



**NSAI**  
Standards

Irish Standard  
I.S. EN 62275:2015

# Cable management systems - Cable ties for electrical installations

**I.S. EN 62275:2015**

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

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

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

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

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

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

EN 62275:2015

*Published:*

2015-02-27

*This document was published under the authority of the NSAI and comes into effect on:*

2015-03-23

ICS number:

29.120.10

29.120.99

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD

**EN 62275**

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2015

ICS 29.120.10; 29.120.99

Supersedes EN 62275:2009

English Version

**Cable management systems - Cable ties for electrical installations  
(IEC 62275:2013 , modified)**

Systèmes de câblage - Colliers pour installations électriques  
(IEC 62275:2013 , modifiée)

Kabelführungssysteme - Kabelbinder für elektrische Installationen  
(IEC 62275:2013 , modifiziert)

This European Standard was approved by CENELEC on 2015-01-19. 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, 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: Avenue Marnix 17, B-1000 Brussels**

## Foreword

This document (EN 62275:2015) consists of the text of IEC 62275:2013 prepared by SC 23A "Cable management systems" of IEC/TC 23 "Electrical accessories", together with the common modifications prepared by CLC/TC 213 "Cable management systems".

The following dates are fixed:

- latest date by which the document has to be implemented at national level (dop) 2016-01-19  
by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-01-19

This document supersedes EN 62275:2009.

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 62275:2013 was approved by CENELEC as a European Standard with agreed common modifications.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 62275:2006      NOTE      Harmonized as EN 62275:2009 (modified).

## COMMON MODIFICATIONS

## Annex A

**Replace** Annex A by:

## Annex A (normative)

### Compliance checks to be carried out for cable ties and fixing devices complying with EN 62275:2009

#### Introduction

This normative annex relates to changed requirements. It informs where compliance checks are not required and where compliance checks are required to be carried out in order that cables ties and fixing devices can be declared to meet the requirements of EN 62275:2015 if the cable ties and fixing devices already comply with EN 62275:2009.

**Table A.1 - Required compliance checks**

Test reference subclause	Description	Compliance check
<b>Marking and documentation</b>		
7.1	Marking of cable ties and fixing devices	Not required
7.2	Durability and legibility marking	Not required
7.3	Literature declaration	Required only for specific mounting or assembly conditions for fixing devices
<b>Construction</b>		
8	Surface and edges	Not required
<b>Mechanical properties</b>		
9.2	Installation test	Not required
9.3	Minimum installation temperature test for cable ties	Not required
9.4	Minimum operating temperature test for cable ties	Not required
9.5.1	Loop tensile strength test for cable ties classified according to 6.2.2. As-received condition	Not required
9.5.2	Loop tensile strength test for cable ties classified according to 6.2.2. After heat aging	Not required
9.5.3	Loop tensile strength test for cable ties classified according to 6.2.2. After temperature cycling	Not required
9.6.1	Loop tensile strength test for cable ties classified according to 6.2.3. As-received condition	Not required
9.6.2	Loop tensile strength test for cable ties classified according to 6.2.3. After heat aging	Not required
9.6.3	Loop tensile strength test for cable ties classified according to 6.2.3. After temperature cycling	Not required
9.6.4	Loop tensile strength test for cable ties classified according to 6.2.3. After vibration test for metallic cable ties	Not required
9.7.1	Mechanical strength test for fixing devices. As-received condition	Required only for fixing devices classified according to 6.2.2
9.7.2	Mechanical strength test for fixing devices. After heat aging	Required only for fixing devices classified according to 6.2.2
9.7.3	Mechanical strength test for fixing devices. After temperature cycling	Required only for fixing devices classified according to 6.2.2
<b>Contribution to fire</b>		
10	Needle flame test	Required only for metallic cable ties with coating
<b>Environmental influences</b>		
11.1	Resistance to ultraviolet light	Not required
11.2	Resistance to corrosion (for metallic and composite components)	Required

## 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 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-6	2007	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	2008
IEC 60695-11-5	2004	Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	2005
IEC 60216-4-1	2006	Electrical insulating materials - Thermal endurance properties - Part 4-1: Ageing ovens - Single-chamber ovens	EN 60216-4-1	2006
ISO 4892-2	2006	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps	EN ISO 4892-2	2006
ISO 9227	2012	Corrosion tests in artificial atmospheres - Salt spray tests	EN ISO 9227	2012



**IEC 62275**

Edition 2.0 2013-11

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

---

**Cable management systems – Cable ties for electrical installations**

**Systemes de câblage – Colliers pour installations électriques**





## THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2013 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester.

