



**NSAI**  
Standards

Irish Standard  
I.S. EN 50655-3:2017

# Electric cables - Accessories - Material characterization - Part 3: Fingerprinting for cold shrinkable components for low and medium voltage applications up to 20,8/36 (42) kV

## I.S. EN 50655-3:2017

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN 50655-3:2017 is the adopted Irish version of the European Document EN 50655-3:2017, Electric cables - Accessories - Material characterization - Part 3: Fingerprinting for cold shrinkable components for low and medium voltage applications up to 20,8/36 (42) kV

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EUROPEAN STANDARD

**EN 50655-3**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2017

ICS 29.035.20

Supersedes HD 631.4 S1:2008

English Version

**Electric cables - Accessories - Material characterization - Part 3:  
Fingerprinting for cold shrinkable components for low and  
medium voltage applications up to 20,8/36 (42) kV**

Câbles électriques - Accessoires - Caractérisation des  
matériaux - Partie 3: Essais d'identification des composants  
rétractables à froid pour les applications basse et moyenne  
tension jusqu'à 20,8/36 (42) kV

Kabel und isolierte Leitungen - Garnituren -  
Materialcharakterisierung - Teil 3: Fingerprint-Prüfungen für  
kaltschrumpfende Komponenten für Nieder- und  
Mittelspannungsanwendungen bis 20,8/36 (42) kV

This European Standard was approved by CENELEC on 2017-09-18. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN 50655-3:2017) has been prepared by CLC/TC 20 “*Electric cables*”.

The following dates are fixed:

- latest date by which this document has (dop) 2018-09-18  
to be implemented at national level by  
publication of an identical national  
standard or by endorsement
- latest date by which the national (dow) 2020-09-18  
standards conflicting with this document  
have to be withdrawn

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

This document supersedes HD 631.4 S1:2008.

EN 50655 series will consist of the following:

- EN 50655-1, *Electric cables - Accessories - Material characterization - Part 1: Fingerprinting for resinous compounds*;
- EN 50655-2, *Electric cables - Accessories - Material characterization - Part 2: Fingerprinting for heat shrinkable components for low and medium voltage applications up to 20,8/36 (42) kV*;
- EN 50655-3, *Electric cables - Accessories - Material characterization - Part 3: Fingerprinting for cold shrinkable components for low and medium voltage applications up to 20,8/36 (42) kV*.

**NOTE** It has been assumed in the preparation of this document that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

**WARNING** This European Standard calls for the use of substances and/or procedures that may be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

## EN 50655-3:2017

## 1 Scope

This European Standard specifies the test methods and requirements for fingerprinting (as defined in 3.11) of cold shrinkable components intended to be used in cable accessories for low and medium voltage, as defined in EN 50393, HD 629.1 and HD 629.2.

Fingerprinting testing of materials does not have a mandatory link to type testing of accessories. It is regarded as a stand-alone test, but it may be carried out in combination with the accessory type tests.

Component basic functions can be conductive, stress control or stress grading, insulating, oil barrier, anti-tracking, external protection and sealing. Components are supplied as single layer items or as multi-layer items.

Components are generally supplied pre-expanded or with a system allowing expansion prior to installation.

NOTE Information on health and safety is given in Annex A.

## 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.

EN 50393, *Test methods and requirements for accessories for use on distribution cables of rated voltage 0,6/1,0 (1,2) kV*

EN ISO 11358-1, *Plastics - Thermogravimetry (TG) of polymers - Part 1: General principles (ISO 11358-1)*

HD 629.1, *Test requirements on accessories for use on power cables of rated voltage from 3,6/6(7,2) kV up to 20,8/36(42) kV - Part 1: Cables with extruded insulation*

HD 629.2, *Test requirements on accessories for use on power cables of rated voltage from 3,6/6(7,2) kV up to 20,8/36(42) kV - Part 2: Cables with impregnated paper insulation*

IEC 60050-461, *International Electrotechnical Vocabulary - Part 461: Electric cables*

ISO 2781, *Rubber, vulcanized or thermoplastic - Determination of density*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-461 and the following apply.

### 3.1

#### **cold shrinkable**

property of an elastomeric component previously expanded to recover to its original shape at ambient temperature after removal of the means of support

### 3.2

#### **cold shrinkable component**

elastomeric extruded tubing or moulded part (single- or multi-layer) pre-expanded on a support or expanded prior to installation, which tends to recover to its original dimensions when the support is removed

### 3.3

#### **multi-layer component**

component that consists of minimum two or more different materials bonded together



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