

SLOVENSKI STANDARD
SIST EN 60332-3-24:2010**01-februar-2010****BUXca Yý U****SIST EN 50266-2-4:2002**

DfYg_i gj`bUY_Y_f] b] ` _UV] \ `]b` _UV] \ `]n`cdh] b] \ `j`U_Yb`j `dcýUfb] \ `fUna YfU `!` !
& ("XY. `DfYg_i g`bUj d] bY[Uý]f`Yb`Uc[b`Udc`bUj d] bc`df]f`Yb] \ `gbc d] \ `ý]WU]
_UV`cj `!`?UH[cf]U7 `f97 `* \$ ` ` & ` !& (.&\$\$\$Ž`5%&\$\$, Ł

Tests on electric and optical fibre cables under fire conditions -- Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category C

iTeh STANDARD PREVIEW

Prüfungen an Kabeln, isolierten Leitungen und Glasfaserkabeln im Brandfall -- Teil 3-24: Prüfung der vertikalen Flammenausbreitung von vertikal angeordneten Bündeln von Kabeln und isolierten Leitungen - Prüfmethode C

[SIST EN 60332-3-24:2010](https://standards.iteh.ai/catalog/standards/sist/e67b618e-978e-4a72-962e-0e7b49874617/sist/en-60332-3-24-2010)[https://standards.iteh.ai/catalog/standards/sist/e67b618e-978e-4a72-962e-](https://standards.iteh.ai/catalog/standards/sist/e67b618e-978e-4a72-962e-0e7b49874617/sist/en-60332-3-24-2010)

Essais des câbles électriques et des câbles à fibres optiques soumis au feu -- Partie 3-24: Essai de propagation verticale de la flamme des fils ou câbles montés en nappes en position verticale - Catégorie C

Ta slovenski standard je istoveten z: EN 60332-3-24:2009**ICS:**

13.220.40	Sposobnost vžiga in obnašanje materialov in proizvodov pri gorenju	Ignitability and burning behaviour of materials and products
29.060.20	Kabli	Cables

SIST EN 60332-3-24:2010**en,fr**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60332-3-24:2010

<https://standards.iteh.ai/catalog/standards/sist/e67b618e-978e-4a72-962e-0a7bd98741b7/sist-en-60332-3-24-2010>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60332-3-24

October 2009

ICS 29.060.20; 13.220.40; 29.020

Supersedes EN 50266-2-4:2001 + corr. March 2002

English version

**Tests on electric and optical fibre cables under fire conditions -
Part 3-24: Test for vertical flame spread
of vertically-mounted bunched wires or cables -
Category C
(IEC 60332-3-24:2000 + A1:2008)**

Essais des câbles électriques
et des câbles à fibres optiques
soumis au feu -
Partie 3-24: Essai de propagation verticale
de la flamme des fils ou câbles
montés en nappes en position verticale -
Catégorie C
(CEI 60332-3-24:2000 + A1:2008)

Prüfungen an Kabeln, isolierten Leitungen
und Glasfaserkabeln im Brandfall -
Teil 3-24: Prüfung der vertikalen
Flammenausbreitung von vertikal
angeordneten Bündeln von Kabeln
und isolierten Leitungen -
Prüfart C
(IEC 60332-3-24:2000 + A1:2008)

[SIST EN 60332-3-24:2010](https://standards.iteh.ai/catalog/standards/sist/e67b618e-978e-4a72-962e-0a7bd98741b7/sist-en-60332-3-24-2010)

<https://standards.iteh.ai/catalog/standards/sist/e67b618e-978e-4a72-962e-0a7bd98741b7/sist-en-60332-3-24-2010>

This European Standard was approved by CENELEC on 2009-08-01. 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of the International Standard IEC 60332-3-24:2000 and its amendment A1:2008, prepared by IEC TC 20, Electric cables, was submitted to the CENELEC Unique Acceptance Procedure and was accepted as EN 60332-3-24 on 2009-08-01.

This European Standard supersedes EN 50266-2-4:2001 + corrigendum March 2002.

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) 2010-08-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-08-01

Annex ZA has been added by CENELEC.

Endorsement notice

iTeh STANDARD PREVIEW

The text of the International Standard IEC 60332-3-24:2000 and its amendment A1:2008 was approved by CENELEC as a European Standard without any modification.

[SIST EN 60332-3-24:2010](https://standards.iteh.ai/catalog/standards/sist/e67b618e-978e-4a72-962e-0a7bd98741b7/sist-en-60332-3-24-2010)

<https://standards.iteh.ai/catalog/standards/sist/e67b618e-978e-4a72-962e-0a7bd98741b7/sist-en-60332-3-24-2010>

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 Where 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 60332-3-10	- ¹⁾	Tests on electric and optical fibre cables under fire conditions - Part 3-10: Test for vertical flame spread of vertically-mounted bunched wires or cables - Apparatus	EN 60332-3-10	2009 ²⁾
IEC 60695-4	- ¹⁾	Fire hazard testing - Part 4: Terminology concerning fire tests	EN 60695-4	2006 ²⁾
IEC 60811-1-3	- ¹⁾	Insulating and sheathing materials of electric and optical cables - Common test methods - Part 1-3: General application - Methods for determining the density - Water absorption tests - Shrinkage test	EN 60811-1-3	1995 ²⁾
IEC Guide 104	- ¹⁾	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60332-3-24:2010

<https://standards.iteh.ai/catalog/standards/sist/e67b618e-978e-4a72-962e-0a7bd98741b7/sist-en-60332-3-24-2010>



IEC 60332-3-24

Edition 1.1 2009-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

GROUP SAFETY PUBLICATION
PUBLICATION GROUPEE DE SÉCURITÉ

**Tests on electric and optical fibre cables under fire conditions –
Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or
cables – Category C**

**Essais des câbles électriques et des câbles à fibres optiques soumis au feu –
Partie 3-24: Essai de propagation verticale de la flamme des fils ou câbles
montés en nappes en position verticale – Catégorie C**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

CB

ICS 29.060.20;13.220.40; 29.020

ISBN 2-8318-1029-6

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references.....	6
3 Definitions	7
4 Test apparatus	7
4.1 General	7
4.2 Ignition source.....	7
5 Test procedure	7
5.1 Test sample.....	7
5.2 Determination of the number of test pieces	7
5.3 Mounting of the test sample	8
5.4 Flame application time.....	9
6 Evaluation of test results.....	9
7 Performance requirements.....	10
8 Retest procedure.....	10
9 Test report.....	10
Annex A (normative) Guidance on cable selection for type approval testing.....	12
Annex B (informative) Recommended performance requirements.....	13
Figure 1 – Spaced cables mounted on the front side of the standard ladder	11
Figure 2 – Touching cables mounted on the front side of the standard ladder (arrays of cables in contact)	11
Table A.1 – Summary of test conditions.....	12

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TESTS ON ELECTRIC AND OPTICAL FIBRE CABLES
UNDER FIRE CONDITIONS –**
**Part 3-24: Test for vertical flame spread of vertically-mounted bunched
wires or cables – Category C**

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 provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 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 60332-3-24 has been prepared by IEC technical committee 20: Electric cables.

It has the status of a group safety publication in accordance with IEC Guide 104.

IEC 60332-3-24 forms one of a series of publications dealing with tests on electric cables under fire conditions; the series supersedes IEC 60332-3 published in 1992. The parts of the series are described in the introduction.

All pre-existing categories of test are retained and updated. A new category (category D) has been added to cater for testing at very low non-metallic volumes.