ICS 31.180 SLOVENSKÁ TECHNICKÁ NORMA Február 2019

STN	**Materiály na plošné spoje a ostatné prepájacie štruktúry Časť 2-46: Vystužené plátované a neplátované základné materiály Laminátové dosky plátované medenou fóliou, vystužené netkanými resp. tkanými sklenými E-vláknami, impregnované nehalogénovanou epoxidovou živicou s tepelnou vodivosťou (1,5 W/m.K) a definovanou horľavosťou (skúška vertikálneho horenia) na bezolovnatú zostavu**	**STN EN IEC 61249-2-46** 34 6511

Materials for printed boards and other interconnecting structures
Part 2-46: Reinforced base materials clad and unclad
Non-halogenated epoxide non-woven/woven E-glass reinforced laminate sheets of thermal conductivity 1.5W/m K and defined flammability (vertical burning test), copper-clad for lead-free assembly

Táto norma obsahuje anglickú verziu európskej normy.

This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/19.

Obsahuje: EN IEC 61249-2-46:2018, IEC 61249-2-46:2018

127782

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61249-2-46

March 2018

ICS 31.180

English Version

Materials for printed boards and other interconnecting structures - Part 2-46: Reinforced base materials clad and unclad - Non-halogenated epoxide non-woven/woven E-glass reinforced laminate sheets of thermal conductivity (1.5W/m K) and defined flammability (vertical burning test), copper-clad for lead-free assembly (IEC 61249-2-46:2018)

Matériaux pour circuits imprimés et autres structures d'interconnexion - Partie 2-46 : Matériaux de base renforcés, plaqués et non plaqués - Feuilles stratifiées renforcées en verre de type E tissé/non tissé époxyde non halogéné, plaquées cuivre de conductivité thermique (1,5W/m m•K) et d'inflammabilité définie (essai de combustion verticale) pour les assemblages sans plomb (IEC 61249-2-46:2018)

Materialien für Leiterplatten und andere Verbindungsstrukturen - Teil 2-46: Kaschierte und unkaschierte verstärkte Basismaterialien - Kupferkaschierte, mit E-Glaswirrfaser im Kernbereich und E-Glasgewebe in den Außenlagen verstärkte Laminattafeln auf der Basis von halogenfreiem Epoxidharz mit Wärmeleitfähigkeit (1,5 W/m•K) und definierter Brennbarkeit (vertikale Prüflingslage) für bleifreie Bestückungstechnik (IEC 61249-2-46:2018)

This European Standard was approved by CENELEC on 2018-02-14. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 61249-2-46:2018 (E)

European foreword

The text of document 91/1448/CDV, future edition 1 of IEC 61249-2-46, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61249-2-46:2018.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2018-11-14
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2021-02-14

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

Endorsement notice

The text of the International Standard IEC 61249-2-46:2018 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:

ISO 9000	NOTE	Harmonized as EN ISO 9000.
ISO 14001	NOTE	Harmonized as EN ISO 14001.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
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	-
IEC/PAS 61249-6-3	-	Specification for finished fabric woven from "E" glass for printed boards	-	-
ISO 11014	-	Safety data sheet for chemical products - Content and order of sections	-	-

IEC 61249-2-46

Edition 1.0 2018-01

INTERNATIONAL STANDARD

Materials for printed boards and other interconnecting structures – Part 2-46: Reinforced base materials clad and unclad – Non-halogenated epoxide non-woven/woven E-glass reinforced laminate sheets of thermal conductivity 1,5 W/(m•K) and defined flammability (vertical burning test), copper-clad for lead-free assembly

IEC 61249-2-46:2018-01(en)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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International Standard IEC 61249-2-46 has been prepared by IEC technical committee 91: Electronics assembly technology.

The text of this International Standard is based on the following documents:

CDV	Report on voting
91/1448/CDV	91/1484/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document 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 document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

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

A bilingual version of this publication may be issued at a later date.

MATERIALS FOR PRINTED BOARDS AND OTHER INTERCONNECTING STRUCTURES –

Part 2-46: Reinforced base materials clad and unclad – Non-halogenated epoxide non-woven/woven E-glass reinforced laminate sheets of thermal conductivity 1,5 W/(m•K) and defined flammability (vertical burning test), copper-clad for lead-free assembly

1 Scope

This part of IEC 61249 gives requirements for properties of non-halogenated epoxide non-woven reinforced core/woven E-glass reinforced surface laminate sheets of thermal conductivity and 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 non-halogenated fire retardants reacted as part of the epoxide polymeric structure. The glass transition temperature is defined to be 105 °C minimum. Thermal Conductivity is defined to be (1,5 ± 0,2) W/(m•K).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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)*

IEC/PAS 61249-6-3, *Specification for finished fabric woven from "E" glass for printed boards*

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