Chinastandards.org

ICS 97.100.10

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 4706.11-2024

Safety of household and similar electrical appliances-Part 11:Particular requirements for instantaneous water heaters

家用和类似用途电器的安全 第11部分：快热式热水器的特殊要求

(English Translation)

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

Preview: page 1 of 5 shown, 29 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/gb-t-4706-11-2024

Chinastandards.org

Table of Contents

Foreword 4
IEC Foreword 6
Introduction 10
1 Scope 11
2 Normative References 12
3 Definitions 12
4 General Requirement 13
5 General Conditions for the Tests 13
6 Classification 13
7 Marking and Instructions 14
8 Protection against Access to Live Parts 15
9 Starting of Motor-operated Appliances 15
10 Power Input and Current 15
11 Heating 16
12 Void 16
13 Leakage Current and Electric Strength at Operating Temperature 16
14 Transient Over-voltages 16
15 Moisture Resistance 17
16 Leakage Current and Electric Strength 17
17 Overload Protection of Transformers and Associated Circuits 17
18 Endurance 17
19 Abnormal Operation 17
20 Stability and Mechanical Hazards 18
21 Mechanical strength 18
22 Construction 18
23 Internal Wiring 22
24 Components 22
25 Supply Connection and External Flexible Cords 23
26 Terminals for External Conductors 24
27 Provision for Earthing 24
28 Screws and Connections 24
29 Clearances, Creepage Distances and Solid Insulation 24

Preview: page 2 of 5 shown, 29 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/gb-t-4706-11-2024

Chinastandards.org

30 Resistance to Heat and Fire 24
31 Resistance to Rusting 25
32 Radiation, Toxicity and Similar Hazards 25
Annex A (normative) Routine Tests 28
Bibliography 29

Foreword

All the technical content of this Part is mandatory.

This Part equivalently adopts (IDT) IEC 60335-2-35:2002 + A1 Household and Similar Electrical Appliances - Safety - Part 2-35.Particular Requirements for Instantaneous Water Heaters. This Part shall be cooperatively used with GB 4706.1-2005 Household and Similar Electrical Appliances - Safety - Part 1: General Requirements.

The "applicable" part in this Part indicates that the corresponding provisions in GB 4706.1-2005 are applicable to this Part; the part that states "replacement" or "modification" in this Part shall prevail; the part that states "addition" in this Part indicates that in addition to complying with the corresponding provisions in GB 4706.1-2005, it shall also comply with the additional provisions in this Part.

For ease of use, this Part makes the following editorial modifications to IEC 60335-2-35.

a) The phrase "Part 1" is modified into "GB 4706.1-2005";

b) Decimal point "." is used to replace comma ",", which is used as decimal point.

This Part serves as a replacement of GB 4706.11-2004 Household and Similar Electrical Appliances - Safety - Particular Requirements for Instantaneous Water Heaters.

In comparison with GB 4706.11-2004, the main differences are as follows.

1) Added in 7.12.1.if it complies with the requirements mentioned in 13.2 and 24.101 for connection by a power cord with a plug, this clause is not mandatory.

2) Added in 13.2.for bare water heaters that are connected to the power source by a power cord with a plug, the leakage current test must be repeated. During the test, the current measurement between the earthing terminal of the appliance and the neutral conductor is shown in Figure 103.Test in each position of selector switch; the leakage current shall not exceed 2.75 mA.

3) Added in 24.101.for bare water heaters that are connected to the power source by a power cord with a non-polar plug, the internal thermal circuit breaker or other protective devices must be disconnected at all poles.

4) Added in 27.1.

Preview: page 3 of 5 shown, 29 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/gb-t-4706-11-2024

For class I appliances, the enclosure of the heating elements must be permanently and reliably connected to the earthing terminal, unless.

---The containers that provide metal water inlet and outlet pipes must be permanently and reliably connected to the earthing terminal, and

---Other easily accessible metal parts of the container that are in contact with water are permanently and reliably connected to the earthing terminal.

Deleted in 27.1.

For class I appliances, metal containers and other metal parts which are in contact with the water shall be permanently and reliably connected to the earthing terminal.

5) Added in 30.2.2.this test is not applicable to electric heating elements that support bare water heaters, and insulating materials of the connecting parts.

This Part was proposed by China Light Industry Council.

This Part shall be under the jurisdiction of National Technical Committee 46 on Household Appliances Condenser of Standardization Administration of China.

1 Scope

This clause of GB 4706.1-2005 applies, except as follows.

This Part deals with the safety of electric instantaneous water heaters for household and similar purposes and intended for heating water below boiling temperature, their rated voltage being not more than 250 V for single-phase appliances and 480 V for other appliances.

NOTE 101: Instantaneous water heaters incorporating bare heating elements are within the scope of this Part.

Appliances not intended for normal household use but which nevertheless may be a source of danger to the public, such as appliances intended for use in shops, in light industry and on farms, are within the scope of this Part.

As far as is practicable, this Part deals with the common hazards presented by appliances which are encountered by all persons in and around the home. However, in general, it does not consider.

---the use of appliances by young children or infirm persons without supervision;

---playing with the appliance by young children.

NOTE 102: Attention is drawn to the fact that

---for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary;

Preview: page 4 of 5 shown, 29 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/gb-t-4706-11-2024

Chinastandards.org

---in many countries, additional requirements authorities responsible for the protection of labor and similar authorities;

---in many countries, regulations exist for the installation of equipment connected to the water mains.

NOTE 103: This Part does not apply to

---appliances for boiling water (GB 4706.19);

---storage water heaters (GB 4706.12);

Preview: page 5 of 5 shown, 29 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/gb-t-4706-11-2024