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Standards

Irish Standard
I.S. EN 60684-2:2011

Flexible insulating sleeving -- Part 2: Methods of test (IEC 60684-2:2011 (EQV))

I.S. EN 60684-2:2011

Incorporating amendments/corrigenda issued since publication:

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<i>This document replaces:</i> EN 60684-2:1997 EN 60684-2:1997/A2:2005 EN 60684-2:1997/A1:2003	<i>This document is based on:</i> EN 60684-2:2011 EN 60684-2:1997	<i>Published:</i> 16 September, 2011 13 August, 1997
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English version

**Flexible insulating sleeving -
Part 2: Methods of test
(IEC 60684-2:2011)**

Gaines isolantes souples -
Partie 2: Méthodes d'essai
(CEI 60684-2:2011)

Isolierschläuche – Teil 2: Prüfverfahren
(IEC 60684-2:2011)

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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 15/634/FDIS, future edition 3 of IEC 60684-2, prepared by IEC TC 15, Solid electrical insulating materials, was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60684-2:2011.

This document supersedes EN 60684-2:1997 + A1:2003 + A2:2005.

The main changes from EN 60684-2:1997 + A1:2003 + A2:2005 are as follows: three additional methods for circumferential extension, voltage proof and thermal shock and alignment with North American methods.

The following dates are fixed:

- latest date by which the document has to be implemented at (dop) 2012-06-14
national level by publication of an identical national
standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2014-09-14
document have to be withdrawn

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Endorsement notice

The text of the International Standard IEC 60684-2:2011 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

- | | | |
|-------------------------|------|--|
| [2] IEC 60068-2 series | NOTE | Harmonized in EN 60068-2 series (not modified). |
| [3] IEC 60068-2-10:2005 | NOTE | Harmonized as EN 60068-2-10:2005 (not modified). |
| [4] IEC 60216-2:2005 | NOTE | Harmonized as EN 60216-2:2005 (not modified). |

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. 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 60068-2-20	2008	Environmental testing - Part 2-20: Tests - Test T: Test methods for solderability and resistance to soldering heat of devices with leads	EN 60068-2-20	2008
IEC 60093	1980	Methods of test for volume resistivity and surface resistivity of solid electrical insulating materials	HD 429 S1 ¹⁾	1983
IEC 60212	2010	Standard conditions for use prior to and during the testing of solid electrical insulating materials	EN 60212	2011
IEC 60216	Series	Electrical insulating materials - Thermal endurance properties	EN 60216	Series
IEC 60216-4-1	2006	Electrical insulating materials - Thermal endurance properties - Part 4-1: Ageing ovens - Single-chamber ovens	EN 60216-4-1	2006
IEC 60216-4-2	2000	Electrical insulating materials - Thermal endurance properties - Part 4-2: Ageing ovens - Precision ovens for use up to 300 °C	EN 60216-4-2	2000
IEC 60243-1	1998	Electrical strength of insulating materials - Test methods - Part 1: Tests at power frequencies	EN 60243-1	1998
IEC 60250 ²⁾	1969	Recommended methods for the determination - of the permittivity and dielectric dissipation factor of electrical insulating materials at power, audio and radio frequencies including metre wavelengths		-
IEC 60426	2007	Electrical insulating materials - Determination of electrolytic corrosion caused by insulating materials - Test methods	EN 60426	2007
IEC 60587	2007	Electrical insulating materials used under severe ambient conditions - Test methods for evaluating resistance to tracking and erosion	EN 60587	2007
IEC 60589	1977	Methods of test for the determination of ionic impurities in electrical insulating materials by extraction with liquids	HD 381 S1	1979

¹⁾ HD 429 S1 is superseded by EN 62631-1:2011, which is based on IEC 62631-1:2011.

²⁾ IEC 60250 is superseded by IEC 62631-1:2011.

