

**Elektrilised kaablid ja optilised kiudkaablid.
Mittemetallmaterjalide katsetusviisid. Osa 509:
Mehaanilised katsetused. Isolatsiooni ja mantlite
vastupidavuse katsetamine pragunemisele kõrgel
temperatuuril (katsetamine temperatuurilöögile)**

**Electric and optical fibre cables - Test methods for non-
metallic materials - Part 509: Mechanical tests - Test for
resistance of insulations and sheaths to cracking (heat
shock test)**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60811-509:2012 sisaldab Euroopa standardi EN 60811-509:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 60811-509:2012 consists of the English text of the European standard EN 60811-509:2012.
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**Electric and optical fibre cables -
Test methods for non-metallic materials -
Part 509: Mechanical tests -
Test for resistance of insulations and sheaths to cracking
(heat shock test)
(IEC 60811-509:2012)**

Câbles électriques et à fibres optiques -
Méthodes d'essai pour les matériaux
non-métalliques -
Partie 509: Essais mécaniques -
Essai de résistance à la fissuration
des enveloppes isolantes et des gaines
(essai de choc thermique)
(CEI 60811-509:2012)

Kabel, isolierte Leitungen
und Glasfaserkabel -
Prüfverfahren für nichtmetallene
Werkstoffe -
Teil 509: Mechanische Prüfungen -
Prüfung der Rissbeständigkeit
von Isolierhüllen und Mänteln
(IEC 60811-509:2012)

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

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Foreword

The text of document 20/1305/FDIS, future edition 1 of IEC 60811-509, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-509:2012.

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-04-17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 60811-3-1:1995 + A1:1996 + A2:2001 (partially). Full details of the replacements are shown in Annex A of EN 60811-100:2012.

There are no specific technical changes with respect to EN 60811-3-1:1995, 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 60811-509:2012 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 60811-3-1:1985 NOTE Harmonized as EN 60811-3-1:1995 (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

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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 509: Mechanical tests – Test for resistance of insulations and sheaths to cracking (heat shock test)

1 Scope

This Part 509 of IEC 60811 gives the procedure for the test for resistance of insulations and sheaths to cracking at an elevated temperature.

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.

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

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

NOTE In the absence of any requirement in the relevant cable standard, Annex A in this standard gives a recommendation for the test conditions and test requirements.

4.2 Apparatus

The apparatus consists of the following parts:

- a) an air oven capable of maintaining the temperature and tolerance specified;
- b) mandrels of sufficient length made of metal or other suitable material.