

ICS 13.120
CCS K09



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

GB/T 4706.114-2024

**Safety of household and similar electrical appliances - Part 114:
Particular requirements for drinking water treatment
equipments**

家用和类似用途电器的安全 第114部分：饮用水处理装置的特殊要求

Issued on: August 23, 2024

Implemented on: August 23, 2024

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

Table of Contents

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

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 114 of GB/T 4706 "Safety of Household and Similar Electrical Appliances". GB/T 4706 has been published as follows part.

1. General requirements;

2. Particular requirements for electric irons;

--- Part 121: Particular requirements for professional ice cream machines. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed by China Light Industry Federation. This document is under the jurisdiction of the National Technical Committee for Standardization of Household Electrical Appliances (SAC/TC46). This document was drafted by: China Household Electrical Appliances Research Institute, Qingdao Haier Strauss Water Equipment Co., Ltd., Shenzhen Angel Drinking Water Industry Group Co., Ltd., Foshan Midea Qinghu Water Purification Equipment Co., Ltd., Guangdong Lizi Technology Co., Ltd., A.O. Smith (China) Environmental Electric Co., Ltd., Zhuhai Gree Electric Appliances Co., Ltd., Xiamen Bailin Water Purification Technology Co., Ltd., Amway (China) Daily Products Co., Ltd., Zhejiang Jiangqinyuan Water Treatment Technology Co., Ltd., Infinitus (China) Co., Ltd., Anhui Zhongren Beijia Technology Co., Ltd., Beijing Zhongjia Zhixin Information Technology Co., Ltd., Shenzhen Jialeshi Water Purification Technology Co., Ltd., Hangzhou Robam Electric Appliance Co., Ltd., Yimate (Jiangsu) Environmental Protection Technology Co., Ltd., Foshan Shunde Apollo Environmental Protection Equipment Co., Ltd., Zhejiang Supor Kitchen and Bathroom Appliances Co., Ltd., Zhongshan Smith Water Purification Co., Ltd. Technology Co., Ltd., Panasonic Home Appliances (China) Co., Ltd., Zhejiang Aibot Environmental Protection Technology Co., Ltd., Anhui Zhihong Purification Technology Co., Ltd. Ltd. The main drafters of this document are. Ma Dejun, Zheng Tao, Zhang Heng, Gao Liang, Chen Xiaoping, Li Peng, Wang Chuan, Chen Songtao, Liu Hongtao, Xie Wenzhao, Gao Mi, Li Jichao, Peng Kaiqin, Chen Guoshuai, Li Tengfei, Liu Xiaoping, Wang Tongshuai, Zhou Haixin, Zhang Xiaoheng, Zhu Jixing, Guan Kuorong, Xu Zhengao, Xie Xiaojun, Ye Xiuyi, Hu Weijie, and Xiong Zhi.

GB/T 4706 "Safety of Household and Similar Electrical Appliances" mostly adopts 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 for use. 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 GB/T 4706.1-2024 "Safety of Household and Similar Electrical Appliances Part

1.General Requirements" The corresponding clauses in the "Requirements" shall apply to this document; for the parts marked "replace" in this document, the clauses in this document shall prevail; The "Add" part indicates that in addition to complying with the corresponding clauses in GB/T 4706.1-2024, the additional clauses in this document must also be complied with. Clause; The part marked "modified" in this document indicates that the corresponding clauses of GB/T 4706.1-2024 are modified. Safety of household and similar electrical appliances Part 114. Particular requirements for drinking water treatment plants

1 Scope

GB/T 4706.114-2024 carries the particular safety requirements for household drinking water treatment equipment within the Chinese adoption of the IEC 60335 appliance safety series. These appliances are a specific hazard case because they combine mains electricity with a permanent water connection: a reverse osmosis unit under a sink holds pressure continuously, runs a pump and a solenoid, may include a UV lamp or an electrolytic cell, and its failure floods a kitchen and can energise wet metalwork. The standard modifies the general requirements of Part 1 clause by clause, covering the classification, the marking and instructions, the protection against access to live parts, the moisture resistance and the treatment of the water circuit, the leakage current and electric strength, the abnormal operation, the stability and mechanical hazards, the construction, the internal wiring, the components, the supply connection, the creepage and clearances

and the resistance to heat and fire, together with the requirements specific to the ultraviolet lamps and the pressure-bearing parts. It took effect on 23 August 2024.

This chapter of GB/T 4706.1-2024 is replaced by the following. This document specifies the safety requirements for drinking water treatment appliances for household and similar purposes. This document applies to household and similar appliances with a rated voltage not exceeding 250V for single-phase appliances and 480V for other appliances. Drinking water treatment equipment. Appliances not intended for normal household use but which may nevertheless present a danger to the public, e.g. those intended to be used by non-professionals in shops, in light industry or on farms. Drinking water treatment equipment used by professional personnel also falls within the scope of this standard. This document deals with appliances that present common hazards that are likely to be encountered by all persons in and around the home. However, generally speaking this document does not take into account the following situations.

--- The following groups of people (including children) cannot use the appliance safely without supervision or guidance. - due to physical, sensory or mental impairment; or - Due to lack of experience and knowledge.

--- Children's play equipment. NOTE 101 Examples of appliances falling within the scope of this document are.

---General water treatment device;

---Pure water processor;

---Mineralized water processor.

Note 102: Pay attention to the following.

--- For equipment intended for use in vehicles, ships or aircraft, additional requirements may be required;

--- National authorities may impose additional requirements on equipment. This document does not apply to.

---Liquid heater (GB/T 4706.19);

--- Commercial electric water boilers (GB/T 4706.36);

--- Cold drink dispenser (GB/T 4706.13);

---Large water treatment equipment (equipment that meets the following conditions at the same time. length or width or height $\geq 200\text{cm}$, mass $\geq 100\text{kg}$, water purification Flow rate $\geq 3\text{L/min}$);

---Industrial special equipment;