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BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

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Responsible committee: CPL/59/1 Dishwashers and washing machines

Interested committees:

Title: Draft BS EN IEC 60436 :2024/prAA Electric dishwashers for household use - Methods for measuring the performance.

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

- i) has any issues related to 3rd party IPR, patent or copyright
- ii) affects other national standard(s)
- iii) requires additional national guidance or information

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This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

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Responsible Committee Secretary: Ms Nicola Young (BSI)

Direct tel:

E-mail: nicola.young@bsigroup.com

Full document details: 24/30493216 DC

Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

English Version

Electric dishwashers for household use - Methods for measuring the performance

Lave-vaisselle électriques à usage domestique - Méthodes de mesure de l'aptitude à la fonction

Elektrische Geschirrspüler für den Hausgebrauch - Messverfahren für Gebrauchseigenschaften

This draft amendment prAA, if approved, will modify the European Standard prEN IEC 60436:2024; it is submitted to CENELEC members for enquiry.

Deadline for CENELEC: 2024-07-19.

It has been drawn up by CLC/TC 59X.

If this draft becomes an amendment, CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

This draft amendment was established by CENELEC in three official versions (English, French, German).

A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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28 European foreword

29 This document (prEN IEC 60436:2024/prAA:2024) has been prepared by CLC/TC 59X "Performance of
30 household and similar electrical appliances".

31 This document is currently submitted to the Enquiry.

32 The following dates are proposed:

- latest date by which the existence of this document has to be announced at national level (doa) dor + 6 months
- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) dor + 12 months
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) dor + 36 months (to be confirmed or modified when voting)

33 This document will modify prEN IEC 60436:2024 and all of its amendments and corrigenda (if any).

34 prEN 60436:2024 includes the following significant technical changes with respect to EN 60436:2020:

- 35 — Implementation of a new reference machine, which better reflects modern dishwasher energy and water
36 saving technologies. Its ability to function as a reference machine for the cleaning assessment was
37 assessed in a Round Robin Test.
- 38 — Implementation of the new reference detergent type E, which better reflects market detergents formulations.
39 It includes upgraded enzymes and a lower content of silicates to reduce the alkalinity which simplifies the
40 worldwide transportation by avoiding dangerous goods labelling and therefore improves the usage all over
41 the world.
- 42 — Implementation of an alignment factor for the cleaning performance assessment as proposed in a scientific
43 study done by a university to align test results of the previous version to the new version of this standard
44 with the new reference system described above.
- 45 — Introduction of alternatives for the oven pan and knives as the production of the current load items were
46 stopped.
- 47 — Improvement of the control of the room temperature due to a temperature measurement inside the
48 dishwasher prior to the start of the test programme.
- 49 — Update of the weight of different load items and the specified ranges to anneal the requirements in the
50 standard to the actual weight of the items.
- 51 — New requirements for the loading and handling instructions for test institutes.
- 52 — Update of supplier information annex.
- 53 — Update of Annex ZC Test report template and ZD Uncertainty of measurement.
- 54 This document is read in conjunction with prEN IEC 60436:2024.

55 This document has been prepared under a standardization request addressed to CENELEC by the European
56 Commission. The Standing Committee of the EFTA States subsequently approves these requests for its
57 Member States.

1 Modifications to Clause 5 “General conditions for measurements”

*In 5.1.1 “General information”, **replace** the second paragraph with the following:*

“Refer to manufacturer’s instructions concerning relevant test conditions for the **test machine**, including installation instructions, **detergent** amounts, **rinse aid** settings, **water softener** settings and any other information relevant to identifying **regeneration operations** (if applicable), filter type, and loading plans/instruction.”

***Add** in 5.1.1 “General information”, the following paragraph after the second paragraph:*

“Loading plans/instruction provided by the manufacturer containing additional loading parts or accessories that are not intended to be applied by the user and that are not described in the user instructions shall be disregarded for testing.”

***Replace** in 5.1.1 “General information” the first sentence of the third paragraph with the following:*

“Performance tests according to this document are generally carried out on a conditioned machine (5.2), with a **reference machine** running parallel with the **test machine(s)**, i.e. at the same time under the same conditions using soil prepared at the same time from the same batch.”

***Replace** the first paragraph of 5.2 “Sequence of test procedures and conditioning of the **test machine**”, with the following:*

“Before conducting performance tests on a **dishwasher**, it shall be operated for at least three **cycles**, using a **programme** suitable for normally or heavily soiled **tableware**, with reference **detergent** (specified in 5.7) and with reference **rinse aid** (specified in 5.8), to remove residues; a clean load or no load may be used.”

***Add** in 5.2 “Sequence of test procedures and conditioning of the **test machine**” the following sentences after the first paragraph:*

“Performance of an aged and/or used **dishwasher** can differ from a new and/or unused machine. Tracking the history (storage, tests done, use cases, modifications to software and hardware, etc.) of the **test machine** is recommended.”

***Replace** in 5.3.1.1 “Voltage” the paragraph with the following:*

“The supply voltage of the **test machine** shall be set at 230 V and maintained within the range of ± 1 % throughout the test. The supply voltage measured during the tests shall be recorded.”

***Replace** in 5.3.1.2 “Frequency” the paragraph with the following:*

“The supply frequency shall be set at 50 Hz and maintained within ± 1 % throughout the test. The measured frequency shall be reported.”

***Replace** in 5.4 “Test **programme**” the first paragraph with the following:*

“For energy labelling and ecodesign purposes, the **programme** to be tested for performance measurements shall be the “ECO” **programme** which is intended to clean normally soiled **tableware** (standard cleaning and drying **cycle**).

NOTE Z1 For noise testing see Clause 9.”

***Replace** in 5.5 “Ambient conditions” the relative humidity range with the following:*

“– Relative humidity: (55 ± 5) %”

***Add** in 5.6.2 “Water temperature” the following paragraph after the note:*

“For energy labelling and ecodesign purposes, the use of hot water is not permitted.”

***Replace** in 5.6.3 “Water hardness” the undated reference with the following dated reference:*

“EN 60734:2012”