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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 47837.4012-2026

**Materials for printed circuit boards and other interconnecting
structures - Part 4-12: Prepreg for multilayer printed circuit boards -
Non-halogenated multifunctional epoxide woven E-glass prepreg**

印制电路板及其他互连结构用材料 第4-12部分：多层印制电路板用粘结片 无卤
多官能环氧E玻纤布粘结片

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 4-12 of GB/T 47837 "Materials for Printed Circuit Boards and Other Interconnect Structures". GB/T 47837 has been issued.

The following parts were laid out.

---Part 4-12. Halogen-free multifunctional epoxy E-glass fiber cloth adhesive sheets for multilayer printed circuit boards;

---Part 4-16. Lead-free lead-free assembly adhesive sheets for multilayer printed circuit boards; Halogen-free multifunctional epoxy E-glass fiber cloth adhesive sheets;

---Part 4-17. Bonding Sheets for Multilayer Printed Circuit Boards - Halogen-Free Epoxy E Fiberglass Cloth Bonding Sheets for Lead-Free Assembly the prepreg series is divided into halogen-free multifunctional epoxy E-glass fiber cloth bonding sheets with specified flammability.

Compared with IEC 61249-4-12:2005, this document has undergone many structural adjustments. A comparison of the structural numbering changes between the two documents is provided below.

See Appendix A for the table of contents.

This document differs significantly from IEC 61249-4-12:2005 in several technical aspects. These differences are indicated in the margins of the relevant clauses.

Vertical single lines (|) are indicated. A summary of these technical differences and their reasons is provided in Appendix B.

The following editorial changes have been made to this document.

---The standard title has been changed to "Materials for Printed Circuit Boards and Other

Interconnect Structures - Part 4-12. Adhesives for Multilayer Printed Circuit Boards"
Halogen-free multifunctional epoxy fiberglass cloth bonding sheet;

---Some descriptive statements in Chapter 1 of IEC 61249-4-12:2005 have been deleted,
and the document has been revised according to the format of Chinese national standards.

Expression;

---The suspended sections in Chapters 3 and 5 of IEC 61249-4-12:2005 are moved to
sections 5.1.1 and 5.2.1 of this document, respectively;

---Change the title of Chapter 5 of IEC 61249-4-12:2005 from "Delivery Status" to
"Dimensions" and move it to section 5.2 of this document;

---The title of Chapter 8 of IEC 61249-4-12:2005 has been changed from "Storage" to
"Storage and Transport".

Please note that some content in this document may involve patents. The issuing
organization of this document assumes no responsibility for identifying patents.

This document was proposed by the Ministry of Industry and Information Technology of the
People's Republic of China.

This document is under the jurisdiction of the National Printed Circuit Standardization
Technical Committee (SAC/TC47).

Introduction

The materials used in printed circuit boards (PCBs) and other interconnect structures are
diverse, their technical specifications are complex, and their applications are constantly
evolving with technological advancements.

Changes cannot be fully and clearly covered by a single standard, requiring comprehensive
technical rules and requirements for all materials. Therefore, GB/T 47837 "Printing
Standards" was established.

The "Materials for Circuit Boards and Other Interconnect Structures" series of standards
aims to comprehensively cover materials used in PCBs and other interconnect structures,
as well as related testing methods.

The law clarifies the boundaries of each technical specification and facilitates the
maintenance and updating of standards.

"Materials for Printed Circuit Boards and Other Interconnect Structures Part 4: Adhesive
Sheets for Multilayer Printed Circuit Boards" aims to establish applicable materials for
multilayer printed circuit boards.

The manufacturing, inspection specifications, and acceptance criteria for adhesive sheets
used in printed circuit boards are proposed to consist of 10 parts.

---Part 4-2.Multifunctional epoxy E-fiberglass cloth adhesive sheet for multilayer printed circuit boards. The purpose is to standardize the curing process.

Development and manufacturing of multifunctional epoxy E fiberglass cloth bonding sheets with a glass transition temperature of 150°C~170°C (excluding 170°C).

The use of these technologies and methods will better ensure the quality of the product, facilitate material selection for downstream customers, and promote the sustainable development of the electronic circuit industry.

---Parts 4-5.Adhesive Sheets for Multilayer Printed Circuit Boards. Modified or Unmodified Polyimide E Fiberglass Cloth Adhesive Sheets. The purpose is to...

Development of modified or unmodified polyimide E fiberglass cloth bonding sheets with a glass transition temperature of not less than 150°C after standard curing.

Manufacturing, use, and other processes will better ensure the quality of the product, facilitate material selection for downstream customers, and promote the sustainable development of the electronic circuit industry.

develop.

---Part 4-11.Halogen-free epoxy E-fiberglass cloth adhesive sheets for multilayer printed circuit boards. The purpose is to standardize the bonding of the cured fiberglass cloth.

Development, manufacturing, and use of halogen-free epoxy E-glass fiber cloth bonding sheets with a glass transition temperature of 120°C~150°C (excluding 150°C).

This will better ensure the quality of the product, facilitate material selection for downstream customers, and promote the sustainable development of the electronic circuit industry.

---Part 4-12.Halogen-free multifunctional epoxy E-glass fiber cloth adhesive sheets for multilayer printed circuit boards. The purpose is to standardize adhesive bonding...

This facilitates the development, manufacturing, and use of the product, better ensuring its quality, facilitating material selection for downstream customers, and promoting the sustainable development of the electronic circuit industry.

develop.

---Part 4-14.Epoxy E-fiberglass cloth adhesive sheets for lead-free assembly of multilayer printed circuit boards. The purpose is to standardize adhesive bonding...

Opening of lead-free epoxy E fiberglass cloth bonding sheet products with a glass transition temperature of 120°C~150°C (excluding 150°C) after tempering.

This facilitates the development, manufacturing, and use of the product, better ensuring its quality, facilitating material selection for downstream customers, and promoting the sustainable development of the electronic circuit industry.