If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de la CEI ou du Comité national de la CEI du pays du demandeur.

Si vous avez des questions sur le copyright de la CEI ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de la CEI de votre pays de résidence.

IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
Fax: +41 22 919 03 00  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

### About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

### About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

#### Useful links:

IEC publications search - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)

The advanced search enables you to find IEC publications by a variety of criteria (reference number, text, technical committee,...).

It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)

Stay up to date on all new IEC publications. Just Published details all new publications released. Available on-line and also once a month by email.

Electropedia - [www.electropedia.org](http://www.electropedia.org)

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in additional languages. Also known as the International Electrotechnical Vocabulary (IEV) on-line.

Customer Service Centre - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: [csc@iec.ch](mailto:csc@iec.ch).

---

### A propos de la CEI

La Commission Electrotechnique Internationale (CEI) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

### A propos des publications CEI

Le contenu technique des publications de la CEI est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

#### Liens utiles:

Recherche de publications CEI - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)

La recherche avancée vous permet de trouver des publications CEI en utilisant différents critères (numéro de référence, texte, comité d'études,...).

Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

Just Published CEI - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)

Restez informé sur les nouvelles publications de la CEI. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

Electropedia - [www.electropedia.org](http://www.electropedia.org)

Le premier dictionnaire en ligne au monde de termes électroniques et électriques. Il contient plus de 30 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans les langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (VEI) en ligne.

Service Clients - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: [csc@iec.ch](mailto:csc@iec.ch).





**IEC 62275**

Edition 2.0 2013-11

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

---

**Cable management systems – Cable ties for electrical installations**

**Systèmes de câblage – Colliers pour installations électriques**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

PRICE CODE  
CODE PRIX



---

ICS 29.120.10, 29.120.99

ISBN 978-2-8322-1198-4

**Warning! Make sure that you obtained this publication from an authorized distributor.  
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

## CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions.....	6
4 General requirements.....	7
5 General notes on tests.....	8
6 Classification.....	12
6.1 According to material.....	12
6.1.1 Metallic component.....	12
6.1.2 Non-metallic component.....	12
6.1.3 Composite component.....	12
6.2 According to loop tensile strength for cable ties and mechanical strength for fixing devices.....	12
6.2.1 Loop tensile strength for cable ties.....	12
6.2.2 Type 1 – Retains at least 50 % of declared loop tensile strength for cable ties and mechanical strength for fixing devices after test conditions.....	12
6.2.3 Type 2 – Retains 100 % declared loop tensile strength for cable ties and mechanical strength for fixing devices after test conditions.....	12
6.3 According to temperature.....	13
6.3.1 According to maximum operating temperature for application given in Table 4.....	13
6.3.2 According to minimum operating temperature for application given in Table 5.....	13
6.3.3 According to minimum temperature during installation as declared by the manufacturer.....	13
6.4 According to contribution to fire for non-metallic and composite cable ties only.....	13
6.4.1 Flame propagating.....	13
6.4.2 Non-flame propagating.....	13
6.5 According to environmental influences.....	14
6.5.1 According to resistance to ultraviolet light for non-metallic and composite components.....	14
6.5.2 According to resistance to corrosion for metallic and composite components.....	14
7 Marking and documentation.....	14
8 Construction.....	15
9 Mechanical properties.....	15
9.1 Requirements.....	15
9.2 Installation test.....	15
9.3 Minimum installation temperature test for cable ties.....	15
9.4 Minimum operating temperature test for cable ties.....	16
9.5 Loop tensile strength test for cable ties classified according to 6.2.2.....	18
9.5.1 As-received condition.....	18
9.5.2 After heat ageing.....	18
9.5.3 After temperature cycling.....	18

