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(JEMA)

**Household and similar electrical
appliances—Safety—
Part 2-15 : Particular requirements
for appliances for heating liquids**

ICS 13.120; 97.040.50

Reference number : JIS C 9335-2-15 : 2004 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee, as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Electrical Manufacturers' Association (JEMA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14. Consequently **JIS C 9335-2-15 : 1998** is replaced with this Standard.

This revision has been made based on **IEC 60335-2-15 : 2002** *Household and similar electrical appliances—Safety—Part 2-15 : Particular requirements for appliances for heating liquids* for the purposes of making it easier to compare this Standard with International Standard; to prepare Japanese Industrial Standard conforming with International Standard; and to propose a draft of an International Standard which is based on Japanese Industrial Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

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Contents

	Page
Introduction	1
1 Scope	1
2 Normative references	3
3 Definitions	3
4 General requirement	4
5 General conditions for the tests	4
6 Classification	4
7 Marking and instructions	4
8 Protection against access to live parts	6
9 Starting of motor-operated appliances	6
10 Power input and current	6
11 Heating	6
12 Void (no specification)	8
13 Leakage current and electric strength at operating temperature	8
14 Transient overvoltages	8
15 Moisture resistance	8
16 Leakage current and electric strength	10
17 Overload protection of transformers and associated circuits	10
18 Endurance	10
19 Abnormal operation	10
20 Stability and mechanical hazards	12
21 Mechanical strength	12
22 Construction	12
23 Internal wiring	15
24 Components	15
25 Supply connection and external flexible cords	16

26	Terminals for external conductors	16
27	Provision for earthing	16
28	Screws and connections	16
29	Clearances, creepage distances and solid insulation	16
30	Resistance to heat and fire	17
31	Resistance to rusting	17
32	Radiation, toxicity and similar hazards	17
	Annexes	18
	Annex C (normative) Ageing test on motors	18
	Annex 1 (informative) Comparison table between JIS and corresponding International Standard	19
	Bibliography	28

Household and similar electrical appliances—Safety—

Part 2-15 : Particular requirements for appliances for heating liquids

Introduction This Japanese Industrial Standard has been prepared based on IEC 60335-2-15 *Household and similar electrical appliances—Safety—Part 2-15 : Particular requirements for appliances for heating liquids* published in 2002 as the fifth edition with some modifications in the technical contents. This is to be read in conjunction with JIS C 9335-1 : 2003 *Household and similar electrical appliances—Safety—Part 1 : General requirements*.

In this Standard, the portions underlined with dots mean the alteration of original International Standard. The list of alterations is given in annex 1 (informative) with the explanation being attached.

1 Scope This Standard deals with the safety of electrical appliances for heating liquids for household and similar purposes, their rated voltage being not more than 250 V.

NOTE 101 Some appliances may be used for heating food.

NOTE 102 Examples of appliances that are within the scope of this Standard are

- coffee-makers;
- cooking pans;
- egg boilers;
- feeding-bottle heaters;
- kettles and other appliances for boiling water, having a rated capacity not exceeding 10 L;
- milk heaters;
- pressure cookers having a rated cooking pressure not exceeding 140 kPa and a rated capacity not exceeding 10 L;
- slow cookers;
- steam cookers;
- wash boilers;
- yoghurt makers;
- rice cookers;
- electric thermal insulation pots.

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

NOTE 103 Examples of such appliances are

- glue pots with a water jacket (overheat cooling device);
- livestock feed boilers;
- sterilizers.

As far as is practicable, this Standard deals with the common hazards presented by appliances that are encountered by all persons in and around the home.

NOTE 104 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 are specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities.

NOTE 105 This Standard does not apply to

- frying pans and deep fat fryers (**JIS C 9335-2-13**);
- storage water heaters (**JIS C 9335-2-21**);
- instantaneous water heaters (**JIS C 9335-2-35**);
- surface-cleaning appliances employing liquids or steam (**JIS C 9335-2-54**);
- portable immersion heaters (**JIS C 9335-2-74**);
- commercial dispensing appliances and vending machines (**JIS C 9335-2-75**);
- appliances for medical purposes (**IEC 60601**);
- appliances intended exclusively for industrial purposes;
- appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
- appliances for high-frequency heating;
- pressure sterilizer.

