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Hairdryers

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Foreword

This Japanese Industrial Standard has been 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 a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS C 9613** : 2007), which has been technically revised.

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Hairdryers

1 Scope

This Japanese Industrial Standard specifies requirements for hand-held hairdryers (hereafter referred to as equipment) with a built-in blower and electric heater of which rated voltage is 300 V or under for single phase a.c., rated frequency is 50 Hz and/or 60 Hz, and rated power consumption is 1 500 W or under, excluding hairdryers for special purposes, such as steam type and iron type.

This Standard specifies requirements for the following different types of hairdryers separately in the main body and in Annex A, depending on the applicable standards.

- a) Type A : Standards unique to Japan are applied.
- b) Type B : Standards of **JIS C 9335-2-23** are applied.

NOTE Standards unique to Japan refers to the interpretation of the technical standards of the Electrical Appliances and Materials Safety Act (Appended Table 8 standards).

When requirements in the main body (Type A) are applied, the requirements in Annex A (Type B) do not apply. Similarly, when requirements in Annex A (Type B) are applied, requirements in the main body (Type A) do not apply.

2 Normative references

Part or all of the provisions of the following standards, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS C 1509-1 *Electroacoustics — Sound level meters — Part 1 : Specifications*

JIS C 1509-2 *Electroacoustics — Sound level meters — Part 2 : Pattern evaluation tests*

JIS C 2520 *Wires and rolled wires for electrical heating*

JIS C 3301 *Rubber insulated flexible cords*

JIS C 3306 *Polyvinyl chloride insulated flexible cords*

JIS C 5101 (all parts) *Fixed capacitors for use in electronic equipment*

JIS C 8303 *Plugs and receptacles for domestic and similar general use*

JIS C 8358 *Appliance couplers for domestic and similar use*

JIS C 9335-2-23 *Household and similar electrical appliances — Safety — Part 2-23 : Particular requirements for appliances for skin or hair care*

JIS C 9603 *Ventilating fans*

JIS K 2240 *Liquefied petroleum gases*

JIS K 5600-5-4 *Testing methods for paints — Part 5 : Mechanical property of film — Section 4 : Scratch hardness (Pencil method)*

JIS K 7202-2 *Plastics — Determination of hardness — Part 2 : Rockwell hardness*

JIS S 6006 *Pencils, coloured pencils and leads for them*

JIS Z 8731 *Acoustics — Description and measurement of environmental noise*

3 Terms and definitions

For the purpose of this Standard, the following terms and definitions apply.

3.1

heating element

electrical heating wire or semiconductor integrated in the electric heater which is accommodated in the equipment body for heating the wind produced by the blower

3.2

blower

device which produces wind by rotation of blades accommodated in the equipment body

3.3

leg and stand

a pair of accessories used when hand-held equipment is placed on a floor or a table, or hanged on the wall

4 Operating performance and shape

4.1 Starting

When the test for starting is carried out in accordance with **8.2**, the equipment shall start irrespective of the position of blades.

4.2 Voltage fluctuation

When the test for voltage fluctuation is carried out in accordance with **8.3**, the equipment shall be capable of continuing the running without any trouble.

4.3 Power consumption

When the test of **8.4** is carried out, the power consumption shall fall within a range of 90 % to 110 % of the rated power consumption.

4.4 Air speed

When the test of **8.5** is carried out, the wind speed shall be not less than 5 m/s.

4.5 Noise

When the test of **8.6** is carried out, the noise shall be 70 dB or less.

4.6 Air volume

When the test of **8.7** is carried out, the air volume shall be in a range of 90 % to 110 % of the indicated value described in a package insert such as an instruction manual. The numerical value obtained by the specified method for calculating air volume shall be indicated in cubic metre per minute (m³/min).

5 Safety performance

5.1 Temperature

5.1.1 Normal temperature

When the test of **9.1** is carried out, the temperature at each part shall not exceed the temperature limit value given in Table 1. At parts not specified in Table 1, abnormal heat generation shall not occur. After the test of **9.1**, the insulation resistance, when tested in accordance with **9.3**, shall be 0.1 MΩ or over. Also, it shall be conducted after the test of **9.3** which is conducted following the test of **9.1**.

Table 1 Temperature limits

Measured part			Unit: °C
			Limit value
Winding	Class A insulation		100
	Class E insulation		115
	Class B insulation		125 (120)
	Class F insulation		150 (140)
	Class H insulation		170 (165)
Rectifier (limited to those used in power supply circuit)	Made of selenium		75
	Made of germanium		60
	Made of silicone		135
Contact part of fuse clip			90
Handle operated by user during service	Made of metal, ceramic and glass		55
	Others		70
Knob and push button of switch, etc.	Made of metal, ceramic and glass		60
	Others		75
Enclosure	Parts touched by user during service	Made of metal, ceramic and glass	55
		Others	70
	Parts easily accessible by test finger shown in Figure 1	Made of metal, ceramic and glass	85
		Others	100
	Parts not easily accessible by test finger shown in Figure 1		100
The values in parentheses apply to the winding of rotating machines. The temperature of the windings of motors used in cooling media shall be the values above plus 5 °C. The container of a compressor, and the parts of cooling media piping connected to it within 50 mm from the container shall be deemed as “parts not easily accessible by test finger shown in Figure 1”. The reference ambient temperature shall be 30 °C.			

5.1.2 Abnormal temperature

When the test of **9.2** is carried out, the temperature of surface of wooden base shall not exceed 150 °C (The reference ambient temperature shall be 30 °C.). This requirement does not apply to those equipped with temperature limiter if there is no risk of fire due to sure operation of the temperature limiter.

After the test of **9.2**, the insulation resistance, when tested in accordance with **9.3**, shall be 0.1 MΩ or over.

5.2 Insulation

5.2.1 Insulation resistance

When the test of **9.3** is carried out, the insulation resistance shall be not less than 1 MΩ for those with a rated voltage not exceeding 150 V, and 3 MΩ for those with a rated voltage exceeding 150 V.

5.2.2 Dielectric withstand voltage

When the test of **9.4** is carried out, the equipment shall withstand the specified test voltage.

5.3 Leakage current

When the test of **9.5** is carried out, the leakage current shall not exceed 1 mA.

5.4 Resistance to shock by fall

When the test of **9.6** is carried out, the equipment shall comply with the following requirements:

- a) The live part shall not be exposed. After the test, when the test finger shown in Figure 1 is pushed into the opening with a force of 10 N, the test finger shall not touch the live part.
- b) The equipment shall be free from hazards of short circuit, fire and electric shock when connected to the power supply.
- c) The insulation resistance between the live part and the surface of equipment measured with a 500 V d.c. insulation resistance tester shall be 0.1 MΩ or over.