

**KODUMAJAPIDAMISES KASUTATAVAD ELEKTRILISED
NÕUDEPESUMASINAD. TOIMIMISNÄITAJATE
MÕÕTEMEETODID**

**Electric dishwashers for household use - Test methods
for measuring the performance**

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

See Eesti standard EVS-EN 50242:2016 sisaldab Euroopa standardi EN 50242:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 50242:2016 consists of the English text of the European standard EN 50242:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.07.2016.	Date of Availability of the European standard is 01.07.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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English Version

Electric dishwashers for household use -
Methods for measuring the performance
(IEC 60436:2004 , modified + A1:2009 , modified
+ A2:2012 , modified)

Lave-vaisselle électriques à usage domestique -
Méthodes de mesure de l'aptitude à la fonction
(IEC 60436:2004 , modifiée + A1:2009 , modifiée
+ A2:2012 , modifiée)

Elektrische Geschirrspüler für den Hausgebrauch -
Messverfahren für Gebrauchseigenschaften
(IEC 60436:2004 , modifiziert + A1:2009 , modifiziert
+ A2:2012 , modifiziert)

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This European Standard exists 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.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

This document (EN 50242:2016 / EN 60436:2016) consists of the text of IEC 60436:2004, IEC 60436:2004/A1:2009 and IEC 60436:2004/A2:2012 prepared by SC 59A "Electric dishwashers" of IEC/TC 59 "Performance of household and similar electrical appliances", together with the common modifications prepared by CLC/TC 59X "Performance of household and similar electrical appliances".

The following dates are fixed:

- latest date by which this document has to be implemented (dop) 2017-04-11
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting (dow) 2018-04-11
with this document have to be withdrawn

This document supersedes EN 50242:2008 / EN 60436:2008.

EN 50242:2016 / EN 60436:2016 includes the following significant technical changes with respect to EN 50242:2008 / EN 60436:2008:

- a) introduction of new combined cleaning and drying performance assessment (Clause 7);
- b) new data on expanded measurement uncertainty (Annex ZB);
- c) new Annexes ZZA, ZZB and ZZC.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 60436:2004, IEC 60436:2004/A1:2009 and IEC 60436:2004/A2:2012 are prefixed "Z".

In this document, the common modifications to the International Standards are indicated **in red**.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with Regulations (EU) No 1059/2010, (EU) No 1016/2010 and (EC) No 1275/2008, see informative Annexes ZZA, ZZB and ZZC, which are integral parts of this document.

Endorsement notice

The text of the International Standard IEC 60436:2004, IEC 60436:2004/A1:2009 and IEC 60436:2004/A2:2012 was approved by CENELEC as a European Standard with agreed common modifications.

COMMON MODIFICATIONS

Contents

Modify the table of contents as follows:

FOREWORD

INTRODUCTION

~~INTRODUCTION TO AMENDMENT 2~~

- 1 Scope
- 2 Normative references
- 3 **Definitions related to the appliance**
- 4 List of measurements
- 5 General conditions for measurements
 - 5.1 General
 - 5.2 Conditioning of the machine under test and sequence of test procedures
 - 5.3 Electricity supply for machines
 - 5.4 Test programme
 - 5.5 Ambient conditions
 - 5.6 Water supply
 - 5.7 Detergent
 - 5.8 Rinse agent
 - 5.9 Salt
- 6 **Combined cleaning and drying performance tests**
 - 6.1 General and purpose
 - 6.2 Load
 - 6.3 Soiling agents
 - 6.4 Preparation and application of soiling agents
 - 6.5 Drying of the soiled dishes
 - 6.6 Loading and operating
 - ~~6.7 Evaluation~~
 - ~~6.8 Expressing results~~

7 Combined cleaning and drying performance assessment

7.1 General

7.2 General requirements to enable subsequent cleaning assessment

7.3 Determination of the drying performance

7.4 Determination of the cleaning performance

7.5 Results

8 Energy consumption, water consumption and time

8.1 General and purpose

8.2 Method of measurement

9 Airborne acoustical noise

Annex A (normative) Place settings and serving pieces (non-AHAM style load)

Annex B (normative) AHAM style load

Annex C (normative) Illustration of soil distribution

Annex D (normative) Test materials for laboratories

Annex E (normative) Description of the reference machine [Type 1]

Annex F (informative) Addresses of suppliers

Annex G (normative) Microwave oven and through-circulation thermal cabinet

Annex H (informative) Guidelines for assessing cleaning performance

Annex I (normative) Test enclosure for built-in dishwasher

Annex J (informative) Flow chart – test sequence for EN 50242

Annex K (informative) Shade chart

Annex L (informative) Test report format

Annex M (informative) Adjusting water consumption in the reference dishwasher

Annex N (normative) Description of the reference machine [Type 2]

Annex O (normative) Additional aspects of the energy consumption of dishwashers [based on 59D/343/CDV]

Annex ZA (informative) Pictures of the soiled items

Annex ZB (informative) Uncertainty of measurements

Annex ZC (informative) Tolerances and control procedures

Annex ZD (informative) Template for test report

Annex ZZA (informative) Relationship between this European Standard and the energy labelling requirements of Commission Delegated Regulation (EU) No 1059/2010 aimed to be covered

Annex ZZB (informative) Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EU) No 1016/2010 aimed to be covered

Annex ZZC (informative) Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EC) No 1275/2008 aimed to be covered.

