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**Kablar –  
Provning av egenskaper vid brand –  
Del 1-2: Provning av brandegenskaper vid vertikal  
brandspridning för en ensam isolerad ledare eller kabel –  
Provning med 1 kW låga med gas-luftblandning**

*Tests on electric and optical fibre cables under fire conditions –  
Part 1-2: Test for vertical flame propagation for a single insulated wire or cable –  
Procedure for 1 kW pre-mixed flame*

Som svensk standard gäller europastandarden EN 60332-1-2:2004. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60332-1-2:2004.

**Nationellt förord**

Europastandarden EN 60332-1-2:2004<sup>\*)</sup>

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60332-1-2, First edition, 2004 - Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 50265-2-1, utgåva 1, 2001, gäller ej fr o m 2007-09-01.

<sup>\*)</sup> EN 60332-1-2:2004 ikraftsattes 2004-12-20 som SS-EN 60332-1-2 genom offentliggörande, d v s utan utgivning av något svenskt dokument.

### *Standarder underlättar utvecklingen och höjer elsäkerheten*

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

### *SEK är Sveriges röst i standardiseringsarbetet inom elområdet*

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

### *Stora delar av arbetet sker internationellt*

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

### *Var med och påverka!*

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

### **SEK Svensk Elstandard**

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English version

**Tests on electric and optical fibre cables under fire conditions**  
**Part 1-2: Test for vertical flame propagation**  
**for a single insulated wire or cable -**  
**Procedure for 1 kW pre-mixed flame**  
**(IEC 60332-1-2:2004)**

Essais des câbles électriques  
et à fibres optiques soumis au feu  
Partie 1-2: Essai de propagation verticale  
de la flamme sur conducteur  
ou câble isolé -  
Procédure pour flamme  
à prémélange de 1kW  
(CEI 60332-1-2:2004)

Prüfungen an Kabeln, isolierten Leitungen  
und Glasfaserkabeln im Brandfall  
Teil 1-2: Prüfung der vertikalen  
Flammenausbreitung an einer Ader,  
einer isolierten Leitung oder einem Kabel -  
Prüfverfahren mit 1 kW-Flamme  
mit Gas-/Luftgemisch  
(IEC 60332-1-2:2004)

This European Standard was approved by CENELEC on 2004-09-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 20/697/FDIS, future edition 1 of IEC 60332-1-2, prepared by IEC TC 20, Electric cables, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60332-1-2 on 2004-09-01.

This European Standard supersedes EN 50265-2-1:1998.

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) | 2005-06-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn                                               | (dow) | 2007-09-01 |

Annex ZA has been added by CENELEC

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## Endorsement notice

The text of the International Standard IEC 60332-1-2:2004 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

|               |      |                                                 |
|---------------|------|-------------------------------------------------|
| IEC 60332-1-3 | NOTE | Harmonized as EN 60332-1-3:2004 (not modified). |
| IEC 60332-2-2 | NOTE | Harmonized as EN 60332-2-2:2004 (not modified). |

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## 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 60332-1-1      | - <sup>1)</sup> | Tests on electric and optical fibre cables under fire conditions<br>Part 1-1: Test for vertical flame propagation for a single insulated wire or cable – Apparatus | EN 60332-1-1 | 2004 <sup>2)</sup> |
| IEC 60695-4        | - <sup>1)</sup> | Fire hazard testing<br>Part 4: Terminology concerning fire tests                                                                                                   | EN 60695-4   | 1995 <sup>2)</sup> |
| IEC Guide 104      | - <sup>1)</sup> | The preparation of safety publications and the use of basic safety publications and group safety publications                                                      | -            | -                  |

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<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

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## TESTS ON ELECTRIC AND OPTICAL FIBRE CABLES UNDER FIRE CONDITIONS –

### Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW pre-mixed flame

#### 1 Scope

This part of IEC 60332 specifies the procedure for testing the resistance to vertical flame propagation for a single vertical electrical insulated conductor or cable, or optical fibre cable, under fire conditions. The apparatus is given in IEC 60332-1-1.

NOTE 1 Testing to IEC 60332-1-2 may be performed simultaneously with that to IEC 60332-1-3 if required.

Recommended requirements for performance are given in Annex A.

IEC 60332-1-2 specifies the use of a 1 kW pre-mixed flame and is for general use, except that the procedure specified may not be suitable for the testing of small single insulated conductors or cables of less than 0,5 mm<sup>2</sup> total cross-section because the conductor melts before the test is completed, or for the testing of small optical fibre cables because the cable is broken before the test is completed. In these cases, the procedure given in IEC 60332-2-2 is recommended.

NOTE 2 Since the use of insulated conductor or cable which retards flame propagation and complies with the recommended requirements of this standard is not sufficient by itself to prevent propagation of fire under all conditions of installation, it is recommended that wherever the risk of propagation is high, for example in long vertical runs of bunches of cables, special installation precautions should also be taken. It cannot be assumed that because the sample of cable complies with the performance requirements recommended in this standard, that a bunch of cables will behave in a similar manner. (See IEC 60332-3 series.)

#### 2 Normative references

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.

IEC 60332-1-1, *Tests on electric and optical fibre cables under fire conditions – Part 1-1: Test for vertical flame propagation for a single insulated wire or cable – Apparatus*

IEC 60695-4, *Fire hazard testing – Part 4: Terminology concerning fire tests*

IEC Guide 104, *The preparation of safety publications and the use of basic safety publications and group safety publications*