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EN 60684-2:2011

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60684-3	Series	Flexible insulating sleeving - Part 3: Specification for individual types of sleeving	EN 60684-3	Series
IEC 60695-6-30	1996	Fire hazard testing - Part 6: Guidance and test methods on the assessment of obscuration hazard of vision caused by smoke opacity from electrotechnical products involved in fires - Section 30: Small-scale static method - Determination of smoke opacity - Description of the apparatus	-	-
IEC/TS 60695-11-21 -		Fire hazard testing - Part 11-21: Test flames - 500 W vertical flame test method for tubular polymeric materials	-	-
IEC 60754-1	1994	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the amount of halogen acid gas	-	-
IEC 60754-2 (mod)	1991	Test on gases evolved during combustion of electric cables - Part 2: Determination of degree of acidity of gases evolved during the combustion of materials taken from electric cables by measuring pH and conductivity	HD 602 S1 ³⁾	1992
ISO 5-1	2009	Photography and graphic technology - Density- measurements - Part 1: Geometry and functional notation		-
ISO 5-2	2009	Photography and graphic technology - Density- measurements - Part 2: Geometric conditions for transmittance density		-
ISO 5-3	2009	Photography and graphic technology - Density- measurements - Part 3: Spectral conditions		-
ISO 5-4	2009	Photography and graphic technology - Density- measurements - Part 4: Geometric conditions for reflection density		-
ISO 37	2005	Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties	-	-
ISO 62	2008	Plastics - Determination of water absorption	EN ISO 62	2008
ISO 105-A02	-	Textiles - Tests for colour fastness - Part A02: Grey scale for assessing change in colour	-	-
ISO 105-B01	-	Textiles - Tests for colour fastness - Part B01: Colour fastness to light: Daylight	EN ISO 105-B01	-

³⁾ HD 602 S1 is superseded by EN 50267-1:1998 and EN 50267-2-3:1998.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 182-1	1990	Plastics - Determination of the tendency of compounds and products based on vinyl homopolymers and copolymers to evolve hydrogen chloride and any other acidic products at elevated temperature - Part 1: Congo red method	-	-
ISO 182-2	1990	Plastics - Determination of the tendency of compounds and products based on vinyl chloride homopolymers and copolymers to evolve hydrogen chloride and any other acidic products at elevated temperature - Part 2: pH method	EN ISO 182-2	1999
ISO 974	2000	Plastics - Determination of the brittleness temperature by impact	-	-
ISO 1431-1	2004	Rubber, vulcanized or thermoplastic - Resistance to ozone cracking - Part 1: Static and dynamic strain testing	-	-
ISO 4589-2	1996	Plastics - Determination of burning behaviour by oxygen index - Part 2: Ambient-temperature test	EN ISO 4589-2	1999
ISO 4589-3	1996	Plastics - Determination of burning behaviour by oxygen index - Part 3: Elevated-temperature test	EN ISO 4589-3	1996
ISO 13943	2008	Fire safety - Vocabulary	EN ISO 13943	2010

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FLEXIBLE INSULATING SLEEVING –**Part 2: Methods of test**

FOREWORD

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International Standard IEC 60684-2 has been prepared by IEC technical committee 15: Solid electrical insulating materials.

This third edition cancels and replaces the second edition published in 1997, and constitutes a minor revision and technical updating. The main changes from the previous edition are as follows: three additional methods for circumferential extension, voltage proof and thermal shock and alignment with North American methods.

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

FDIS	Report on voting
15/634/FDIS	15/644/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.

A list of all the parts in the IEC 60684 series, under the general title *Flexible insulating sleeving*, 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,
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- replaced by a revised edition, or
- amended.

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INTRODUCTION

This International Standard is one of a series which deals with flexible insulating sleeving. The series consists of three parts:

Part 1: Definitions and general requirements (IEC 60684-1)

Part 2: Methods of test (IEC 60684-2)

Part 3: Specifications for individual types of sleeving (IEC 60684-3)

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