



**NSAI**  
Standards

Irish Standard  
I.S. EN 60684-3-271:2011

Flexible insulating sleeving -- Part 3:  
Specifications for individual types of  
sleeving -- Sheet 271: Heat-shrinkable  
elastomer sleeveings, flame retarded,  
fluid resistant, shrink ratio 2:1 (IEC  
60684-3-271:2011 (EQV))

## I.S. EN 60684-3-271:2011

*Incorporating amendments/corrigenda issued since publication:*

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

<i>This document replaces:</i> EN 60684-3-271:2004	<i>This document is based on:</i> EN 60684-3-271:2011 EN 60684-3-271:2004	<i>Published:</i> 19 August, 2011 25 August, 2004
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<b>NSAI</b> 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie  W NSAI.ie	<b>Sales:</b> T +353 1 857 6730 F +353 1 857 6729 W standards.ie
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EUROPEAN STANDARD

**EN 60684-3-271**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2011

ICS 29.035.20

Supersedes EN 60684-3-271:2004

English version

**Flexible insulating sleeving -  
Part 3: Specifications for individual types of sleeving -  
Sheet 271: Heat-shrinkable elastomer sleeveings, flame retarded, fluid  
resistant, shrink ratio 2:1  
(IEC 60684-3-271:2011)**

Gaines isolantes souples -  
Partie 3: Spécifications pour types  
particuliers de gaines -  
Feuille 271: Gaines thermorétractables en  
élastomère, retardées à la flamme,  
résistant aux fluides, rapport de rétreint  
2:1  
(CEI 60684-3-271:2011)

Isolierschläuche -  
Teil 3: Anforderungen für einzelne  
Schlauchtypen -  
Blatt 271: Wärmeschrumpfende  
Elastomerschläuche, flammwidrig,  
flüssigkeitsbeständig, Schrumpfverhältnis  
2:1  
(IEC 60684-3-271:2011)

This European Standard was approved by CENELEC on 2011-07-26. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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**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 (15/627/FDIS), future edition 3 of IEC 60684-3-271, prepared by IEC TC 15, Solid electrical insulating materials, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60684-3-271 on 2011-07-26.

This European Standard supersedes EN 60684-3-271:2004.

EN 60684-3-271:2011 includes the following significant technical change from EN 60684-3-271:2004: the addition of a type of sleeving suitable for use at temperatures up to 150 °C.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates were fixed:

- latest date by which the EN has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 2012-04-26
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2014-07-26

Annex ZA has been added by CENELEC.

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## **Endorsement notice**

The text of the International Standard IEC 60684-3-271:2011 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 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 60684-1	2003	Flexible insulating sleeving - Part 1: Definitions and general requirements	EN 60684-1	2003
IEC 60684-2 + corr. December	1997 1997	Flexible insulating sleeving - Part 2: Methods of test	EN 60684-2	1997
IEC 60757	1983	Code for designation of colours	HD 457 S1	1985
ISO 846	1997	Plastics - Evaluation of the action of microorganisms	EN ISO 846	1997
ISO 1817	2005	Rubber, vulcanized - Determination of the effect of liquids	-	-

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## FLEXIBLE INSULATING SLEEVING –

**Part 3: Specifications for individual types of sleeving –  
Sheet 271: Heat-shrinkable elastomer sleeveings, flame retarded,  
fluid resistant, shrink ratio 2:1**

## FOREWORD

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International Standard IEC 60684-3-271 has been prepared by IEC technical committee 15: Solid electrical insulating materials.

This third edition cancels and replaces the second edition published in 2004, and constitutes a technical revision. It includes the following significant technical change from the previous edition: the addition of a type of sleeving suitable for use at temperatures up to 150 °C.

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

FDIS	Report on voting
15C/627/FDIS	15C/639/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,
- withdrawn,
- replaced by a revised edition, or
- amended.



## INTRODUCTION

This International Standard is part of a series which deals with flexible insulating sleeving for electrical purposes.

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)

This standard is one of the sheets comprising Part 3, as follows:

Sheet 271: Heat-shrinkable elastomer sleeveings, flame retarded, fluid resistant, shrink ratio 2:1.

## FLEXIBLE INSULATING SLEEVING –

### Part 3: Specifications for individual types of sleeving – Sheet 271: Heat-shrinkable elastomer sleeveings, flame retarded, fluid resistant, shrink ratio 2:1

#### 1 Scope

This part of IEC 60684 gives the requirements for four types of heat-shrinkable, flame retarded, fluid resistant, elastomer sleeveings, nominal shrink ratio of 2:1.

- Type A: standard wall thickness for use at temperatures up to 120 °C  
Type B: thin wall thickness for use at temperatures up to 120 °C  
Type C: standard wall thickness for use at temperatures up to 150 °C  
Type D: thin wall thickness for use at temperatures up to 150 °C

These sleeveings are normally supplied with internal diameters up to 102 mm for the standard wall thickness and up to 51 mm for the thin wall thickness. The standard colour is black.

Sizes or colours other than those specifically listed in this standard may be available as custom items. These items are considered to comply with this standard if they comply with the property requirements listed in Tables 1, 2, 3, 4, 5 and 6 except for dimensions and mass.

Materials which conform to this specification meet established levels of performance. However, the selection of a material by a user for a specific application should be based on the actual requirements necessary for adequate performance in that application and not based on this specification alone.

#### 2 Normative references

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.

IEC 60684-1:2003, *Flexible insulating sleeving – Part 1: Definitions and general requirements*

IEC 60684-2:1997, *Flexible insulating sleeving – Part 2: Methods of test*

IEC 60757:1983, *Code for designation of colours*

ISO 846:1997, *Plastics – Evaluation of the action of micro-organisms*

ISO 1817:2005, *Rubber, vulcanized – Determination of the effect of liquids*

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