SLOVENSKI STANDARD
SIST EN IEC 60350-1:2023/oprA1:2024

01-september-2024

Gospodinjski električni kuhalni aparati - 1. del: Štedilniki, pečice, parne pečice in žari - Metode za merjenje funkcionalnosti - Dopolnilo A1

Amendment 1 - Household electric cooking appliances - Part 1: Ranges, ovens, steam ovens and grills - Methods for measuring performance

Elektrische Kochgeräte für den Hausgebrauch - Teil 1: Herde, Backöfen, Dampfgarer und Grills - Verfahren zur Messung der Gebrauchseigenschaften

Appareils de cuisson électrodomestiques - Partie 1: Cuisinières, fours, fours à vapeur et grils - Méthodes de mesure de l'aptitude à la fonction

Ta slovenski standard je istoveten z: **EN IEC 60350-1:2023/prA1:2024**

ICS:

97.040.20	Štedilniki, delovni pulti, pečice in podobni aparati	Cooking ranges, working tables, ovens and similar appliances

SIST EN IEC 60350-1:2023/oprA1:2024 **en**

59K/394/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER: **IEC 60350-1/AMD1 ED3**	
DATE OF CIRCULATION: **2024-07-12**	CLOSING DATE FOR VOTING: **2024-10-04**
SUPERSEDES DOCUMENTS: **59K/390/RR**	

IEC SC 59K : PERFORMANCE OF HOUSEHOLD AND SIMILAR ELECTRICAL COOKING APPLIANCES

SECRETARIAT: Germany	SECRETARY: Ms Susanne Stolz
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.

FUNCTIONS CONCERNED:

☐ EMC ☒ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY

☒ SUBMITTED FOR CENELEC PARALLEL VOTING	☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

Attention IEC-CENELEC parallel voting

The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.

The CENELEC members are invited to vote through the CENELEC online voting system.

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Recipients of this document are invited to submit, with their comments, notification of any relevant “In Some Countries” clauses to be included should this proposal proceed. Recipients are reminded that the CDV stage is the final stage for submitting ISC clauses. (SEE AC/22/2007 OR NEW GUIDANCE DOC).

TITLE:

Amendment 1 - Household electric cooking appliances - Part 1: Ranges, ovens, steam ovens and grills - Methods for measuring performance

PROPOSED STABILITY DATE: 2025

NOTE FROM TC/SC OFFICERS:

HOUSEHOLD ELECTRIC COOKING APPLIANCES –

Part 1: Ranges, ovens, steam ovens and grills – Methods for measuring performance

1 Scope

Cancel the 2nd dash "ovens with reciprocating trays or turntable" in NOTE 2

2 Normative References

Add this dated reference:

IEC 60705:202x[1], *Household microwave ovens – Methods for measuring performance*

3 Terms and definitions

Add an additional definition and re-number accordingly

3.x
combination microwave oven
appliance which can be operated at least

- by **microwave function** and thermal function, hot steam or steam
- or by **combination microwave function**

[Source: IEC 60705, 3.3 modified, Note to entry has been removed.]

Change the definition 3.17 as follows:

3.17
standby mode
condition where the appliance is connected to the mains and provides only one or more of the following functions, which may persist for an indefinite duration:

a) reactivation function;
b) reactivation function and only an indication of enabled reactivation function;
c) information or status display.

8 Energy consumption and time for heating a load

Add following sentences and note at the end of 8.1:

For measuring the energy consumption in a **combination microwave oven** fitted with a turntable deviating requirements regarding the test set up are specified in Annex H.

NOTE The definition for turntable of IEC 60705 applies.

Annex K shows the expanded uncertainties for measuring the energy consumption.

8.3.3 Preparation

Change the 5th subclause, last sentence as follows:

[1] CDV stage

The amount of absorbed water shall be as specified in Clause C.1.

8.5.6 Determining the *s*-factor

Replace 8.5.6 as follows:

In the case that the heating mode is designated as a **heating function**, the s-factor shall be determined in addition to the c-factor.

Determine the s_k-factor for each measurement.

The s_k -factor is the ratio between the observer temperatures measured in phase 1 in the last 30 % of the whole phase (= β) and the observer temperature in phase 1 in the second last 30 % (= α), calculated as shown in Formulae (1), (2) and (3):

$$s_k = \frac{\bar{T}_{o1,k,\beta}}{\bar{T}_{o1,k,\alpha}} \quad (1)$$

Where:

$$\bar{T}_{o1,k,\alpha} = \frac{1}{0,3 i_k} \sum_{j=0,4 i_k}^{0,7 i_k} T_{o1,k,j} \quad (2)$$

$$\bar{T}_{o1,k,\beta} = \frac{1}{0,3 i_k} \sum_{j=0,7 i_k}^{i_k} T_{o1,k,j} \quad (3)$$

Where:

– i_k is determined by $i_k = \lfloor t_k \times f_s \rfloor$;

– α is i_k from 0,4 i_k until 0,7 i_k;

– β is i_k from 0,7 i_k until i_k.

The s_1, s_2 and s_3 for the **heating function** is rounded to two decimal places.

For calculating the s-factor, s_1, s_2 and s_3 are averaged and rounded to two decimal places, as shown in formula 18.

$$s = \frac{s_1 + s_2 + s_3}{3} \quad (18)$$

The averaged value s and the single values, s_1, s_2 and s_3 are reported.

8.6.4 *s*-factor

Replace 8.6.4 as follows:

The s_k-factors and the s-factor are used to show that a function designated as a **heating function** does not use residual heat.

The s_k-factors calculated in **Error! Reference source not found.** for a function designated as a **heating function** shall be $s_k \geq 0{,}92$.

The s-factor, the average value of the s_k-factors, calculated in **Error! Reference source not found.** for a function designated as a **heating function** shall be $s \geq 0{,}95$.

8.9 Reporting of test results

Add an additional dash:

f) the applied temperature measurement in the brick, i.e. with thermocouples in accordance with Clause 8 or with dataloggers in accordance with Annex H.

9.2.1.4 Preliminary measurements

Replace the note as follows:

NOTE Annex B recommends suppliers for the colour measuring instrument. IEC TS 63350 contains recommendations for digital measuring systems.

14.2.1 Principles

Change the second last dash as follows:

– after each appliance interaction, wait at least 20 min before commencing with measurements;

14.2.4

Change in the 3rd subclause the last sentence as follows:

Avoid any interaction with the remote user interface during the 20 min waiting time and the measurement.

14.2.5

Change in the 4th subclause the last sentence as follows:

Power measurements in **delay start** shall commence at the earliest 20 min after the moment the **delay start** is activated and shall continue for at least 10 min;

Replace in Annex G, the 15 min waiting time by 20 min waiting time

Replace in Annex B, Clause B.3 as follows:

B.3 Food mixer

This clause describes an appropriate food mixer for the dough for the small cakes specified in 9.2.2. and for the fatless sponge cake specified in 9.3.1. Mixing times and levels are determined for the Bosch MUM2 series, e.g. Bosch MUMS2ER01 or MUMS2EW00[2].

Specification of an appropriate food mixer:

– Power rating: (700 ± 50) W
– Wire balloon whisk
– Bowl, 3,8 l, top diameter (23 ± 2) cm
– Revolutions per minute with wire balloon whisk:
  – Level 1: (86 ± 8) min^{-1}
  – Level 2: (150 ± 8) min^{-1}

[2] Bosch MUMS2ER01 or MUMS2EW00 are trade names of a product supplied by Bosch. It might be commercially available by other suppliers after the date of publication of this document. This information is given for the convenience of the 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.