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Household and similar electrical appliances - Safety - Part 2-5: Particular requirements for dishwashers



#### EESTI STANDARDI EESSÕNA

#### NATIONAL FOREWORD

See Eesti standard EVS-EN 60335-2-5:2015 sisaldab Euroopa standardi EN 60335-2-5:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 60335-2-5:2015 consists of the English text of the European standard EN 60335-2-5:2015.		
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 24.04.2015.	Date of Availability of the European standard is 24.04.2015.		
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.		

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile <u>standardiosakond@evs.ee</u>.

#### ICS 13.120, 97.040.40

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## EUROPEAN STANDARD NORME EUROPÉENNE

EN 60335-2-5

EUROPÄISCHE NORM

April 2015

ICS 13.120; 97.040.40

Supersedes EN 60335-2-5:2003

#### **English Version**

Household and similar electrical appliances - Safety - Part 2-5: Particular requirements for dishwashers (IEC 60335-2-5:2012, modified)

Appareils électrodomestiques et analogues - Sécurité -Partie 2-5: Exigences particulières pour les lave-vaisselle (IEC 60335-2-5:2012, modifiée) Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-5: Besondere Anforderungen für Geschirrspülmaschinen (IEC 60335-2-5:2012, modifiziert)

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

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#### **Foreword**

The text of document 61/4450/FDIS, future edition 6 of IEC 60335-2-5, prepared by IEC/TC 61 "Safety of household and similar electrical appliances" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60335-2-5:2015.

A draft amendment, which covers common modifications to IEC 60335-2-5:2012, was prepared by CLC/TC 61, "Safety of household and similar electrical appliances" and approved by CENELEC.

The following dates are fixed:

- latest date by which the document has to be implemented at (dop) 2015-10-24 national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with (dow) 2016-08-09 the document have to be withdrawn

This document supersedes EN 60335-2-5:2003.

EN 60335-2-5:2015 includes the following significant technical changes with respect to EN 60335-2-5:2003 and its amendments:

- added requirements to 22.104 to address switch issues;
- converted notes to normative text (3.1.9, 7.12, 10.1, 10.2, 15.101, 22.6, 22.103, AA.1, AA.2, Annex BB Clause 4);
- deleted notes (19.101, 22.6, 23.101, AA.2).

This Part 2 is to be used in conjunction with the latest edition of EN 60335-1 and its amendments. It was established on the basis of EN 60335-1:2012.

NOTE 1 When "Part 1" is mentioned in this standard, it refers to EN 60335-1.

This Part 2 supplements or modifies the corresponding clauses of EN 60335-1, so as to convert it into the European Standard: Safety requirements for electric dishwashers.

When a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text of Part 1 is to be adapted accordingly.

NOTE 2 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.;
- clauses, subclauses, notes, tables, figures and annexes that are additional to those in the IEC standard are prefixed with the letter Z.

NOTE 3 The following print types are used:

- requirements: in roman type;
- test specifications: in italic type;
- notes: in small roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

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 standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

### **Endorsement notice**

The text of the International Standard IEC 60335-2-5:2012 was approved by CENELEC as a European Standard with agreed common modifications.

#### COMMON MODIFICATIONS

#### Introduction

Add the following:

An investigation by CLC/TC 61 has shown that all risks from products within the scope of this standard are fully covered by the Low Voltage Directive, 2006/95/EC.

#### 1 Scope

Replace the text by the following:

This clause of Part 1 is replaced by the following.

This European Standard deals with the safety of electric dishwashers for household and similar purposes, that are intended for washing and rinsing dishes, cutlery and other utensils, their **rated voltage** being not more than 250 V for single-phase appliances and 480 V for other appliances.

Appliances intended to be used by laymen in shops and other premises for normal housekeeping purposes, are within the scope of this European Standard.

NOTE Z101 Examples of appliance for household environment are appliances for typical housekeeping functions used in the household environment that may also be used by non-expert users for typical housekeeping functions:

- in shops and other similar working environments;
- in farm houses;
- by clients in hotels, motels and other residential type environments;
- in bed and breakfast type environments.

NOTE Z102 Household environments include the dwelling and its associated buildings, the garden, etc.

As far as is practicable, this European Standard deals with the common hazards presented by appliances that are encountered by all persons in household and similar environments.

However, in general, it does not take into account

- children playing with the appliance,
- the use of the appliance by very young children,
- the use of the appliance by young children without supervision,
- user maintenance by children, including the cleaning of the appliance.

It is recognised that **very vulnerable people** may have needs beyond the level addressed in this European Standard.

This European Standard does not apply to

- commercial electric dishwashing machines (EN 60335-2-58),
- appliances intended for industrial purposes,
- appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

NOTE Z103 Attention is drawn to the fact that

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary,
- in many countries, additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities.

#### 6 Classification

**6.1** Delete the modification in IEC 60335-2-5:2012 as it is covered by EN 60335-1:2012.

#### 11 Heating

Add the following modification:

#### **11.8** *Modification*:

Replace the first paragraph of Part 1 by the following: "During the test, the temperature rises are monitored continuously and shall not exceed the values shown in Table 3 and Table Z101 in accordance with 11.Z101".

In Table 3, delete the row "External enclosure of motor-operated appliances, except handles held in normal use" and the corresponding footnotes.

Add the following Table Z101.

Table Z101 - Maximum temperature rises for external surfaces under normal operating conditions

Surface <sup>a</sup>	Temperature rise K			
C	Surfaces of appliances situated not more than 850 mm above the floor after installation		Surfaces situated more than 850 mm above the	
9	Front surfaces	Other surfaces	floor after installation	
Bare metal	40	45	45	
Coated metal b	45	55	55	
Glass and ceramic	55	60	60	
Plastic and plastic coating > 0,3 mm c	60	65	65	

When the thickness of plastic coating does not exceed 0,3 mm, the temperature rise limits of coated metal or glass and ceramic apply

Add the following new subclause:

#### 11.Z101 Temperature rises are not measured

- on the underside of appliances intended to be used on a working surface or floor,
- on the rear surface of appliances which, according to the instructions, shall be placed against a wall.

#### 20 Stability and mechanical hazards

**20.102** Add the following at the end of the requirement:

When the door is opened, the programme cycle shall stop.

NOTE Z101 Draining is neglected.

Metal is considered coated when a coating having a minimum thickness of 80 µm made by enamel or non substantially plastic coating is used.

The temperature rise limit applies also for plastic material having a metal finish of thickness less than 0,1 mm.

Add the following:

## Annex ZC (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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

#### Addition:

Publication	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 60436	-	Electric dishwashers for household use Methods for measuring the performance		N 60436 <i>-</i>
ISO 1817	2011	Rubber, vulcanised or thermoplastic – Determination of the effect of liquids	-	-
ISO 4046-4	2002	Paper, board, pulps and related terms - Vocabulary Part 4: Paper and board grades and converted products		