

INTERNATIONAL STANDARD

NORME INTERNATIONALE



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

Fers à repasser électriques pour usage domestique ou analogue – Méthodes de mesure de l'aptitude à la fonction



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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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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 59L: Small household appliance, of IEC technical committee 59: Performance of household and similar electrical appliances.

This fifth edition cancels and replaces the fourth edition published in 2002, Amendment 1:2005 and Amendment 2:2009. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) 5.3: introduction of clarifications on voltage and frequency to be applied for the tests;
- b) 5.12: introduction of an anti-circumvention subclause;
- c) 9.2.3: clarification on the procedure for measuring steaming rate;
- d) 14.1 and 14.2: clarification on type of water used for the tests;
- e) Figure 2: clarifications and alignment with the relevant formula.

The text of this International Standard is based on the following documents:

CDV	Report on voting
59L/116/CDV	59L/121/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

In this standard, the following print types are used:

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

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

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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 document 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 document 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, 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 is not given to minor differences in any one result.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part 1: Definitions and general requirements common to all parts*

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

ISO 105–F01, *Textiles – Test for colour fastness – Specification for wool adjacent fabric*

ISO 105–F02, *Textiles – Test for colour fastness – Specification for cotton and viscose adjacent fabrics.*

ISO 105–F03, *Textiles – Test for colour fastness – Specification for polyamid adjacent fabric*

ISO 1518–1, *Paints and varnishes – Determination of scratch resistance – Part 1: constant-loading method*

ISO 2409:2013, *Paints and varnishes – Cross-cut test*

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

ISO 6330:2012, *Textiles – Domestic washing and drying procedures for textile testing*

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

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

ISO 13934-1, *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 document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

electric iron

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

Note 1 to entry: In this document, "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 the means to produce and supply steam nor to spray water onto textile materials while ironing

3.5

steam iron

iron having the means to produce and supply steam to textile materials while ironing

Note 1 to entry: It can be provided with a means to supply a shot of steam.

3.5.1

shot-of-steam iron

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