9.6	Loop tensile strength test for cable ties classified according to 6.2.3 .....	19
9.6.1	As-received condition .....	19
9.6.2	After heat ageing .....	19
9.6.3	After temperature cycling .....	19
9.6.4	After vibration test for metallic cable ties .....	20
9.7	Mechanical strength test for fixing devices .....	21
9.7.1	As-received .....	21
9.7.2	After heat ageing .....	24
9.7.3	After temperature cycling .....	24
10	Contribution to fire .....	24
11	Environmental influences .....	27
11.1	Resistance to ultraviolet light .....	27
11.2	Resistance to corrosion .....	29
12	Electromagnetic compatibility .....	30
Annex A (normative) Compliance checks to be carried out for cable ties and fixing devices complying with IEC 62275:2006 .....		31
Bibliography .....		33
Figure 1 – Reference thickness for cable ties .....		9
Figure 2 – Typical arrangements for cable tie orientation on split mandrel for tensile test 11		
Figure 3 – Test apparatus for cable tie impact test .....		17
Figure 4 – Typical arrangement for the vibration test .....		21
Figure 5 – Typical arrangement of test assembly for fixing device test .....		23
Figure 6 – Arrangement for the needle flame test .....		26
Figure 7 – Recommended sample repositioning for ultraviolet light and water exposure .....		29
Table 1 – Stabilisation time for samples .....		8
Table 2 – Test mandrel diameter .....		10
Table 3 – Loop tensile strength .....		12
Table 4 – Maximum operating temperature for application .....		13
Table 5 – Minimum operating temperature for application .....		13
Table 6 – Energy values of hammer .....		18
Table A.1 – Required compliance checks .....		31

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

---

**CABLE MANAGEMENT SYSTEMS –  
CABLE TIES FOR ELECTRICAL INSTALLATIONS**

## 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.
- 2) The formal decisions or agreements of 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 IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62275 has been prepared by subcommittee 23A: Cable management systems, of IEC technical committee 23: Electrical accessories.

This second edition cancels and replaces the first edition published in 2006 and constitutes a technical revision. It incorporates additional tables, an annex and figures as well as revisions to such that appeared in the first edition. In places the text has been substantially altered including:

- revised and updated normative references,
- integral cable ties and fixing devices,
- change in the range of the diameter of the test mandrel,
- general notes on tests,
- mechanical properties and associated tests as well as tests for resistance to ultraviolet light and corrosion.

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

FDIS	Report on voting
23A/693/FDIS	23A/695/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.

In this publication, the following print types are used:

- Requirements proper: in roman type.
- *Test specifications: in italic type.*
- Notes: in smaller roman type.

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.

## CABLE MANAGEMENT SYSTEMS – CABLE TIES FOR ELECTRICAL INSTALLATIONS

### 1 Scope

This International Standard specifies requirements for metallic, non-metallic and composite cable ties and their associated fixing devices used for the management and support of wiring systems in electrical installations.

Cable ties and associated fixing devices may also be suitable for other applications and where so used, regard should be taken of any additional requirements.

This standard does not contain requirements that evaluate any electrical insulation properties of the cable tie or mechanical protection of the cables provided by the cable tie.

This standard does not consider the mechanical interface of a fixing device to a solid surface such as a wall or ceiling.

### 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.

IEC 60068-2-6:2007, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60695-11-5:2004, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

IEC 60216-4-1:2006, *Electrical insulating materials – Thermal endurance properties – Part 4-1: Ageing ovens – Single-chamber ovens*

ISO 4892-2:2006, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

ISO 9227:2012, *Corrosion tests in artificial atmospheres – Salt spray tests*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1 cable tie

band or length of material, employing a locking device, used for bundling or tying groups of cables together, securing and/or supporting the cables

Note 1 to entry: Type 1 and Type 2 cable ties are classified in 6.2.2 and 6.2.3.

Note 2 to entry: In some countries, such as Canada and the United States, additional Type classifications are applicable when prequalified moulding materials are used. See UL 62275/CSA C22.2 No. 62275.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
  - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-