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INTERNATIONAL STANDARD



Electric irons for household or similar use – Methods for measuring performance

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	7
4 Measurements for various types of irons	9
5 General conditions for measurements.....	10
5.1 Ambient conditions	10
5.2 Voltage for measurements.....	10
5.3 Steady conditions	11
5.4 Iron support for measurements.....	11
5.5 Temperature measurement.....	11
5.6 Cordless irons having a mains supply attachment	11
5.7 Irons fitted with separate steam generator/boiler	11
5.8 Irons fitted with auto switch-off devices	11
5.9 Test sample	11
5.10 Irons with additives.....	11
6 General requirements.....	12
6.1 Determination of mass.....	12
6.2 Measurement of length of the supply cord	12
7 Temperature measurements	12
7.1 Measurement of heating-up time	12
7.2 Measurement of initial overswing temperature and heating-up excess temperature.....	12
7.3 Measurement of sole-plate temperature	13
7.4 Determination of the hottest point.....	13
7.5 Measurement of temperature distribution.....	14
7.6 Measurement of cyclic fluctuation of temperature of the hottest point	14
8 Assessment of the spray function	14
8.1 Determination of the mass of spray	14
8.2 Determination of the spray pattern.....	15
9 Measurements concerning steaming operation	16
9.1 Measurement of heating-up time for steaming operation.....	16
9.2 Measurement of steaming time, steaming rate and water leakage rate	17
9.3 Determination of mass of a shot of steam.....	19
10 Assessment of smoothing.....	20
10.1 Creasing of test cloth	20
10.2 Conditioning of the iron	21
10.3 Ironing.....	21
10.4 Ironing with shot of steam	22
10.5 Evaluation	22
11 Measurement of input power and energy consumption.....	23
11.1 Measurement of input power	23
11.2 Measurement of energy consumption	23
11.3 Ironing efficiency	24

12	Assessment of sole-plate.....	24
12.1	Determination of smoothness of the sole-plate	24
12.2	Measurement of scratch resistance of sole-plate	25
12.3	Determination of adhesion of polytetrafluorethylene (PTFE) coating or similar coating on sole-plate	27
13	Measurement of thermostatic stability.....	28
13.1	Heating test.....	28
13.2	Drop test	28
13.3	Determination of drift of thermostat	28
14	Determination of total steaming time for hard water	29
14.1	For non-pressurised steam irons	29
14.2	For pressurised steam irons or instantaneous steam irons	30
15	Instruction for use.....	31
16	Information at the point of sale	31
	Annex A (informative) Measurement of steaming time, steaming rate and water leakage rate for pressurized steam irons or instantaneous steam irons.....	45
	Annex B (normative) Ironing board.....	46
	Annex C (normative) Cotton cloth	49
	Annex D (informative) Classification of electric irons.....	50
	Figure 1 – Arrangement for measuring the sole-plate temperature	32
	Figure 2 – Variation of sole-plate temperature after switching-on	32
	Figure 3 – Determination of spray pattern	34
	Figure 4 – Test apparatus	35
	Figure 5 – Creasing tool.....	36
	Figure 6 – Wrapping rod and pencil	36
	Figure 7 – Circular and rectangular blocks.....	37
	Figure 8 – Conditioning of the iron	37
	Figure 9 – Ironing	38
	Figure 10 – Evaluation	38
	Figure 11 – Comparison charts	39
	Figure 12 – Test apparatus for smoothness of sole-plate	41
	Figure 13 – Scratch	42
	Figure 14 – Positions of cutting area.....	43
	Figure 15 – Apparatus for drop test.....	44
	Figure 16 – Test apparatus for total steaming time	44
	Figure A.1 – Measurements concerning steaming operation.....	45
	Figure B.1 – Example of construction of the ironing-board	48
	Table 1 – Measurements of various types of irons	9
	Table 2 – Classes of scratch resistance	26

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRIC IRONS FOR HOUSEHOLD OR SIMILAR USE – METHODS FOR MEASURING PERFORMANCE

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International Standard IEC 60311 has been prepared by subcommittee 59E: Ironing and pressing appliances, of IEC technical committee 59: Performance of household electrical appliances.

This consolidated version of IEC 60311 consists of the fourth edition (2002) [documents 59E/148/FDIS and 59E/149/RVD], its amendment 1 (2005) [documents 59L/22/FDIS and 59L/24/RVD] and its amendment 2 (2009) [documents 59L/67/FDIS and 59L/68/RVD].

