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NSAI Standards

Irish Standard
I.S. EN 60705:2015

Household microwave ovens - Methods for measuring performance

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60705

March 2015

ICS 97.040.20

Supersedes EN 60705:2012

English Version

Household microwave ovens - Methods for measuring performance (IEC 60705:2010 + A1:2014)

Fours à micro-ondes à usage domestique - Méthodes de mesure de l'aptitude à la fonction (IEC 60705:2010 + A1:2014)

Mikrowellengeräte für den Hausgebrauch und ähnliche Zwecke - Verfahren zur Messung der Gebrauchstauglichkeit (IEC 60705:2010 + A1:2014)

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Ref. No. EN 60705:2015 E

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Foreword

This document (EN 60705:2015) consists of the text of IEC 60705:2010 + A1:2014 prepared by SC 59K "Performance of household and similar electrical cooking appliances" of IEC/TC 59 "Performance of household and similar electrical appliances".

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-09-11
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-09-11

This document supersedes EN 60705:2012.

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This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

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The text of the International Standard IEC 60705:2010 + A1:2014 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60335-2-25:2002	NOTE	Harmonized as EN 60335-2-25:2002[1)] (not modified).
IEC 60335-2-90:2006	NOTE	Harmonized as EN 60335-2-90:2006 (not modified).
IEC 60350:1999	NOTE	Harmonized as EN 60350:1999 [2)] (not modified).
CISPR 11:2009	NOTE	Harmonized as EN 55011:2009 (modified).

[1)] Superseded by EN 60335-2-25:2012 (IEC 60335-2-25:2010, modified).

[2)] Superseded by EN 50304:2009/EN 60350:2009 (IEC 60350:1999, modified) + A1:2005, modified + A2:2008, modified).

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

Publication	Year	Title	EN/HD	Year
IEC 60350-1 (mod)	2011	Household electric cooking appliances - Part 1: Ranges, ovens, steam ovens and grills - Methods for measuring performance	EN 60350-1 +A11	2013 2014
IEC 60584-2	-	Thermocouples - Part 2: Tolerances	EN 60584-2	-
IEC 62301 (mod)	2011	Household electrical appliances - Measurement of standby power	EN 50564	2011
ISO 80000-1	2009	Quantities and units - Part 1: General	EN ISO 80000-1	2013

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD MICROWAVE OVENS – METHODS FOR MEASURING PERFORMANCE

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

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This Consolidated version of IEC 60705 bears the edition number 4.1. It consists of the fourth edition (2010-04) [documents 59K/195/FDIS and 59K/198/RVD] and its amendment 1 (2014-06) [documents 59K/252/FDIS and 59K/255/RVD]. The technical content is identical to the base edition and its amendment.

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions and deletions are displayed in red, with deletions being struck through. A separate Final version with all changes accepted is available in this publication.

This publication has been prepared for user convenience.

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International Standard IEC 60705 has been prepared by subcommittee 59K: Ovens and microwave ovens, cooking ranges and similar appliances, of IEC technical committee 59: Performance of household and similar electrical appliances.

The main changes from the previous edition are as follows:

– the definition of rounding is given in 3.5;
– the usable volume and the overall volume are respectively determined in 7.2 and 7.3.

This publication 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.

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

This standard contains an attached file in the form of an Excel®[1] 97-2003 data sheet program. This file is intended to be used as a complement and does not form an integral part of the standard.

The following differences exist in some countries:

Clause 7: Metric dimensional measures are not in common use (USA).

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability 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.

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.

[1] Excel® is the trademark of a product supplied by Microsoft®. This information is given for the convenience of users of this document and does not constitute an endorsement by IEC of the product named. Equivalent products may be used if they can be shown to lead to the same results.

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INTRODUCTION to Amendment 1

This amendment includes the following significant technical changes:

– the usable volume is renamed to calculated volume and the measurement method for the calculated volume is revised (see 7.2), which is in accordance with IEC 60350-1;

– new definitions for **microwave function**, **combination microwave function**, **set to off mode**, **set to standby mode**, **cooling down period** and **food support** in Clause 3;

– a method for measuring the energy consumption of the **microwave function** in Clause 14;

– more precise requirements for instruments and measurements in Table 2;

– additional product specific requirements for measuring the energy consumption of low power modes in Clause 15;

– a method for measuring the energy consumption for the **cooling down period** in Annex F (informative).

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HOUSEHOLD MICROWAVE OVENS – METHODS FOR MEASURING PERFORMANCE

1 Scope

This International Standard applies to **microwave ovens** for household use. It also applies to **combination microwave ovens**.

This standard defines the main performance characteristics of household microwave ovens which are of interest to the user, and it specifies methods for measuring these characteristics.

NOTE 1 This standard does not deal with

– microwave ovens which cannot accept a load having a diameter of ≥ 200 mm or a height of ≥ 120 mm;

– safety requirements (see IEC 60335-2-25 [1]* and IEC 60335-2-90 [2]).

NOTE 2 This standard does not apply to ovens incorporating conventional heating means only (see IEC 60350) [3].

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 60350-1:2011, *Household electric cooking appliances – Part 1: Ranges, ovens, steam ovens and grills – Methods for measuring performance*

IEC 60584-2, *Thermocouples – Part 2: Tolerances*

IEC 62301:2011, *Household electrical appliances – Measurement of standby power*

ISO 80000-1:2009, *Quantities and units – Part 1: General*

3 Terms and definitions

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

3.1
microwave oven
appliance using electromagnetic energy in the ISM frequency band of 2 450 MHz, for heating food and beverages in the cavity

~~NOTE 1 The microwave oven may incorporate a browning element.~~

NOTE ~~2~~1 ISM frequency bands are the electromagnetic frequencies established by the ITU and reproduced in CISPR 11 [4].

* Figures in square brackets refer to the bibliography.

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