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**Materiali za tiskane plošče in druge povezovalne strukture -2-11. del:  
Pokovinjeni in nepokovinjeni ojačeni osnovni materiali - Z bakrom  
pokovinjeni laminat z določeno gorljivostjo (navpični preskus gorljivosti),  
ojačen s poliamidom in bromiranim epoksidnim spremenjenim ali  
nespremenjenim tkanim E-steklom (IEC 61249-2-11:2003)\***

Materials for printed boards and other interconnecting structures - Part 2-11:  
Reinforced base materials, clad and unclad - Polyimide, brominated epoxide  
modified or unmodified, woven E-glass reinforced laminated sheets of defined  
flammability (vertical burning test), cooper-clad (IEC 61249-2-11:2003)

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**Materials for printed boards and other interconnecting structures  
Part 2-11: Reinforced base materials, clad and unclad –  
Polyimide, brominated epoxide modified or unmodified,  
woven E-glass reinforced laminated sheets of defined flammability  
(vertical burning test), copper-clad  
(IEC 61249-2-11:2003)**

Matériaux pour circuits imprimés et autres structures d'interconnexion

Partie 2-11: Matériaux de base renforcés, plaqués et non plaqués –

Feuilles stratifiées renforcées en polyimide et tissu de verre de type E époxyde bromé

modifié ou non modifié, d'inflammabilité définie (essai de combustion verticale),

plaquées cuivre

(CEI 61249-2-11:2003)

Materialien für Verbindungsstrukturen

Teil 2-11: Kaschierte und unkaschierte verstärkte Basismaterialien –

Kupferkaschierte mit E-Glasgewebe

verstärkte Laminattafeln auf der Basis von

Polyimid und bromiertem Epoxidharz,

modifiziert oder nicht-modifiziert,

mit definierter Brennbarkeit

(Brennprüfung mit vertikaler Prüflingslage)

(IEC 61249-2-11:2003)

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This European Standard was approved by CENELEC on 2003-12-01. 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.

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## 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 91/412/FDIS, future edition 1 of IEC 61249-2-11, prepared by IEC TC 91, Electronics assembly technology, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61249-2-11 on 2003-12-01.

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) 2004-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2006-12-01

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annex ZA is normative and annexes A, B and C are informative.

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61249-2-11:2003 was approved by CENELEC as a European Standard without any modification.

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**Annex ZA**  
(normative)

**Normative references to international publications  
with their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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 61189-2 + corr. June	1997 1997	Test methods for electrical materials, printed boards and other interconnection structures and assemblies Part 2: Test methods for materials for interconnection structures	EN 61189-2 + corr. August	1997 1997
IEC 61249-5-1	1995	Materials for interconnection structures Part 5: Sectional specification set for conductive foils and films with or without coatings - Section 1: Copper foils (for the manufacture of copper-clad base materials)	EN 61249-5-1	1996
ISO 9000	2000	Quality management systems - Fundamentals and vocabulary	EN ISO 9000	2000
ISO 11014-1	1994	Safety data sheet for chemical products Part 1: Content and order of sections	-	-
ISO 14001	1996	Environmental management systems Specification with guidance for use	EN ISO 14001	1996

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**61249-2-11**

Première édition  
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**Matériaux pour circuits imprimés  
et autres structures d'interconnexion –**

**Partie 2-11:**

**Matériaux de base renforcés, plaqués et non  
plaqués – Feuilles stratifiées renforcées en  
polyimide et tissu de verre de type E époxyde  
bromé modifié ou non modifié, d'inflammabilité  
définie (essai de combustion verticale),  
plaquées cuivre**

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**Materials for printed boards and other  
interconnecting structures –**

SIST EN 61249-2-11:2004  
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**Part 2-11:**

**Reinforced base materials, clad and unclad –  
Polyimide, brominated epoxide modified or  
unmodified, woven E-glass reinforced laminated  
sheets of defined flammability (vertical burning  
test), copper-clad**

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

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For price, see current catalogue*

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**MATERIALS FOR PRINTED BOARDS  
AND OTHER INTERCONNECTING STRUCTURES –**

**Part 2-11: Reinforced base materials, clad and unclad –  
Polyimide, brominated epoxide modified or unmodified,  
woven E-glass reinforced laminated sheets of defined flammability  
(vertical burning test), copper-clad**

## 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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International Standard IEC 61249-2-11 has been prepared by IEC technical committee 91: Electronics assembly technology.

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

FDIS	Report on voting
91/412/FDIS	91/428/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.

IEC 61249-2 consists of the following parts, under the general title *Materials for printed boards and other interconnecting structures – Part 2: Reinforced base materials, clad and unclad*:

- Part 2-1: Phenolic cellulose paper laminate, economic grade
- Part 2-2: Phenolic cellulose paper reinforced laminated sheets, high electrical grade, copper-clad
- Part 2-4: Polyester non-woven/woven fibreglass laminated sheet of defined flammability (vertical burning test), copper-clad
- Part 2-5: Brominated epoxide cellulose paper reinforced core/woven E-glass reinforced surfaces-laminated sheets of defined flammability (vertical burning test), copper-clad
- Part 2-6: Brominated epoxide non-woven/woven, E-glass reinforced laminated sheets of defined flammability (vertical burning test), copper-clad
- Part 2-7: Epoxide woven E-glass laminated sheet of defined flammability (vertical burning test), copper-clad
- Part 2-8: Modified brominated epoxide woven fibreglass reinforced laminated sheets of defined flammability (vertical burning test), copper clad
- Part 2-9: Bismaleimide/triazine, modified epoxide or unmodified, woven E-glass reinforced laminated sheets of defined flammability (vertical burning test), copper-clad
- Part 2-10: Cyanate ester, brominated epoxide, modified or unmodified, woven E-glass reinforced laminated sheets of defined flammability (vertical burning test), copper-clad
- Part 2-11: Polyimide, brominated epoxide modified or unmodified, woven E-glass reinforced laminated sheets of defined flammability (vertical burning test), copper-clad
- Part 2-12: Epoxide non-woven aramid laminate of defined flammability, copper-clad
- Part 2-13: Cyanate ester non-woven aramid laminate of defined flammability, copper-clad
- Part 2-18: Polyester non-woven fibreglass reinforced laminated sheet of defined flammability (vertical burning test), copper-clad
- Part 2-19: Epoxide cross-plyed linear fibreglass-reinforced laminated sheets of defined flammability (vertical burning test), copper-clad
- Part 2-21: Non-halogenated epoxide woven E-glass reinforced laminated sheets of defined flammability (vertical burning test), copper-clad
- Part 2-22: Modified non-halogenated epoxide woven E-glass laminated sheets of defined flammability (vertical burning test), copper-clad<sup>1</sup>
- Part 2-23: Non-brominated phenolic, cellulose paper laminated sheets of defined flammability, economic grade, copper clad<sup>1</sup>
- Part 2-26: Non-brominated epoxide, non-woven/woven glass fabric sheet of defined flammability, copper-clad<sup>1</sup>

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<sup>1</sup> Under consideration.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

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