



**SLOVENSKI STANDARD**  
**SIST-TS CLC/TS 62441:2007**  
**01-december-2007**

---

**Naključno povzročen vžig s plamenom sveče pri avdio/video, komunikacijski in informacijski opremi (IEC/TS 62441:2006)**

Accidentally caused candle flame ignition for audio/video, communication and information technology equipment

Zufällige Entzündung von Geräten der Audio/Video-, Kommunikations- und Informationstechnologie durch Kerzenflamme

Comportement au feu des équipements audio/vidéo et des technologies de l'information et de la communication, créé accidentellement par une flamme de bougie

<https://standards.iteh.ai/catalog/standards/sist/6b3a2e23-0649-4ab3-af77-2d2d82306c61/sist-ts-clc-ts-62441-2007>

**Ta slovenski standard je istoveten z: CLC/TS 62441:2007**

---

**ICS:**

13.220.40	Sposobnost vžiga in obnašanje materialov in proizvodov pri gorenju	Ignitability and burning behaviour of materials and products
35.020	Informacijska tehnika in tehnologija na splošno	Information technology (IT) in general

**SIST-TS CLC/TS 62441:2007**

**en,fr,de**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST-TS CLC/TS 62441:2007

<https://standards.iteh.ai/catalog/standards/sist/6b3a2e23-0649-4ab3-af77-2d2d82306c61/sist-ts-clc-ts-62441-2007>

TECHNICAL SPECIFICATION  
SPÉCIFICATION TECHNIQUE  
TECHNISCHE SPEZIFIKATION

**CLC/TS 62441**

June 2007

ICS 35.020; 35.260

English version

**Accidentally caused candle flame ignition for audio/video,  
communication and information technology equipment  
(IEC/TS 62441:2006)**

Comportement au feu des équipements  
audio/vidéo et des technologies  
de l'information et de la communication,  
créé accidentellement par une flamme  
de bougie  
(CEI/TS 62441:2006)

Zufällige Entzündung von Geräten  
der Audio/Video-,  
Kommunikations- und  
Informationstechnologie  
durch Kerzenflamme  
(IEC/TS 62441:2006)

**iTeh STANDARD PREVIEW  
(standards.iteh.ai)**

This Technical Specification was approved by CENELEC on 2007-04-27.

[SIST-TS CLC/TS 62441:2007](#)

CENELEC members are required to announce the existence of this TS in the same way as for an EN and to make the TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force.

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: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of the Technical Specification IEC/TS 62441:2006, prepared by IEC TC 108, Safety of electronic equipment within the field of audio/video, information technology and communication technology, was submitted to the formal vote and was approved by CENELEC as CLC/TS 62441 on 2007-04-27.

The following date was fixed:

- latest date by which the existence of the CLC/TS  
has to be announced at national level (doa) 2007-10-27

Annex ZA has been added by CENELEC.

## Endorsement notice

The text of the Technical Specification IEC/TS 62441:2006 was approved by CENELEC as a Technical Specification without any modification.

## 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 When 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 60695-11-5	- <sup>1)</sup>	Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	2005 <sup>2)</sup>
IEC 60695-11-10	- <sup>1)</sup>	Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10	1999 <sup>2)</sup>
IEC 60695-11-20	- <sup>1)</sup>	Fire hazard testing - Part 11-20: Test flames - 500 W flame test methods	EN 60695-11-20	1999 <sup>2)</sup>

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

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

SPÉCIFICATION  
TECHNIQUE  
TECHNICAL  
SPECIFICATION

CEI  
IEC

TS 62441

Première édition  
First edition  
2006-12

---



---

**Comportement au feu des équipements  
audio/vidéo et des technologies de l'information  
et de la communication, créé accidentellement  
par une flamme de bougie**

iTeh STANDARD PREVIEW

**Accidentally caused candle flame ignition for  
audio/video, communication and information  
technology equipment**

<https://standards.iteh.ai/catalog/standards/sist/6b3a2e23-0649-4ab3-af77-2d2d82306c61/sist-ts-clc-ts-62441-2007>

© IEC 2006 Droits de reproduction réservés — Copyright - all rights reserved

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 l'éditeur.

