

**Elektrilised kaablid ja optilised kiudkaablid.
Mittemetallmaterjalide katsetusviisid. Osa 501:
Mehaanilised katsetused. Isoleer- ja mantlikompaundide
katsetamine mehaaniliste tunnussuuruste
kindlakstegemiseks**

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60811-501:2012 sisaldab Euroopa standardi EN 60811-501:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 60811-501:2012 consists of the English text of the European standard EN 60811-501:2012.
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**Electric and optical fibre cables -
Test methods for non-metallic materials -
Part 501: Mechanical tests -
Tests for determining the mechanical properties of insulating
and sheathing compounds
(IEC 60811-501:2012)**

Câbles électriques et à fibres optiques -
Méthodes d'essai pour les matériaux
non-métalliques -
Partie 501: Essais mécaniques -
Détermination des propriétés mécaniques
des mélanges pour les enveloppes
isolantes et les gaines
(CEI 60811-501:2012)

Kabel, isolierte Leitungen und
Glasfaserkabel - Prüfverfahren
für nichtmetallene Werkstoffe -
Teil 501: Mechanische Prüfungen -
Prüfungen zur Bestimmung
der mechanischen Eigenschaften
von Isolier- und Mantelwerkstoffen
(IEC 60811-501:2012)

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 20/1297/FDIS, future edition 1 of IEC 60811-501, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-501:2012.

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-04-17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 Clause 9 of EN 60811-1-1:1995 + A1:2001 (partially). Full details of the replacements are shown in Annex A of EN 60811-100:2012.

EN 60811-501:2012 includes the following significant technical change with respect to EN 60811-1-1:1995:

- the requirements for the (minimum) thickness of dumb-bell test pieces have changed.

See also 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 60811-501:2012 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 60811-1-1:1993 NOTE Harmonized as EN 60811-1-1:1995 (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 60811-201	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 201: General tests - Measurement of insulation thickness	EN 60811-201	-
IEC 60811-202	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 202: General tests - Measurement of thickness of non-metallic sheath	EN 60811-202	-
IEC 60811-203	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 203: General tests - Measurement of overall dimensions	EN 60811-203	-
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	EN 60811-401	-
IEC 60811-404	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 404: Miscellaneous tests - Mineral oil immersion tests for sheaths	EN 60811-404	-
IEC 60811-606	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 606: Physical tests - Methods for determining the density	EN 60811-606	-

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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 501: Mechanical tests – Tests for determining the mechanical properties of insulating and sheathing compounds

1 Scope

This Part 501 of IEC 60811 gives the procedure for determining the mechanical properties, which typically applies to cross-linked and thermoplastic compounds used for insulating and sheathing materials.

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 60811-201, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 201: General tests – Measurement of insulation thickness*

IEC 60811-202, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 202: General tests – Measurement of thickness of non-metallic sheaths*

IEC 60811-203, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 203: General tests – Measurement of overall dimensions*

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 60811-404, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 404: Miscellaneous tests – Mineral oil immersion tests for sheaths made with cross-linked compounds*

IEC 60811-606, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 606: Physical tests – Methods for determining the density*

3 Terms and definitions

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

3.1

maximum tensile force

highest value reached by the load during the test