Bibliography

Figure 1 – Position of the glasses on the microwave turntable

Figure G.1 – Illustration chart 1: Location of the thermocouple on upper, intermediate and lower wire sheet

Figure G.2 – Illustration chart 2: The thermal cabinet filled with dishes (pictures of the soiled items: see Annex ZA)

Figure I.1 – Test enclosure for built-in dishwasher

Figure N.1 – Maximum water level at the end of programme

Figure N.2 – Reference machine [Type 2] loading plan

Figure O.Z1 – Measurement procedure for the low power modes (left on mode and off mode)

Table 1 – Evaluation to determine the drying index

Table 2 – Evaluation of cleaning tests

Table 3 – Evaluation to determine the cleaning index

Table 4 – Numerical Values of the *t*-factor for statistical calculations

Table L.1 – Detailed results for test machine(s) and reference machine

Table ZB.1 – Relative expanded uncertainty of measured values of this European Standard

Table ZD.1 – Test report template

Table ZZA.1 – Correspondence between this European Standard and Commission Delegated Regulation (EU) No 1059/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household dishwashers [OJ L 314, 30.11.2010] and Commission's standardization request M/481

Table ZZB.1 – Correspondence between this European Standard and Commission Regulation (EU) No 1016/2010 of 10 November 2010 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household dishwashers [OJ L 293, 11.11.2010] and Commission's standardization request M/481

Table ZZC.1 – Correspondence between this European Standard and Commission Regulation (EC) No 1275/2008 of 17 December 2008 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment [OJ L 339, 18.12.2008] and Commission's standardization request M/481

Introduction

Replace the existing introductions by the following:

This new edition of EN 50242 / EN 60436 has been developed based on the mandate M/481 to CEN, CENELEC and ETSI for standardisation in the field of household dishwashers, which relates to Directive 2009/125/EC of the European Parliament and of the Council and to Directive 2010/30/EU of the European Parliament and of the Council.

Mandate M/481, issued by the European Commission, includes the standardization task to develop measures in testing household dishwashers, which ensure “that the prospective harmonised standard(s) includes a procedure that avoids an appliance being programmed to recognize the test cycles, and reacting specifically to them, with the exclusion of test cycle recognition that is active only during the manufacturing of the appliance”.

CLC/TC 59X/WG 2 has identified the deviating test conditions in the previous edition of this standard for the cleaning performance assessment (soiled test load), including relevant energy and water consumption measurements, and the drying performance assessment (unsoiled test load), excluding energy and water consumption measurements, to be the main potential source for an appliance being programmed to recognize the test cycle, and reacting specifically to them. Therefore, the Combined Cleaning and Drying evaluation (CCD) has been established to repeal former deviating test conditions, and to improve alignment with common real life household conditions.

This document submits all common modifications necessary for the application of IEC 60436:2004/A1:2009 and IEC 60436:2004/A2:2012 in Europe. Accordingly, it incorporates the changes made in EN 50242:2008/A11:2012 / EN 60436:2008/A11:2012.

In addition, this document submits modifications to Annex O “Additional aspects of the energy consumption of dishwashers” based on the FDIS draft of IEC 60436 4th Edition prepared by SC 59A “Electric dishwashers” of IEC/TC 59 “Performance of household and similar electrical appliances”.

1 Scope

In the first sentence of the first paragraph, **replace** 'International Standard' by 'European Standard'.

2 Normative references

Add the following new references:

EN 50564:2011, *Electrical and electronic household and office equipment – Measurement of low power consumption* (IEC 62301:2011, modified)

EN ISO 80000-1:2013, *Quantities and units – Part 1: General* (ISO 80000-1:2009 + Cor 1:2011)

ISO 3310 series, *Test sieves - Technical requirements and testing*

Modify the referenced documents as follows:

EN 60350 series, *Household electric cooking appliances* (IEC 60350 series)

EN 60704-2-3, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 2-3: Particular requirements for dishwashers* (IEC 60704-2-3)

EN 60704-3, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 3: Procedure for determining and verifying declared noise emission values* (IEC 60704-3)

EN 60705, *Household microwave ovens – Methods for measuring performance* (IEC 60705)

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

AHAM DW-1:~~2003~~, *Performance testing methods for household electric dishwashers*

3 Terms and definitions

Replace the heading of Clause 3 by the following:

3 Definitions related to the appliance

3.16 off mode

Delete the Note 2.

3.17 left on mode

Replace the definition by the following:

the lowest power consumption mode that may persist for an indefinite time after the completion of the programme, opened and unlatched door without any further intervention of the user

3.18 delay start mode

Delete the note.