

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

EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN 61249-4-18:2013 sisaldab Euroopa standardi EN 61249-4-18:2013 inglisekeelset teksti.	This Estonian standard EVS-EN 61249-4-18:2013 consists of the English text of the European standard EN 61249-4-18:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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**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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Europäisches Komitee für Elektrotechnische Normung

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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
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-12-09

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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

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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*

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*

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*

3 Materials and construction

3.1 General

The prepreg consists of a reinforcing E-glass fabric which is impregnated with high performance epoxide resin, partially cured to the B-stage. The flammability rating is achieved