NOTE 106 Attention is drawn to the fact that in many countries requirements for pressure vessels are applied to pressure cookers.

NOTE : The International Standard corresponding to this Standard is as follows.

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21**.

IEC 60335-2-15 *Household and similar electrical appliances—Safety—Part 2-15 : Particular requirements for appliances for heating liquids* (MOD)

2 Normative references Normative references are as stated in clause 2 of **JIS C 9335-1**.

3 Definitions Definitions are as stated in clause 3 of **JIS C 9335-1** except as follows.

3.1.9 Replacement

normal operation operation of the appliance under the following conditions

3.1.9.101 Kettles and other appliances for boiling water, coffee-makers, cooking pans, glue pots, milk heaters, slow cookers, sterilizers, wash boilers and yoghurt makers are operated with their container filled with the rated capacity of water, any lid being closed. The quantity of water in slow cookers is maintained above 50 % of their rated capacity.

Appliances with a heated surface intended to keep the liquid warm are operated with or without the container, whichever is the more unfavourable.

3.1.9.102 Egg boilers and steam cookers are operated with their containers filled with the maximum quantity of water specified in the instructions.

3.1.9.103 Feeding-bottle heaters are operated with a bottle of heat-resistant glass, round or hexagonal in shape, having a mass between 190 g and 200 g and a capacity of approximately 225 ml, unless a particular bottle is specified, in which case that bottle is used. The bottle is filled to approximately its rated capacity of water or 200 ml, whichever is less, and is placed in the feeding-bottle heater. The heater is filled with water to the level specified in the instructions or, in the absence of instructions, to the maximum level.

3.1.9.104 Livestock feed boilers are operated with the lid closed, the container being filled with half its rated capacity of water.

3.1.9.105 Pressure cookers excluding rice cookers are operated in accordance with the instructions but with the container filled with water to a depth of 25 mm.

3.101 rated capacity capacity assigned to the appliance by the manufacturer

3.102 rated cooking pressure pressure assigned to the appliance by the manufacturer

3.103 espresso coffee-maker coffee-maker in which water is heated and forced through the ground coffee by steam pressure or by means of a pump

NOTE : Espresso coffee-makers may have an outlet for supplying steam or hot water.

3.104 feeding-bottle heater appliance for heating prepared baby food in a feeding-bottle to a predetermined temperature, heat being transferred by means of water

3.105 pressure regulator control that maintains the pressure at a particular value during normal use

3.106 pressure-relief device control that limits the pressure under abnormal operating conditions

3.107 cordless kettle kettle incorporating a heating element and which is connected to the supply only when placed on its associated stand

3.108 steam cooker appliance in which food is heated by steam generated at atmospheric pressure

3.201 rice cooker appliance which mainly cooks automatically utilizing electric heat. Appliance having function to keep the temperature is included

3.202 electric thermal insulation pot appliance which consists of integrated heater and container, boils water utilizing electric heat, then automatically transfers to function for keeping the temperature

4 General requirement General requirement shall be as stated in clause 4 of JIS C 9335-1.

5 General conditions for the tests General conditions for the tests shall be as stated in clause 5 of JIS C 9335-1 except as follows.

5.2 Addition to 5.2 of JIS C 9335-1:

NOTE 101 If the test of 15.101 has to be carried out, three additional samples are required.

5.3 Addition to 5.3 of JIS C 9335-1:

The test of 19.101 is carried out after the other tests.

6 Classification Classification shall be as stated in clause 6 of JIS C 9335-1 except as follows.

6.2 Addition to 6.2 of JIS C 9335-1:

Wash boilers and livestock feed boilers shall be at least IPX3.

7 Marking and instructions Marking and instructions shall be as stated in clause 7 of JIS C 9335-1 except as follows.

7.1 Addition to 7.1 of JIS C 9335-1:

Appliances intended to be partially immersed in water for cleaning shall be marked with the maximum level of immersion and with the substance of the following:

Do not immerse beyond this level.

