

**Elektrilised kaablid ja optilised kiudkaablid.
Mittemetallmaterjalide katsetusviisid. Osa 412:
Mitmesugused katsetused. Soojusliku vanandamise
viisid. Vanandamine kinnises õhkanumas**

**Electric and optical fibre cables - Test methods for non-
metallic materials - Part 412: Miscellaneous tests -
Thermal ageing methods - Ageing in an air bomb**

EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN 60811-412:2012 sisaldab Euroopa standardi EN 60811-412:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 60811-412:2012 consists of the English text of the European standard EN 60811-412:2012.
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**Electric and optical fibre cables -
Test methods for non-metallic materials -
Part 412: Miscellaneous tests -
Thermal ageing methods -
Ageing in an air bomb
(IEC 60811-412:2012)**

Câbles électriques et à fibres optiques -
Méthodes d'essai pour les matériaux non-
métalliques -
Partie 412: Essais divers -
Méthodes de vieillissement thermique -
Vieillissement dans une bombe à air
(CEI 60811-412:2012)

Kabel, isolierte Leitungen und
Glasfaserkabel -
Prüfverfahren für nichtmetallene
Werkstoffe -
Teil 412: Sonstige Prüfungen -
Thermische Alterungsverfahren -
Alterung in einer Druckkammer
(IEC 60811-412:2012)

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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 20/1296/FDIS, future edition 1 of IEC 60811-412, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-412:2012.

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-04-16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 60811-1-2:1995 + A2:2000 (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 60811-1-2:1995 + A2:2000, 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 60811-412:2012 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
IEC 60811-501	-	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	EN 60811-501	-

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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 412: Miscellaneous tests – Thermal ageing methods – Ageing in an air bomb

1 Scope

This Part 412 of IEC 60811 gives the procedure for ageing in an air bomb, which typically applies to crosslinked 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 60811-501, *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*

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.

4.2 Apparatus

The ageing is realized in an air bomb which can be filled with air, which shall be free from oil and moisture, to a pressure of $(0,55 \pm 0,02)$ MPa.

4.3 Sample and test pieces preparation

A sample of cable or sheath, removed from the cable, or samples of core, cut into pieces of sufficient length, shall be taken, preferably from positions close to that from which the samples for the tensile tests without ageing are taken, in accordance with IEC 60811-501.

Test pieces, dumb-bell or tubular, shall be prepared according to IEC 60811-501.