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|------------|--|------------------------------|
| STN | Materiály na plošné spoje a ostatné prepájacie štruktúry. Časť 4-18: Rámcová špecifikácia pre neplátované prepregy (na výrobu viacvrstvových dosiek). Vysokovýkonové prepregy vystužené sklenenými E-vláknami impregnované epoxidovou živicom s definovanou horľavosťou (skúška vertikálneho horenia) na bezolovnaté zostavy. | STN EN 61249-4-18 |
| | | 34 6511 |

Materials for printed boards and other interconnecting structures - Part 4-18: Sectional specification set for prepreg materials, unclad (for the manufacture of multilayer boards) - High performance epoxide woven E-glass prepreg of defined flammability (vertical burning test) for lead-free assembly

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Obsahuje: EN 61249-4-18:2013, IEC 61249-4-18:2013

119251

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, odbor SÚTN, 2014
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

**Materials for printed boards and other interconnecting structures -
 Part 4-18: Sectional specification set for prepreg materials, unclad (for the
 manufacture of multilayer boards) -
 High performance epoxide woven E-glass prepreg of defined flammability
 (vertical burning test) for lead-free assembly
 (IEC 61249-4-18:2013)**

Matériaux pour circuits imprimés et autres structures d'interconnexion -
 Partie 4-18: Série de spécifications intermédiaires pour matériaux préimprégnés, non plaqués (pour la fabrication des cartes multicouches) -
 Tissu de verre époxyde préimprégné de type E à haute performance, d'inflammabilité définie (essai de combustion verticale), pour les assemblages sans plomb
 (CEI 61249-4-18:2013)

Materialien für Leiterplatten und andere Verbindungsstrukturen -
 Teil 4-18: Rahmenspezifikation für unkaschierte Prepreg-Materialien (zur Herstellung von Mehrlagenleiterplatten) -
 Hochwertige mit E-Glasgewebe verstärkte Epoxidharz-Prepregs mit definierter Brennbarkeit (Brennprüfung mit vertikaler Prüflingslage) für bleifreie Bestückungstechnik
 (IEC 61249-4-18:2013)

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 Comité Européen de Normalisation Electrotechnique
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Foreword

The text of document 91/1125/FDIS, future edition 1 of IEC 61249-4-18, prepared by IEC TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61249-4-18:2013.

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) 2014-09-09
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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

| | | |
|----------------|------|---|
| IEC 60194:2006 | NOTE | Harmonized as EN 60194:2006 (not modified). |
| IEC 62326-4 | NOTE | Harmonized as EN 62326-4. |

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 61249-2-39 | 2012 | Materials for printed boards and other interconnecting structures - Part 2-39: Reinforced base materials clad and unclad - High performance epoxide and non-epoxide, woven E-glass laminated sheets of defined flammability (vertical burning test), copper-clad for lead-free assembly | EN 61249-2-39 | 2013 |
| IEC/PAS 61249-6-3 | 2011 | Specification for finished fabric woven from "E" glass for printed boards | - | - |
| ISO 9000 | 2005 | Quality management systems - Fundamentals and vocabulary | EN ISO 9000 | 2005 |
| ISO 11014 | 2009 | Safety data sheet for chemical products - Content and order of sections | - | - |
| ISO 14001 | 2004 | Environmental management systems - Requirements with guidance for use | EN ISO 14001 | 2004 |



INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Materials for printed boards and other interconnecting structures –
Part 4-18: Sectional specification set for prepreg materials, unclad (for the
manufacture of multilayer boards) – High performance epoxide woven E-glass
prepreg of defined flammability (vertical burning test) for lead-free assembly**

**Matériaux pour circuits imprimés et autres structures d'interconnexion –
Partie 4-18: Série de spécifications intermédiaires pour matériaux préimprégnés,
non plaqués (pour la fabrication des cartes multicouches) – Tissu de verre
époxyde préimprégné de type E à haute performance, d'inflammabilité définie
(essai de combustion verticale), pour les assemblages sans plomb**



