

**Elektrilised kaablid ja optilised kiudkaablid.
Mittemetallmaterjalide katsetusviisid. Osa 510:
Mehaanilised katsetused. Polüeteen- ja
polüpropeenkompaundide erikatsetused.
Mähkimiskatsetus pärast soojuslikku vanandamist õhus**

**Electric and optical fibre cables - Test methods for non-metallic materials - Part 510: Mechanical tests - Methods specific to polyethylene and polypropylene compounds
- Wrapping test after thermal ageing in air**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60811-510:2012 sisaldab Euroopa standardi EN 60811-510:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 60811-510:2012 consists of the English text of the European standard EN 60811-510:2012.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 15.06.2012.	Date of Availability of the European standard is 15.06.2012.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 29.035.20, 29.060.20

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:
Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

English version

**Electric and optical fibre cables -
Test methods for non-metallic materials -
Part 510: Mechanical tests -
Methods specific to polyethylene and polypropylene compounds -
Wrapping test after thermal ageing in air
(IEC 60811-510:2012)**

Câbles électriques et câbles à fibres
optiques -
Méthodes d'essai pour les matériaux
non-métalliques -
Partie 510: Essais mécaniques -
Méthodes spécifiques pour les mélanges
polyéthylène et polypropylène -
Essai d'enroulement après vieillissement
thermique dans l'air
(CEI 60811-510:2012)

Kabel, isolierte Leitungen
und Glasfaserkabel -
Prüfverfahren für nichtmetallene
Werkstoffe -
Teil 510: Mechanische Prüfungen -
Verfahren speziell für Polyethylen- und
Polypropylenmischungen -
Wickelprüfung nach thermischer Alterung
in Luft
(IEC 60811-510:2012)

This European Standard was approved by CENELEC on 2012-04-17. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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 20/1306/FDIS, future edition 1 of IEC 60811-510, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-510:2012.

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 10 of EN 60811-4-2:2004 (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 60811-4-2:2004, 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 60811-510:2012 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 60811-4-2:2004 NOTE Harmonized as EN 60811-4-2:2004 (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

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
4 Test method	6
4.1 General.....	6
4.2 Apparatus.....	6
4.3 Sampling.....	6
4.4 Ageing procedure	7
4.5 Test procedure	7
4.6 Evaluation of results.....	7
5 Test report.....	7
Bibliography.....	8

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 510: Mechanical tests – Methods specific to polyethylene and polypropylene compounds – Wrapping test after thermal ageing in air

1 Scope

This Part 510 of IEC 60811 specifies the test method for a wrapping test after thermal ageing in air. This test method applies specifically to polyolefin insulation in communication cables.

This test is intended for polyolefin insulations of unfilled cables and of dry cores for filled cables, where the insulation has a wall thickness of less than or equal to 0,8 mm.

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 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, if any, of the compounds used for insulating or sheathing.

4.2 Apparatus

The apparatus consists of the following parts:

- a smooth metal mandrel and loading elements;
- a winding device, preferably with mechanically driven mandrel;
- an electrically heated cabinet with natural air flow.

4.3 Sampling

The test shall be carried out on four test pieces for each length of cable or core to be tested.

Take a sample 2 m long and cut it into four test pieces of equal length.