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 the publisher.

International Electrotechnical Commission, 3, rue de Varembe, PO Box 131, CH-1211 Geneva 20, Switzerland  
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

CODE PRIX  
PRICE CODE

J

Pour prix, voir catalogue en vigueur  
For price, see current catalogue

## CONTENTS

FOREWORD.....	5
1 Scope.....	9
2 Normative references .....	9
3 Terms and definitions .....	9
4 Warning for users .....	11
5 Control of fire growth.....	13
5.1 General.....	13
5.2 Determination of candle flame accessible areas.....	15
5.3 Test methodology.....	15
5.4 Test for sustained flaming .....	17
Figure 1 – Examples of candle flame accessible areas .....	15
Figure 2 – Positioning of the needle flame burner .....	17

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST-TS CLC/TS 62441:2007](https://standards.iteh.ai/catalog/standards/sist/6b3a2e23-0649-4ab3-af77-2d2d82306c61/sist-ts-clc-ts-62441-2007)

<https://standards.iteh.ai/catalog/standards/sist/6b3a2e23-0649-4ab3-af77-2d2d82306c61/sist-ts-clc-ts-62441-2007>

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

---

**ACCIDENTALLY CAUSED CANDLE FLAME IGNITION  
FOR AUDIO/VIDEO, COMMUNICATION AND INFORMATION TECHNOLOGY  
EQUIPMENT**
**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.

The main task of IEC technical committees is to prepare International Standards. In exceptional circumstances, a technical committee may propose the publication of a technical specification when

- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- The subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 62441, which is a technical specification, has been prepared by IEC technical committee 108: Safety of electronic equipment within the field of audio/video, information technology and communication technology.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
108/171/DTS	108/191A/RVC

Full information on the voting for the approval of this technical specification 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.

NOTE The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in small roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

**iTeh STANDARD PREVIEW**  
([standards.iteh.ai](https://standards.iteh.ai))  
[SIST-TS CLC/TS 62441:2007](https://standards.iteh.ai/catalog/standards/sist/6b3a2e23-0649-4ab3-af77-2d2d82306c61/sist-ts-clc-ts-62441-2007)  
<https://standards.iteh.ai/catalog/standards/sist/6b3a2e23-0649-4ab3-af77-2d2d82306c61/sist-ts-clc-ts-62441-2007>



# ACCIDENTALLY CAUSED CANDLE FLAME IGNITION FOR AUDIO/VIDEO, COMMUNICATION AND INFORMATION TECHNOLOGY EQUIPMENT

## 1 Scope

This technical specification introduces safeguards to reduce the likelihood of flame spread that could lead to room flash-over as a result of accidental ignition of exterior housings of audio/video and information communication technology products, likely to be used in the home, caused by a simulated candle flame.

## 2 Normative references

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

IEC 60695-11-10, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods*

IEC 60695-11-20, *Fire hazard testing – Part 11-20: Test flames – 500 W flame test methods*

## 3 Terms and definitions

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

### 3.1

#### combustible material

organic material, capable of combustion by a candle flame

NOTE 1 Metal or ceramic are examples of materials that are not combustible by a candle flame.

NOTE 2 All plastic materials are considered combustible by a candle flame, regardless of flammability classification.

### 3.2

#### flammability classification of materials

classification of the burning and extinguishing behaviour of a material

NOTE 1 Material classes are defined in 3.2.1 to 3.2.4.

NOTE 2 When applying the requirements in this technical specification, a material of **5VA class** is regarded as better than **5VB class**, **5VB class** better than **V-0 class** and **V-0 class** better than **V-1 class** (see 5.1).

NOTE 3 When applying the requirements in this technical specification, materials of **V-2 class** or **HB class** are considered less than **V-1 class** (see 5.1). For further details regarding these flame classifications, see IEC 60695-11-10.

#### 3.2.1

##### V-0 class material

material tested in the thinnest significant thickness used and classified **V-0** according to IEC 60695-11-10