Kettles and electric thermal insulation pots shall have a level mark or other means to indicate when they are filled to rated capacity, unless they cannot be filled beyond their rated capacity or withstand the test of 15.2 when filled completely. This indication shall be visible when the kettle or electric thermal insulation pot is in the filling position. If the level mark is not self-evident, there shall be a reference to this mark on the outside of the kettle or electric thermal insulation pot which shall be visible when the kettle or electric thermal insulation pot is in its normal position of use.

If the closed position of the lid of a pressure cooker is not obvious, this position shall be marked on the appliance.

Stands provided with cordless kettles shall be marked with

- the name, trademark or identification mark of the manufacturer or responsible vendor;
- the model or type reference.

7.12 Addition to 7.12 of JIS C 9335-1:

The instructions for appliances incorporating an appliance inlet, and intended to be partially or fully immersed in water for cleaning, shall state that the connector must be removed before the appliance is cleaned and that the appliance inlet must be dried before the appliance is used again.

The instructions for appliances intended to be used with a connector incorporating a thermostat shall state that only the appropriate connector must be used.

Unless kettles and electric thermal insulation pots are constructed so that a hazard cannot arise from boiling water being ejected, the instructions shall state that if the kettle or electric thermal insulation pot is overfilled, boiling water may be ejected.

The instructions for kettles and electric thermal insulation pots filled through a lid aperture situated below the handle shall include the substance of the following:

WARNING : Position the lid so that steam is directed away from the handle.

NOTE 101 The warning is not required if the lid can only be closed so that steam is directed away from the handle.

WARNING : Do not remove the lid while the water is boiling.

The instructions for cordless kettles shall state that the kettle is only to be used with the stand provided.

If the kettle, electric thermal insulation pot or stand of cordless kettles can be lifted together by gripping the handle of the kettle, the instructions shall include the substance of the following:

CAUTION : Insure that the kettle is switched off before removing it from its stand.

The instructions for feeding-bottle heaters shall state

- that the food should not be heated for too long;
- how to check that the correct food temperature has not been exceeded.

The instructions for appliances normally cleaned after use, and not intended to be immersed in water for cleaning, shall state that the appliance must not be immersed.

NOTE 102 This requirement normally applies to coffee-makers, cooking pans, milk heaters, pressure cookers, steam cookers, slow cookers and yoghurt makers.

The instructions for pressure cookers shall state that the ducts in the pressure regulator allowing the escape of steam should be checked regularly to ensure that they are not blocked. They shall also give details of how to open the container safely and state that the container must not be opened until the pressure has decreased sufficiently.

The instructions for egg boilers provided with a pricking device shall contain the substance of the following:

CAUTION : Avoid injuries from the egg pricker.

8 Protection against access to live parts Protection against access to live parts shall be as stated in clause 8 of **JIS C 9335-1** except as follows.

8.1.2 Addition to 8.1.2 of **JIS C 9335-1**:

NOTE : Connecting devices in stands of cordless kettles are not considered to be socket-outlets.

9 Starting of motor-operated appliances Clause 9 of **JIS C 9335-1** is not applicable.

10 Power input and current Power input and current shall be as stated in clause 10 of **JIS C 9335-1**.

11 Heating Heating shall be as stated in clause 11 of **JIS C 9335-1** except as follows.

11.2 Addition to 11.2 of **JIS C 9335-1**:

Portable appliances are tested away from the walls of the test corner.

11.4 Addition to 11.4 of **JIS C 9335-1**:

If the temperature rise limits are exceeded in appliances incorporating motors, transformers or electronic circuits, and if the power input is lower than the rated power input, the test is repeated with the appliance supplied at 1.06 times the rated voltage.

11.6 Addition to 11.6 of **JIS C 9335-1**:

Combined appliances are operated as heating appliances.

11.7 Replacement of 11.7 of **JIS C 9335-1**:

Appliances are operated for the duration specified in 11.7.101 to 11.7.105.