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**Flexible insulating sleeving - Part 3: Specification for individual types of sleeving - Sheet 228: Heat-shrinkable, semi-rigid polyvinylidene fluoride sleeving, flame retarded, shrink ratio 2:1 (IEC 60684-3-228:1998)**

Flexible insulating sleeving -- Part 3: Specifications for individual types of sleeving -- Sheet 228: Heat-shrinkable semi-rigid polyvinylidene fluoride sleeving, flame retarded, fluid resistant, shrink ratio 2:1

Isolierschläuche -- Teil 3: Anforderungen für einzelne Schlauchtypen -- Blatt 228: Wärmeschrumpfende Polyvinylidenefluoridschläuche, halbfest, flammwidrig, flüssigkeitsbeständig, Schrumpfverhältnis 2:1

Gaines isolantes souples -- Partie 3: Specifications pour types particuliers de gaines -- Feuille 228: Gaines thermorétractables semi-rigides en fluorure de polyvinylidène, retardées à la flamme, résistant aux fluides, rapport de rétreint 2:1

**Ta slovenski standard je istoveten z: EN 60684-3-228:1998**

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**ICS:**

29.035.20 Účel { ^ } [ \ ] ā Plastics and rubber insulating materials

**SIST EN 60684-3-228:2001**

**en**

## **iTeh STANDARD PREVIEW** **(standards.iteh.ai)**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 60684-3-228

August 1998

ICS 29.035.01

Descriptors: Solid electrical insulating materials, protection sleeveings, heat-shrinkable materials, fluorinated rubber, flexible conductors, designation, individual specifications, dimensions, mass, characteristics, tables of data, breakdown voltage

English version

**Flexible insulating sleeving**  
**Part 3: Specifications for individual types of sleeving**  
**Sheet 228: Heat-shrinkable semi-rigid polyvinylidene fluoride sleeving,**  
**flame retarded, fluid resistant, shrink ratio 2:1**  
**(IEC 60684-3-228:1998)**

Gaines isolantes souples

Partie 3: Spécifications pour types particuliers de gaines

Feuille 228: Gaines thermorétractables semi-rigides en fluorure de polyvinylidène, retardées à la flamme, résistant aux fluides, rapport de rétreint 2:1

(CEI 60684-3-228:1998)

Isolierschläuche

Teil 3: Anforderungen für einzelne Schlauchtypen

Blatt 228: Wärmeschrumpfende

Polyvinylidenefluoridschläuche, halbfest, flammwidrig, flüssigkeitsbeständig, Schrumpfverhältnis 2:1

(IEC 60684-3-228:1998)

This European Standard was approved by CENELEC on 1998-08-01. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

### Foreword

The text of document 15C/887/FDIS, future edition 1 of IEC 60684-3-228, prepared by SC 15C, Specifications, of IEC TC 15, Insulating materials, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60684-3-228 on 1998-08-01.

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) 1999-05-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2001-05-01

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex ZA is normative.  
Annex ZA has been added by CENELEC.

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### Endorsement notice

The text of the International Standard IEC 60684-3-228:1998 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**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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	1980	Specification for flexible insulating sleeving Part 1: Definitions and general requirements	EN 60684-1	1995
IEC 60684-2	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	1978	Plastics - Evaluation of the action of micro-organisms	-	-
ISO 1817	1973	Rubber, vulcanized - Determination of the effect of liquids	-	-

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1) To be published.

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# NORME INTERNATIONALE

**CEI  
IEC**

## INTERNATIONAL STANDARD

**60684-3-228**

Première édition  
First edition  
1998-05

### Gaines isolantes souples –

#### Partie 3:

Spécifications pour types particuliers de gaines –

Feuille 228: Gaines thermorétractables

semi-rigides en fluorure de polyvinylidène,  
retardées à la flamme, résistant aux fluides,  
rapport de rétreint 2:1

[SIST EN 60684-3-228:2001](https://standards.iteh.ai/catalog/standards/sist/b7eed62a-18b5-4b80-a73a-6160684-3-228-2001)

[https://standards.iteh.ai/catalog/standards/sist/b7eed62a-18b5-4b80-a73a-](https://standards.iteh.ai/catalog/standards/sist/b7eed62a-18b5-4b80-a73a-6160684-3-228-2001)

### Flexible insulating sleeving –

#### Part 3:

Specifications for individual types of sleeving –

Sheet 228: Heat-shrinkable semi-rigid

polyvinylidene fluoride sleeving, flame retarded,  
fluid resistant, shrink ratio 2:1

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

CODE PRIX  
PRICE CODE

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Pour prix, voir catalogue en vigueur  
For price, see current catalogue

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## FLEXIBLE INSULATING SLEEVING –

**Part 3: Specifications for individual types of sleeving –  
Sheet 228: Heat-shrinkable, semi-rigid polyvinylidene fluoride sleeving,  
flame retarded, fluid resistant, shrink ratio 2:1**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
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- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60684-3-228 has been prepared by subcommittee 15C: Specifications, of IEC technical committee 15: Insulating materials.

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

FDIS	Report on voting
15C/887/FDIS	15C/967/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.



## INTRODUCTION

This International Standard is one 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 gives one of the sheets comprising part 3 as follows:

Sheet 228: Heat-shrinkable, semi-rigid polyvinylidene fluoride sleeving, flame retarded, fluid resistant, shrink ratio 2:1.

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