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NSAI Standards

Irish Standard
I.S. EN 60811-405:2012

# Electric and optical fibre cables - Test methods for non-metallic materials -- Part 405: Miscellaneous tests - Thermal stability test for PVC insulations and PVC sheaths (IEC 60811-405:2012 (EQV))

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# I.S. EN 60811-405:2012

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| *This document replaces:* | *This document is based on:* | *Published:* |
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| EN 60811-3-2:1995 (partially) + A2:2004 (partially) | EN 60811-405:2012 | 15 June, 2012 |

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 60811-405

June 2012

ICS 29.035.01; 29.060.20

Supersedes EN 60811-3-2:1995 (partially) + A2:2004 (partially)

English version

# Electric and optical fibre cables - Test methods for non-metallic materials - Part 405: Miscellaneous tests - Thermal stability test for PVC insulations and PVC sheaths

(IEC 60811-405:2012)

Câbles électriques et à fibres optiques - Méthodes d'essai pour les matériaux non-métalliques - Partie 405: Essais divers - Essai de stabilité thermique pour les enveloppes isolantes et gaines en PVC (CEI 60811-405:2012)

Kabel, isolierte Leitungen und Glasfaserkabel - Prüfverfahren für nichtmetallene Werkstoffe - Teil 405: Sonstige Prüfungen - Prüfung der thermischen Stabilität von PVC-Isolierhüllen und PVC-Mänteln (IEC 60811-405:2012)

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

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Ref. No. EN 60811-405:2012 E

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## Foreword

The text of document 20/1289/FDIS, future edition 1 of IEC 60811-405, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-405:2012.

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| • latest date by which the national standards conflicting with the document have to be withdrawn | (dow) | 2015-04-16 |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 60811-3-2:1995 + A2:2004 (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 60811-3-2:1995 + A2:2004, 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 60811-405:2012 was approved by CENELEC as a European Standard without any modification.

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# 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.

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| IEC 60811-100 | 2012 | Electric and optical fibre cables - Test methods for non-metallic materials - Part 100: General | EN 60811-100 | 2012 |
| ISO 695 | 1991 | Glass - Resistance to attack by a boiling aqueous solution of mixed alkali - Method of test and classification | - | - |
| ISO 719 | 1985 | Glass - Hydrolytic resistance of glass grains at 98 degrees C - Method of test and classification | - | - |
| ISO 1776 | 1985 | Glass - Resistance to attack by hydrochloric acid at 100 degrees C - Flame emission or flame atomic absorption spectrometric method | - | - |

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

# ELECTRIC AND OPTICAL FIBRE CABLES – TEST METHODS FOR NON-METALLIC MATERIALS –

## Part 405: Miscellaneous tests – Thermal stability test for PVC insulations and PVC sheaths

## FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60811-405 has been prepared by IEC technical committee 20: Electric cables.

This Part 405 of IEC 60811 cancels and replaces Clause 9 of IEC 60811-3-2:1985, which is withdrawn. Full details of the replacements are shown in Annex A of IEC 60811-100:2012.

There are no specific technical changes with respect to the previous edition, but see the Foreword to IEC 60811-100:2012.

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The text of this standard is based on the following documents:

| FDIS | Report on voting |
|---|---|
| 20/1289/FDIS | 20/1338/RVD |

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This part of IEC 60811 shall be used in conjunction with IEC 60811-100.

A list of all the parts in the IEC 60811 series, published under the general title *Electric and optical fibre cables – Test methods for non-metallic materials*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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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.

SAI GLOBAL

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