

ICS 13.120
CCS Y 63



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

GB/T 4706.117-2024

**Safety of household and similar electrical appliances - Part 117:
Particular requirements for electric ondol mattress with a
non-flexible heated part
(English Translation)**

Issued on: July 24, 2024

Implemented on: August 1, 2026

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

Preface	
Introduction	
1 Scope	
2 Normative references	
3 Terms and Definitions	
4 General requirements	
5 General conditions for testing	
6 Categories	
7 Markings and instructions	
8 Protection against contact with live parts	
9 Starting of electrical appliances	
10 Input power and current	
11 Fever	
12 Empty Chapter	
13 Leakage current and electrical strength at operating temperature	
14 Transient overvoltage	
15 Moisture resistance	
16 Leakage current and electrical strength	
17 Overload protection of transformers and related circuits	
18 Durability	
19 Abnormal working	
20 Stability and mechanical hazards	
21 Mechanical strength	
22 Structure	
23 Internal Wiring	
24 Components	
25 Power connection and external cord	
26 Terminals for external conductors	
27 Grounding measures	
28 Screws and connections	
29 Clearances, creepage distances and solid insulation	
30 Heat and flame resistance	

31 Rust prevention

32 Radiation, toxicity and similar hazards

Appendix

Appendix AA (normative) Parameter description of insulation materials

Reference

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 117 of GB/T 4706 "Safety of Household and Similar Electrical Appliances". GB/T 4706 has been published as follows part.

--- Part 1: General requirements;

--- Part 2: Particular requirements for electric irons;

--- Part 121: Particular requirements for professional ice cream machines.

This document is equivalent to IEC 60335-2-111:2015 "Safety of Household and Similar Electrical Appliances Part 2-111. Electrical Equipment with Non-Flexible Insulation Particular requirements for electric heated mattresses with heating elements.

The following minimal editorial changes were made to this document.

--- Change the name of the standard to "Safety of Household and Similar Electrical Appliances Part 117: Electrically Heated Mattresses with Non-Flexible Heating Elements Special Requirements" to enhance the coordination of the standard system.

Introduction

GB/T 4706 "Safety of Household and Similar Electrical Appliances" adopts most of IEC 60335. On this basis, GB/T 4706 refers to the structure of IEC 60335 is divided into several parts, consisting of general requirements and special requirements. Part 1 is general requirements, and the other parts are for products covered by special requirements, their safety requirements are general requirements used in combination with the special requirements.

The requirements include supplements and modifications to the corresponding clauses in the general requirements to provide complete requirements for each product.

This document is the protection requirements for electrical, mechanical, thermal, fire and radiation risks when the appliance is used normally in accordance with the instructions.

This document also covers abnormal conditions that may occur during use and considers how electromagnetic interference may affect the safe operation of the equipment.

This document has taken into account the requirements specified in GB/T 16895 "Low Voltage Electrical Installations". The appliance is connected to the power supply in accordance with the electrical wiring rules.

requirements are coordinated.

If multiple functions of an appliance involve other parts of GB/T 4706, the other parts shall apply to the appliance separately as long as it is reasonable.

Each function. If applicable, consider the impact of one function on other functions.

When no additional requirements are given in other parts for hazards already included in this document, GB/T 4706.1 applies.

GB/T 4706 is a standard covering appliance safety and takes precedence over general standards/horizontal standards covering the same subject.

This document is used in conjunction with GB/T 4706.1-2024 "Safety of Household and Similar Electrical Appliances Part 1: General Requirements".

The part marked "applicable" in the document indicates that the corresponding clauses in GB/T 4706.1-2024 are applicable to this document; the part marked "replaces" in this document indicates that the corresponding clauses in GB/T 4706.1-2024 are applicable to this document.

For the parts marked as "added" in this document, in addition to complying with GB/T 4706.1-2024, the provisions in this document shall prevail.

In addition to the corresponding clauses, the clauses added in the clauses of this document must also be complied with; the part of this document marked "modified" means that in GB/T 4706.1-the relevant provisions of 2024 will be modified.

Safety of household and similar electrical appliances Part 117: Electric heaters with non-flexible heating elements Special requirements for mattresses

1 Scope

This chapter of GB/T 4706.1-2024 is replaced by the following.

This document specifies particular requirements for the safety of electrically heated mattresses for household and similar purposes.

This document applies to appliances with a rated voltage not exceeding 250 V, control units that supply power to the appliances, and control devices supplied with the appliances.

Devices that are not intended for general household use but may still cause danger to the

public, such as those used in community spas or in low ambient temperatures this document also applies to appliances used in environments where as far as is practical, the common hazards presented by the various appliances covered by this document are those that are present in the home and its surroundings.

However, in general this document does not consider the following situations.

---The following groups (including children).

- due to a physical, sensory or mental impairment, or - Due to lack of experience and knowledge, Conditions that render them incapable of using the appliance safely without supervision or instruction.

--- Condition of children's play equipment.

Note 101: This document does not apply to.

---Appliances designed for industrial use;

--- Apparatus intended for use in special environments where there are often corrosive or explosive gases (such as dust, steam or methane);

--- Electric blankets, heating pads and similar flexible heating appliances (GB/T 4706.8);

--- Indoor heaters (GB/T 4706.23);

--- Water bed heater (GB/T 4706.58);

--- Electric heaters for animal breeding and feeding (GB/T 4706.47);

--- Foot warmers and heated foot pads (GB/T 4706.80);

--- Soft film heating elements for room heating (GB/T 4706.82);

--- Electric heating carpets and electric heating devices installed under removable floor coverings for heating rooms (GB 4706.108);

---Specially used for medical electrical equipment (YY9706.235).

2 Normative references

Except for the following contents, this chapter of GB/T 4706.1-2024 applies.

Increase.

ISO 2439 Flexible cellular polymeric materials - Determination of hardness (indentation method) Determination of hardness (indentation technique)] Note. GB/T 10807-2006 Determination of hardness of flexible cellular polymeric materials (indentation method) (ISO 2439:1997, IDT)