

**Elektrilised kaablid ja optilised kiudkaablid.  
Mittemetallmaterjalide katsetusviisid. Osa 202:  
Üldkatsetused. Mittemetallmantli paksuse mõõtmine**

**Electric and optical fibre cables - Test methods for non-metallic materials - Part 202: General tests -  
Measurement of thickness of non-metallic sheath**

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN 60811-202:2012 sisaldab Euroopa standardi EN 60811-202:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 60811-202:2012 consists of the English text of the European standard EN 60811-202:2012.
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 202: General tests -  
Measurement of thickness of non-metallic sheath  
(IEC 60811-202:2012)**

Câbles électriques et à fibres optiques -  
Méthodes d'essai pour les matériaux non-  
métalliques -  
Partie 202: Essais généraux -  
Mesure de l'épaisseur des gaines non-  
métalliques  
(CEI 60811-202:2012)

Kabel, isolierte Leitungen und  
Glasfaserkabel -  
Prüfverfahren für nichtmetallene  
Werkstoffe -  
Teil 202: Allgemeine Prüfungen -  
Messung der Wanddicke von  
nichtmetallenen Mänteln  
(IEC 60811-202:2012)

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## Foreword

The text of document 20/1281/FDIS, future edition 1 of IEC 60811-202, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-202:2012.

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) 2013-01-16
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-04-16

This document supersedes 8.2 of EN 60811-1-1:1995 + A1:2001 (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 60811-1-1:1995 + A1:2001, but see the Foreword to EN 60811-100:2012.

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 60811-202:2012 was approved by CENELEC as a European Standard without any modification.

**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

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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 202: General tests – Measurement of thickness of non-metallic sheath**

### **1 Scope**

This Part 202 of IEC 60811 gives the methods for measuring thicknesses of non-metallic sheath which apply to the most common types of sheathing compounds (cross-linked, PVC, PE, PP, etc.).

### **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.

Unless otherwise specified, tests shall be carried out at room temperature.

The measurement of sheath thickness may be required as an individual test, or as a step in the procedure for carrying out other tests, such as the measurement of mechanical properties. The test method applies to the measurement of all sheaths for which thickness limits are specified, for example separation sheaths, as well as external sheaths.

In each case, the method of selecting samples shall be in accordance with the relevant cable standard.

#### **4.2 Measuring equipment**

A measuring microscope or a profile projector of at least 10 x magnification or an optical digital image analyser shall be used. All types of equipment shall allow a reading of 0,01 mm and an estimated reading to three decimal places when measuring insulation with a specified thickness less than 0,5 mm.

For sheaths applied over longitudinally irregular surfaces such as corrugated metallic sheaths, a micrometer having a ball nose radius of 1 mm and allowing a reading of 0,01 mm