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CONTENTS

| | |
|--|----|
| FOREWORD..... | 4 |
| 1 Scope..... | 6 |
| 2 Normative references | 6 |
| 3 Materials and construction..... | 6 |
| 3.1 General..... | 6 |
| 3.2 Reinforcement | 7 |
| 3.3 Resin system | 7 |
| 4 Properties..... | 7 |
| 4.1 Properties related to the appearance of the prepreg..... | 7 |
| 4.1.1 General | 7 |
| 4.1.2 Dewetted areas (fish eyes) | 7 |
| 4.1.3 Broken filaments..... | 7 |
| 4.1.4 Distortion | 7 |
| 4.1.5 Creases..... | 7 |
| 4.1.6 Edge conditions | 8 |
| 4.2 Properties related to B-stage prepreg | 8 |
| 4.2.1 General | 8 |
| 4.2.2 Resin content | 8 |
| 4.2.3 Treated weight..... | 8 |
| 4.2.4 Resin flow..... | 8 |
| 4.2.5 Scaled flow thickness | 9 |
| 4.2.6 Melting viscosity | 9 |
| 4.2.7 Gel time..... | 9 |
| 4.2.8 Volatile content..... | 9 |
| 4.3 Properties related to prepreg after curing..... | 9 |
| 4.3.1 Electric strength..... | 9 |
| 4.3.2 Flammability | 9 |
| 4.3.3 Relative permittivity and dissipation factor | 10 |
| 4.3.4 Cured thickness..... | 10 |
| 4.3.5 Glass transition temperature (T_g)..... | 10 |
| 4.3.6 Decomposition temperature (T_d)..... | 10 |
| 4.3.7 Time to delamination | 10 |
| 4.3.8 Z-axis expansion..... | 11 |
| 5 Delivery form | 11 |
| 5.1 General..... | 11 |
| 5.2 Rolls | 11 |
| 5.3 Sheets | 11 |
| 5.4 Cut panels | 11 |
| 6 Quality assurance..... | 11 |
| 6.1 Quality system | 11 |
| 6.2 Responsibility for inspection..... | 12 |
| 6.3 Qualification inspection | 12 |
| 6.4 Quality conformance inspection | 12 |
| 6.5 Certificate of conformance | 12 |
| 6.6 Safety data sheet..... | 12 |

| | | |
|---|--|----|
| 7 | Packaging and marking | 12 |
| 8 | Shelf life | 13 |
| 9 | Ordering information | 13 |
| | Bibliography..... | 14 |
| | | |
| | Table 1 – Flammability, vertical burning test | 10 |
| | Table 2 – Decomposition temperature requirements | 10 |
| | Table 3 – Time to delamination requirements..... | 11 |
| | Table 4 – Z-axis expansion requirements | 11 |

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MATERIALS FOR PRINTED BOARDS
AND OTHER INTERCONNECTING STRUCTURES –**
**Part 4-18: Sectional specification set for prepreg materials,
unclad (for the manufacture of multilayer boards) –
High performance epoxide woven E-glass prepreg of defined
flammability (vertical burning test) for lead-free assembly**

FOREWORD

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International Standard IEC 61249-4-18 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 |
|--------------|------------------|
| 91/1125/FDIS | 91/1147/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 4-18: Sectional specification set for prepreg materials, unclad (for the manufacture of multilayer boards) – High performance epoxide woven E-glass prepreg of defined flammability (vertical burning test) for lead-free assembly

1 Scope

This part of IEC 61249 gives requirements for properties of prepreg that is mainly intended to be used as bonding sheets in connection with laminates according to IEC 61249-2-39 when manufacturing multilayer boards according to IEC 62326-4. Multilayer boards comprised of these materials are suitable for lead-free assembly processes. This material may be also used to bond other types of laminates.

Prepreg according to this standard is of defined flammability (vertical burning test). The flammability rating on fully cured prepreg is achieved through the use of brominated fire retardants contained as an integral part of the polymeric structure. After curing of the prepreg according to the supplier's instructions, the glass transition temperature is defined to be 170 °C minimum.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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, interconnection structures and assemblies – Part 2: Test methods for materials for interconnection structures*

IEC 61249-2-39:2012, *Materials for printed boards and other interconnecting structures – Part 2-39: Reinforced base materials clad and unclad – High performance epoxide and non-epoxide, woven E-glass laminate sheets of defined flammability (vertical burning test), copper-clad for lead-free assembly*

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ISO 9000:2005, *Quality management systems – Fundamentals and vocabulary*

ISO 11014:2009, *Safety data sheet for chemical products – Content and order of sections*

ISO 14001:2004, *Environmental management systems – Requirements with guidance for use*

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