The technical content is therefore identical to the base edition and its amendments and has been prepared for user convenience.

It bears the edition number 4.2.

A vertical line in the margin shows where the base publication has been modified by amendments 1 and 2.

Annexes B and C form an integral part of this standard.

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Annexes A and D are for information only.

In this standard, the following print types are used:

- *test specifications: in italic type*
- notes: in small roman type
- other texts: in roman type

Words in **bold** in the text are defined in clause 3.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The “colour inside” logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this publication using a colour printer.

ELECTRIC IRONS FOR HOUSEHOLD OR SIMILAR USE – METHODS FOR MEASURING PERFORMANCE

1 Scope

This International Standard applies to electric irons for household or similar use.

The purpose of this standard is to state and define the principal performance characteristics of electric irons for household or similar use which are of interest to the user and to describe the standard methods for measuring these characteristics.

Electric irons covered by this standard include

- dry irons;
- steam irons;
- vented steam irons with motor pump;
- spray irons;
- steam irons with separate water reservoir or boiler/generator having a capacity not exceeding 5 l.

This standard is concerned neither with safety nor with performance requirements.

NOTE The primary characteristic to be taken into account in assessing the performance of an electric iron is its basic ability to produce a smooth finish to textile materials, without risk of scorching or other damage. It has not proved possible to devise a single method which will measure this characteristic in a consistently reproducible way and measurements have therefore been included to check certain factors, such as the temperature of the sole-plate at the mid-point, sole-plate temperature distribution, etc., which affect the basic characteristic. In evaluating the results, it must be realized that, while a very exceptional result in any one of them may significantly affect performance, there is considerable latitude in the combination of results which will give satisfactory ironing performance, and too much significance should not be attached to minor differences in any one result.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60051-1:1997, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 1: Definitions and general requirements common to all parts*

IEC 60454-3-3:1998, *Pressure-sensitive adhesive tapes for electrical purposes – Part 3: Specifications for individual materials – Sheet 3: Polyester film tapes with rubber thermoplastic adhesive*

IEC 60734:2001, *Household electrical appliances – Performance – Hard water for testing*

ISO 105-F:1985, *Textiles – Tests for colour fastness – Part F: Standard adjacent fabrics*

ISO 1518:1992, *Paints and varnishes – Scratch test*

ISO 2409:1992, *Paints and varnishes – Cross-cut test*

ISO 3758:1991, *Textiles – Care labelling code using symbols*

ISO 3801:1977, *Textiles – Woven fabrics – Determination of mass per unit length and mass per unit area*

ISO 6330:2000, *Textiles – Domestic washing and drying procedures for textile testing*

ISO 7211-2:1984, *Textiles – Woven fabrics – Construction – Methods of analysis – Part 2: Determination of number of threads per unit length*

ISO 9073-2: 1995, *Textiles – Test methods for nonwovens – Part 2: Determination of thickness*

ISO 13934-1:1999, *Textiles – Tensile properties of fabrics – Part 1: Determination of maximum force and elongation at maximum force using the strip method*

3 Terms and definitions

For the purposes of this standard the following definitions apply.

3.1

electric iron

portable appliance, which has an electrically heated sole-plate and is used for ironing textile materials

NOTE In this standard, "electric iron" is referred to as "iron".

3.2

thermostatic iron

iron fitted with a thermostat, the setting of which can be adjusted manually to alter the sole-plate temperature over a range and maintain it within certain limits

3.3

electric iron with non-self-resetting thermal cut-out

iron fitted with a non-self-resetting thermal cut-out, such as a fusible link, for the purpose of disconnecting the heating element if the iron attains excessive temperature

3.4

dry iron

iron having neither means to produce and supply steam nor to spray water onto textile materials while ironing

3.5

steam iron

iron having means to produce and supply steam to textile materials while ironing. It can be provided with means to supply a shot of steam

3.5.1

shot-of-steam iron

iron provided with means to supply a shot of steam to textile materials while ironing

3.5.2

shot of steam

single emission of an increased volume of steam from the sole-plate for a short duration

3.5.3

vented steam iron

steam iron in which steam is produced when the water contacts the sole-plate, the water reservoir being at atmospheric pressure.

NOTE The water reservoir may be incorporated in the iron or connected by a hose to the iron.

3.5.4

pressurized steam iron

steam iron in which steam is produced in a boiler at a pressure exceeding 50 kPa

NOTE The boiler may be incorporated in the iron or connected by a hose to the iron.