

**Elektrilised kaablid ja optilised kiudkaablid.
Mittemetallmaterjalide katsetusviisid. Osa 301:
Elektrilised katsetused. Täitekompaundide elektrilise
läbitavuse mõõtmise temperatuuril 23 °C**

**Electric and optical fibre cables - Test methods for non-
metallic materials - Part 301: Electrical tests -
Measurement of the permittivity at 23 °C of filling
compounds**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60811-301:2012 sisaldab Euroopa standardi EN 60811-301:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 60811-301:2012 consists of the English text of the European standard EN 60811-301:2012.
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 301: Electrical tests -
Measurement of the permittivity at 23 °C of filling compounds
(IEC 60811-301:2012)**

Câbles électriques et à fibres optiques -
Méthodes d'essai pour les matériaux non-
métalliques -
Partie 301: Essais électriques -
Mesure de la permittivité à 23 °C des
matières de remplissage
(CEI 60811-301:2012)

Kabel, isolierte Leitungen und
Glasfaserkabel -
Prüfverfahren für nichtmetallene
Werkstoffe -
Teil 301: Elektrische Prüfungen -
Messung der Dielektrizitätskonstanten von
Füllmassen bei 23 °C
(IEC 60811-301:2012)

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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 20/1283/FDIS, future edition 1 of IEC 60811-301, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-301:2012.

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-04-16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 Clause 9 of EN 60811-5-1:1999 + A1:2004 (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 60811-5-1:1999 + A1:2004, 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 60811-301:2012 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 60247	-	Insulating liquids - Measurement of relative permittivity, dielectric dissipation factor ($\tan \delta$) and d.c. resistivity	EN 60247	-
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 301: Electrical tests – Measurement of the permittivity at 23 °C of filling compounds

1 Scope

This Part 301 of IEC 60811 gives the procedure to determine the permittivity at 23 °C which typically applies to filling compounds used for optical cables, communication cables and optical fibre cables.

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 60247, *Insulating liquids – Measurement of relative permittivity, dielectric dissipation factor ($\tan \delta$) and d.c. resistivity*

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.

This test shall be carried out in accordance with the method specified in IEC 60247.

4.2 Apparatus

The test apparatus used shall be a three-terminal cell as described in IEC 60247.

4.3 Sample and test piece preparation

In addition to details given in IEC 60247, the filling compound shall be heated to its clarify point and poured into the cell which has been preheated to the same temperature.

4.4 Ageing procedure

This test shall be carried out according to IEC 60247. Care shall be taken that no air bubbles are introduced into the cell.

The test shall be carried out at temperatures of (23 ± 2) °C.