

ICS 31.180
CCS L 30



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

GB/T 47837.4017-2026

**Materials for printed circuit boards and other interconnecting structures - Part
4-17: Prepreg for multilayer printed circuit boards - Non-halogenated epoxide
woven E-glass prepreg for lead-free assembly**

印制电路板及其他互连结构用材料 第4-17部分：多层印制电路板用粘结片 无铅
装联用无卤环氧E玻纤布粘结片

(English Translation)

Issued on: July 2, 2026

Implemented on: February 1, 2027

Issued by: State Administration for Market Regulation

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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 4-17 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 this document is modified to adopt IEC 61249-4-17:2009 "Materials for printed circuits and other interconnects - Part 4-17.Copper-free".

Adhesive sheet.

This document has undergone significant structural adjustments compared to IEC 61249-4-17:2009.A table comparing the structural numbering of the two documents is provided below.

See Appendix A.

This document differs significantly from IEC 61249-4-17:2009.The 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 name has been changed to "Materials for Printed Circuit Boards and Other Interconnect Structures Part 4-17.Adhesives for Multilayer Printed Circuit Boards".

"Halogen-free epoxy E-glass fiber cloth bonding sheet for lead-free packaging";

---The description of the corresponding IEC product model for this adhesive sheet in Chapter 1 has been deleted;

---The device sections of Chapters 3, 4, and 5 of IEC 61249-4-17:2009 are moved to sections 4.1, 5.1.1, and 5.1.1 of this document, respectively.

5.1.2;

---Change 4.1.3 to skewness and move it to 5.1.8 skewness, consistent with the existing national standard writing format, and consistent with the test in Table 2.

The order of methods corresponds;

---Adjust the curing thickness from 4.3.4 to 5.4.1;

---In accordance with the description in GB/T 33015, 5.1.1 unwetted area is changed to un-wetted area;

---The title of Chapter 6 has been changed from "Delivery Status" to "Dimensions," and Chapter 6 has been moved to section 5.2 to align with the existing national standard format.

The requirements for shear sheets are incorporated into the dimensions of sheet-like adhesive sheets, and different dimensional requirements are specified. Additionally, requirements for the perpendicularity of sheet-like adhesive sheets are added.

---The title of Chapter 8 has been changed from "Storage" to "Transportation and Storage";

---The references in IEC 61249-4-17:2005 have been removed;

---This document has deleted any content related to sample preparation requirements that overlaps with GB/T 33016-2016.

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.

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 curing process of the 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