



NSAI
Standards

Irish Standard
I.S. EN 61249-2-41:2010

Materials for printed boards and other interconnecting structures -- Part 2-41: Reinforced base materials clad and unclad - Brominated epoxide cellulose paper/woven E-glass reinforced laminate sheets of defined flammability (vertical burning test), copper-clad for lead-free assembly (IEC 61249-2-41:2010 (EQV))

I.S. EN 61249-2-41:2010

Incorporating amendments/corrigenda issued since publication:

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61249-2-41

May 2010

ICS 31.180

English version

**Materials for printed boards and other interconnecting structures -
Part 2-41: Reinforced base materials clad and unclad -
Brominated epoxide cellulose paper/woven E-glass reinforced laminate
sheets of defined flammability (vertical burning test),
copper-clad for lead-free assembly
(IEC 61249-2-41:2010)**

Matériaux pour circuits imprimés et autres
structures d'interconnexion -
Partie 2-41: Matériaux de base renforcés,
plaqués et non plaqués -
Feuilles stratifiées renforcées en tissu
de verre de type E/papier cellulose
époxyde bromé, plaquées cuivre,
d'inflammabilité définie (essai
de combustion verticale)
pour les assemblages sans plomb
(CEI 61249-2-41:2010)

Materialien für Leiterplatten und andere
Verbindungsstrukturen -
Teil 2-41: Kaschierte und unkaschierte
verstärkte Basismaterialien -
Kupferkaschierte mit Zellulose-Papier
und E-Glasgewebe verstärkte
Laminattafeln für bleifreie Fertigung
auf der Basis von bromhaltigem
Epoxidharz mit definierter Brennbarkeit
(Brennprüfung mit vertikaler Prüflingslage)
(IEC 61249-2-41:2010)

This European Standard was approved by CENELEC on 2010-05-01. 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

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Foreword

The text of document 91/911/FDIS, future edition 1 of IEC 61249-2-41, prepared by IEC TC 91, Electronics assembly technology, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61249-2-41 on 2010-05-01.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) | 2011-02-01 |
| – latest date by which the national standards conflicting
with the EN have to be withdrawn | (dow) | 2013-05-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61249-2-41:2010 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60194:2006	NOTE	Harmonized as EN 60194:2006 (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 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	2006	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	2006
IEC 61249-5-1	-	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	-
ISO 9000	-	Quality management systems - Fundamentals and vocabulary	-	-
ISO 11014	-	Safety data sheet for chemical products - Content and order of sections	-	-
ISO 14001	-	Environmental management systems - Requirements with guidance for use	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MATERIALS FOR PRINTED BOARDS
AND OTHER INTERCONNECTING STRUCTURES –****Part 2-41: Reinforced base materials clad and unclad –
Brominated epoxide cellulose paper/woven E-glass
reinforced laminate sheets of defined flammability
(vertical burning test), copper-clad for lead-free assembly**

FOREWORD

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International Standard IEC 61249-2-41 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
91/911/FDIS	91/922/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.

A list of all parts of the IEC 61249 series, under the general title *Materials for printed boards and other interconnecting structures*, can be found on the IEC website.

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

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

MATERIALS FOR PRINTED BOARDS AND OTHER INTERCONNECTING STRUCTURES –

Part 2-41: Reinforced base materials clad and unclad – Brominated epoxide cellulose paper/woven E-glass reinforced laminate sheets of defined flammability (vertical burning test), copper-clad for lead-free assembly

1 Scope

This part of IEC 61249 gives requirements for properties of brominated epoxide cellulose paper reinforced core/woven E-glass reinforced surface laminate sheets of defined flammability (vertical burning test), copper-clad for lead-free assembly in thicknesses of 0,60 mm up to 1,70 mm. The flammability rating is achieved through the use of brominated fire retardants reacted as part of the epoxide polymeric structure. The glass transition temperature is defined to be 100 °C minimum.

Some property requirements may have several classes of performance. The class desired should be specified on the purchase order, otherwise the default class of material will be supplied.

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 61189-2:2006, *Test methods for electrical materials, printed boards and other interconnection structures and assemblies – Part 2: Test methods for materials for interconnection structures*

IEC 61249-5-1, *Materials for interconnection structures – Part 5: Sectional specification set for conductive foils and films with and without coatings – Section 1: Copper foils (for the manufacture of copper-clad base materials)*

ISO 9000, *Quality management systems – Fundamentals and vocabulary*

ISO 14001, *Environmental management systems – Requirements with guidance for use*

ISO 11014, *Safety data sheet for chemical products – Content and order of sections*

3 Materials and construction

The sheet consists of an insulating base with metal-foil bonded to one side or both.

3.1 Resin system

Brominated epoxide, filled or unfilled, resulting in a laminate with a glass transition temperature of 100 °C minimum.

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