

# INTERNATIONAL STANDARD

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



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# INTERNATIONAL STANDARD

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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 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] and its amendment 1 (2005) [documents 59L/22/FDIS and 59L/24/RVD].

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

It bears the edition number 4.1.

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

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

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- withdrawn,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.

# **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.