für nichtmetallene
Werkstoffe -
Teil 504: Mechanische Prüfungen -
Biegeprüfungen bei niedriger Temperatur
für Isolierhüllen und Mäntel
(IEC 60811-504:2012)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 20/1300/FDIS, future edition 1 of IEC 60811-504, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-504:2012.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-01-17
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-04-17

This document supersedes 8.1 and 8.2 of EN 60811-1-4:1995 + A2:2001 (partially). Full details of the replacements are shown in Annex A of EN 60811-100:2012.

There are no technical changes with respect to EN 60811-1-4:1995, but see the Foreword to EN 60811-100.

This standard is to be read in conjunction with EN 60811-100.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60811-504:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 60811-1-4:1985 NOTE Harmonized as EN 60811-1-4:1995 (not modified).

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60811-100	2012	Electric and optical fibre cables - Test methods for non-metallic materials - Part 100: General	EN 60811-100	2012
IEC 60811-505	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 505: Mechanical tests - Elongation at low temperature for insulations and sheaths	EN 60811-505	-

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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 504: Mechanical tests – Bending tests at low temperature for insulation and sheaths

1 Scope

This Part 504 of IEC 60811 gives the procedure for performing bending tests at low temperature on extruded insulations and 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*

IEC 60811-505, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 505: Mechanical tests – Elongation at low temperature for insulations and sheaths*

3 Terms and definitions

For the purposes of this document, the 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.

All the tests shall be carried out not less than 16 h after the extrusion or cross-linking of the insulating or sheathing compounds.

Tests shall be carried out at the temperature specified in the relevant cable standard.

For tests on the insulation, the test is intended for insulated conductors of circular cross-section having an external diameter up to and including 12,5 mm and for sector-shaped cores where it is not possible to prepare dumb-bells.

For tests on sheaths, the test is intended for cables with an overall diameter up to and including 12,5 mm; and for flat cables, with a major axis dimension up to and including 12,5 mm.

If required by the relevant cable standard the test shall also be carried out on larger cables. Note that equipment may need to be modified in accordance with the cable standard. Otherwise, the insulation and sheath of larger cables shall be subjected to the elongation test described in IEC 60811-505.