IEC 61249-2-31

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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Materials for printed boards and other interconnecting structures – Part 2-31: Reinforced base materials, clad and unclad – Halogenated modified or unmodified resin system, woven E-glass laminate sheets of defined relative permittivity (equal to or less than 4,1 at 1 GHz) and flammability (vertical burning test), copper-clad

Matériaux pour circuits imprimés et autres structures d'interconnexion – Partie 2-31: Matériaux de base renforcés, plaqués et non plaqués – Feuilles stratifiées en tissu de verre de type E, en résine isolante halogénée modifiée ou non, de permittivité relative (inférieure ou égale à 4,1 à 1 GHz) et d'inflammabilité définies (essai de combustion verticale), plaquées cuivre

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International Standard IEC 61249-2-31 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
91/827/FDIS	91/842/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.

The list of all the parts in 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 maintenance result 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

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1 Scope

This part of IEC 61249 specifies requirements for properties of modified epoxide woven E-glass laminate sheet of a thickness of 0,05 mm up to 3,2 mm, of defined flammability (vertical burning test), copper-clad. The glass transition temperature is defined to be 150 °C minimum. The relative permittivity is equal to or less than 4,1 and the dissipation factor is equal to or less than 0,012 0 at 1 GHz.

Some property requirements may have several classes of performance. The class desired should be specified in 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 61249-5-1:1995, *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 11014-1, *Safety data sheet for chemical products – Part 1: Content and order of sections*

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

3 Materials and construction

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

3.1 Resin system

The resin system is modified multifunctional epoxide, or modified epoxide, with halogenated woven E-glass laminate with a glass transition temperature of 150 °C minimum.

Contrast agents may be added to assist processing such as Automated Optical Inspection (AOI).