

Translated English of Chinese Standard: GB4706.11-2008

www.ChineseStandard.net → Buy True-PDF → Auto-delivery.

Sales@ChineseStandard.net

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

ICS 97.100.10

Y 63

GB 4706.11-2008 / IEC 60335-2-35:2002

Replacing GB 4706.11-2004

Household and Similar Electrical Appliances - Safety - Particular Requirements for Instantaneous Water Heaters

家用和类似用途电器的安全 快热式热水器的特殊要求

(IEC 60335-2-35:2002, IDT)

Issued on: July 31, 2008

Implemented on: September 1, 2009

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;**

**Standardization Administration of the People's Republic of
China.**

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
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:

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.

The drafting organizations of this Part: China Household Electric Appliance Research Institute (CHEARI); Xiamen Shuaike Bathroom Appliance Co., Ltd.; Midea Group; Qingdao Economic and Technological Development Zone Haier Water Heater Co., Ltd.; Ningbo FOTILE Kitchenware Co., Ltd.; Ningbo Suodun Feiyu Electric Appliance Co., Ltd.; Moluoni Sanitary Ware (China) Co., Ltd.; A.O.Smith (China) Water Heater Co., Ltd.; SAKURA Kitchen (China) Co., Ltd.; Zhejiang KANCH Electric Co., Ltd.; Zhongshan HANOVER Electric Appliance Co., Ltd.

The main drafters of this Part: Ma Dejun, Li Yi, Hou Quanduo, Zhou Ligu, Wang Renhua, Wang Qi, Chen Fei, Yang Bo, Wan Huaxin, Liao Jinzhu, Xu Zhong, Chen Su, Zhang Wenhao.

This Part was issued for the first time in 2004. This is the first amendment.

Household and Similar Electrical Appliances - Safety - Particular Requirements for Instantaneous Water Heaters

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;
- 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);

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 2 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----