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INTERNATIONAL STANDARD



Cable management systems – Cable ties for electrical installations

INTERNATIONAL
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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.
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This commented version (CMV) of the official standard IEC 62275:2022 edition 4.0 allows the user to identify the changes made to the previous IEC 62275:2018 edition 3.0. Furthermore, comments from IEC SC 23A experts are provided to explain the reasons of the most relevant changes, or to clarify any part of the content.

A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text. Experts' comments are identified by a blue-background number. Mouse over a number to display a pop-up note with the comment.

This publication contains the CMV and the official standard. The full list of comments is available at the end of the CMV.

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

This fourth edition cancels and replaces the third edition published in 2018. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) scope clarification,
- b) new definitions,
- c) deletion of the exception for the stabilization of the moisture content,
- d) possibility to carry out tensile strength tests with dead weights,
- e) differentiation of rubber and acrylic adhesive fixings,
- f) clarification for mechanical testing of integral devices,
- g) clarifications on Table 6,
- h) clarifications in 9.1,
- i) the minimum installation temperature test for cable ties is carried out only when the declared minimum temperature is lower than 0 °C,
- j) a requirement that metallic cable ties be classified according to 6.2.3,
- k) definition of colours to be tested for contribution to fire,
- l) addition of a "some countries" note in Clause 10,
- m) clarification of the mounting of fixing devices in the resistance to ultraviolet light test,
- n) clarification on the testing of integral devices in the resistance to ultraviolet light test.

The text of this International Standard is based on the following documents:

Draft	Report on voting
23A/1025/FDIS	23A/1029/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The following differing practices of a less permanent nature exist in the countries indicated below.

- 6.2.2: Additional type classifications are applicable when pre-qualified moulding materials are used (Canada, USA).
- 6.2.3: Additional type classifications are applicable when pre-qualified moulding materials are used (Canada, USA).
- 7.3: Some marking information is required to be placed on the packaging (Canada, Russia, USA).

In this document, the following print types are used:

- Requirements proper: in roman type.

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

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CABLE MANAGEMENT SYSTEMS – CABLE TIES FOR ELECTRICAL INSTALLATIONS

1 Scope

This document specifies requirements for metallic, non-metallic and composite cable ties and their associated fixing devices as a means used for managing or securing the ~~management and support of~~ **1** wiring systems in electrical installations. Cable ties and associated fixing devices can also be suitable for other applications, such as support of wiring systems, and where so used, additional requirements can apply.

This document 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 document contains requirements for the mechanical interface of an adhesive fixing device to a solid surface. It does not consider the mechanical behaviour of the solid surface in itself.

This document does not consider the mechanical interface, for example the mounting screw, of a fixing device other than adhesive to a solid surface.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60068-2-6:2007, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

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

IEC 60695-11-5:2016, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

ISO 4892-2:2013, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

ISO 4892-2:2013/AMD1:2021

ISO 9227:2017, *Corrosion tests in artificial atmospheres – Salt spray tests*

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Cable management systems – Cable ties for electrical installations

Systemes de câblage – Colliers pour installations électriques



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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

SYSTÈMES DE CÂBLAGE – COLLIERS POUR INSTALLATIONS ÉLECTRIQUES

AVANT-PROPOS

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L'IEC 62275 a été établie par le sous-comité 23A: Systèmes de câblage, du comité d'études 23 de l'IEC: Petit appareillage. Il s'agit d'une Norme internationale.

Cette quatrième édition annule et remplace la troisième édition parue en 2018. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) une clarification du domaine d'application;
- b) de nouvelles définitions;
- c) la suppression de l'exception relative au conditionnement pour atteindre la reprise d'humidité;
- d) la possibilité d'effectuer des essais de tenue à la traction avec des poids morts;

- e) la différenciation des fixations adhésives en caoutchouc et en acrylique;
- f) une clarification pour les essais mécaniques des accessoires intégrés;
- g) des clarifications du Tableau 6;
- h) des clarifications de 9.1;
- i) l'essai des colliers à la température minimale d'installation est effectué uniquement lorsque la température minimale déclarée est inférieure à 0 °C;
- j) une exigence selon laquelle les colliers métalliques sont classés conformément à 6.2.3;
- k) la définition des couleurs à soumettre à essai en matière de contribution au feu;
- l) l'ajout d'une note "Dans certains pays" à l'Article 10;
- m) la clarification du montage des accessoires de fixation dans l'essai de tenue au rayonnement ultraviolet;
- n) la clarification de l'essai des accessoires intégrés dans l'essai de tenue au rayonnement ultraviolet.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
23A/1025/FDIS	23A/1029/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/publications.

Les différentes pratiques suivantes, à caractère moins permanent, existent dans les pays indiqués ci-après:

- 6.2.2: des classifications de type supplémentaires sont applicables lorsque des matériaux de moulage préqualifiés sont utilisés (Canada, Etats-Unis);
- 6.2.3: des classifications de type supplémentaires sont applicables lorsque des matériaux de moulage préqualifiés sont utilisés (Canada, Etats-Unis);
- 7.3: certaines informations de marquage sont exigées sur l'emballage (Canada, Etats-Unis et Russie).

Dans le présent document, les caractères d'imprimerie suivants sont utilisés:

- exigences proprement dites: caractères romains;
- *spécifications d'essais: caractères italiques;*
- notes: petits caractères romains.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous webstore.iec.ch dans les données relatives au document recherché. À cette date, le document sera

- reconduit,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

SYSTÈMES DE CÂBLAGE – COLLIERS POUR INSTALLATIONS ÉLECTRIQUES

1 Domaine d'application

Le présent document spécifie les exigences pour les colliers métalliques, non métalliques et composites, ainsi que pour leurs accessoires de fixation associés, comme un moyen utilisé pour l'aménagement et la fixation des systèmes de câblage dans les installations électriques. Les colliers et leurs accessoires de fixation associés peuvent également être utilisés pour d'autres applications, comme le soutien des systèmes de câblage et, dans ce cas, des exigences supplémentaires peuvent s'appliquer.

Le présent document ne contient pas d'exigences concernant l'évaluation des propriétés d'isolation électrique du collier ou de la protection mécanique des câbles assurée par le collier. Le présent document contient des exigences relatives à l'interface mécanique d'un accessoire de fixation adhésif sur une surface rigide. Il ne traite pas du comportement mécanique de la surface rigide elle-même.

Le présent document ne traite pas de l'interface mécanique (par exemple la vis de montage), d'un accessoire de fixation autre que l'adhésif sur une surface rigide.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60068-2-6:2007, *Essais d'environnement – Partie 2-6: Essais – Essai Fc: Vibrations (sinusoïdales)*

IEC 60216-4-1:2006, *Electrical insulating materials – Thermal endurance properties – Part 4-1: Ageing ovens – Single-chamber ovens* (disponible en anglais seulement)

IEC 60695-11-5:2016, *Essais relatifs aux risques du feu – Partie 11-5: Flamme d'essai – Méthode d'essai au brûleur-aiguille – Appareillage, dispositif d'essai de vérification et lignes directrices*

ISO 4892-2:2013, *Plastiques – Méthodes d'exposition à des sources lumineuses de laboratoire – Partie 2: Lampes à arc au xénon*
ISO 4892-2:2013/AMD1:2021

ISO 9227:2017, *Essais de corrosion en atmosphères artificielles – Essais aux brouillards salins*