ICS 31.180 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2026

STN	**Materiály na plošné spoje a ostatné prepájacie štruktúry Časť 2-53: Vystužené plátované a neplátované základné materiály Neplnené laminátové dosky z PTFE plátované medenou fóliou s definovanou horľavosťou (skúška zvislého horenia)**	**STN EN IEC 61249-2-53** 34 6511

Materials for printed boards and other interconnecting structures - Part 2-53: Reinforced base materials clad and unclad - PTFE unfilled laminate sheets of defined flammability (vertical burning test), copper-clad

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. 03/26

Obsahuje: EN IEC 61249-2-53:2025, IEC 61249-2-53:2025

142102

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61249-2-53

November 2025

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English Version

Materials for printed boards and other interconnecting structures - Part 2-53: Reinforced base materials clad and unclad - PTFE unfilled laminate sheets of defined flammability (vertical burning test), copper-clad (IEC 61249-2-53:2025)

Matériaux pour circuits imprimés et autres structures d'interconnexion - Partie 2-53: Matériaux de base renforcés, métallisés et non métallisés - Feuilles stratifiées non chargées en PTFE d'inflammabilité définie (essai de combustion verticale), plaquées cuivre (IEC 61249-2-53:2025)

Werkstoffe für Leiterplatten und andere Verbindungsstrukturen - Teil 2-53: Kaschierte und unkaschierte verstärkte Basismaterialien - ungefüllte PTFE-Laminattafeln mit definierter Brennbarkeit (Brennprüfung mit vertikaler Prüflingslage), kupferkaschiert (IEC 61249-2-53:2025)

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

Ref. No. EN IEC 61249-2-53:2025 E

European foreword

The text of document 91/1978/CDV, future edition 1 of IEC 61249-2-53, prepared by TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61249-2-53:2025.

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) 2026-11-30
•	latest date by which the national standards conflicting with the document have to be withdrawn	(dow) 2028-11-30

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.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 61249-2-53:2025 was approved by CENELEC as a European Standard without any modification.

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.cencenelec.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 61189-2-721	2015	Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 2-721: Test methods for materials for interconnection structures - Measurement of relative permittivity and loss tangent for copper clad laminate at microwave frequency using a split post dielectric resonator	EN 61189-2-721	2015
IEC 61189-2-803	2023	Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 2-803: Test methods for Z-axis expansion of base materials and printed boards	EN IEC 61189-2-803	2023
IEC 61189-2-807	2021	Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 2-807: Test methods for materials for interconnection structures - Decomposition temperature (T_d) using TGA	EN IEC 61189-2-807	2021
IEC 61189-2-809	2024	Test methods for electrical materials, circuit boards and other interconnection structures and assemblies - Part 2-809: X/Y coefficient of thermal expansion (CTE) test for thick base materials by TMA	EN IEC 61189-2-809	2025

EN IEC 61249-2-53:2025 (E)

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)	EN 61249-5-1	-
IEC 61249-6-3	2023	Materials for printed boards and other interconnecting structures - Part 6-3: Sectional specification set for reinforcement materials - Specification for finished fabric woven from “E” glass for printed boards	EN IEC 61249-6-3	2023
ISO 11014	2009	Safety data sheet for chemical products - Content and order of sections	-	-
IPC TM-650 TM 2.5.5.5	-	Stripline Test for Permittivity and Loss Tangent (Dielectric Constant and Dissipation Factor) at X-Band	-	-

IEC 61249-2-53

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INTERNATIONAL STANDARD

**Materials for printed boards and other interconnecting structures -
Part 2-53: Reinforced base materials clad and unclad - PTFE unfilled laminate sheets of defined flammability (vertical burning test), copper-clad**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Materials for printed boards and other interconnecting structures - Part 2-53: Reinforced base materials clad and unclad - PTFE unfilled laminate 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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IEC 61249-2-53 has been prepared by IEC technical committee 91: Electronics assembly technology. It is an International Standard.

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

Draft	Report on voting
91/1978/CDV	91/2044/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

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

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

– reconfirmed,
– withdrawn, or
– revised.

1 Scope

This part of IEC 61249 specifies requirements for properties of PTFE unfilled reinforced laminated sheet of a thickness 0,05 mm up to 10,0 mm of defined flammability (vertical burning test), copper-clad.

This part of IEC 61249 is applicable to the design, manufacture, use of PTFE unfilled reinforced laminated sheet of defined flammability (vertical burning test), copper-clad.

Its flame resistance is defined in terms of the flammability requirements of 8.4.

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 61189-2-721:2015, *Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 2-721: Test methods for materials for interconnection structures - Measurement of relative permittivity and loss tangent for copper clad laminate at microwave frequency using a split post dielectric resonator*

IEC 61189-2-803:2023, *Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 2-803: Test methods for Z-axis expansion of base materials and printed boards*

IEC 61189-2-807:2021, *Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 2-807: Test methods for materials for interconnection structures - Decomposition temperature (T_d) using TGA*

IEC 61189-2-809:2024, *Test methods for electrical materials, printed board and other interconnection structures and assemblies - Part 2-809: X/Y coefficient of thermal expansion (CTE) test for thick base materials by TMA*

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 61249-6-3:2023, *Materials for printed boards and other interconnecting structures - Part 6-3: Sectional specification set for reinforcement materials - Specification for finished fabric woven from "E" glass for printed boards*

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