

**Majapidamis- ja muud taolised
elektriseadmed. Ohutus. Osa 2-5:
Erinõuded kaubanduslikele
nõudepesumasinatele**

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 60335-2-5:2003 sisaldab Euroopa standardi EN 60335-2-5:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.12.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 60335-2-5:2003 consists of the English text of the European standard EN 60335-2-5:2003.</p> <p>This document is endorsed on 18.12.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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ICS 13.120, 97.040.40

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EUROPEAN STANDARD

EN 60335-2-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2003

ICS 97.040.40; 13.120

Supersedes EN 60335-2-5:1995 + A1:1999 + A2:2000

English version

**Household and similar electrical appliances –
Safety**

Part 2-5: Particular requirements for dishwashers
(IEC 60335-2-5:2002 + corrigendum 2003, modified)

Appareils électrodomestiques et
analogues –
Sécurité
Partie 2-5: Règles particulières
pour les lave-vaisselle
(CEI 60335-2-5:2002 + corrigendum 2003,
modifiée)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke
Teil 2-5: Besondere Anforderungen
für Geschirrspülmaschinen
(IEC 60335-2-5:2002 + Corrigendum 2003,
modifiziert)

This European Standard was approved by CENELEC on 2003-03-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 61/2099/FDIS, future fifth edition of IEC 60335-2-5, prepared by the IEC Technical Committee 61, was submitted to the IEC-CENELEC parallel vote.

As a result of the Kista meeting of CENELEC TC 61 in May 2002, a draft amendment prAA containing the relevant existing common modifications was submitted to the formal vote.

The texts of the FDIS and the prAA were approved by CENELEC as a new edition of EN 60335-2-5 on 2003-03-01.

This European Standard replaces EN 60335-2-5:1995 + A1:1999 + A2:2000.

The following dates are applicable:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2004-03-01
- date on which national standards
conflicting with the EN have to be withdrawn (dow) 2006-03-01

This part 2 has to be used in conjunction with EN 60335-1, Household and similar electrical appliances – Safety – Part 1: General requirements. It was established on the basis of the 2002 edition of that standard. Amendments and revisions of Part 1 have also to be taken into account and the dates when such changes become applicable will be stated in the relevant amendment or revision of Part 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 1 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.;
- subclauses, notes and annexes that are additional to those in the IEC standard are prefixed with the letter Z.

NOTE 2 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.

There are no special national conditions causing a deviation from this European Standard, other than those listed in Annex ZA to EN 60335-1.

There are no national deviations from this European Standard, other than those listed in Annex ZB to EN 60335-1.

p NOTE In this document, p is used in the margin to indicate instructions for preparing the printed version.

Introduction

p Add:

An investigation by CENELEC TC 61 has shown that all risks from products within the scope of this standard are fully covered by the Low Voltage Directive, 73/23/EEC. For products having mechanical moving parts, a risk assessment in accordance with the Machinery Directive, 98/37/EC, has shown that the risks are mainly of electrical origin and consequently this directive is not applicable. However, the relevant essential safety requirements of the Machinery Directive are covered by this standard together with the principal objectives of the Low Voltage Directive.

Endorsement notice

The text of the International Standard IEC 60335-2-5:2002 including the corrigendum May 2003 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

2 Normative references

p Add:

IEC 61770, *Electric appliances connected to the water mains - Avoidance of backsiphonage and failure of hose-sets*

19 Abnormal operation

p **19.101** Add to note 1:

- failure or blocking of the mechanical part of a water level switch.

This fault condition is not applied if the cross section of the tube supplying the air chamber with water is greater than 500 mm² with a minimum dimension of 10 mm and if the outlet of the chamber is at least 20 mm above the highest water level. The tube connecting the air-chamber to the water level switch is to be fixed so that there is no likelihood of bending or pinching.

24 Components

p Add:

24.Z101 Components necessary for the connection of the dishwasher to the water mains shall comply with IEC 61770. They shall be supplied with the appliance.

Compliance is checked by inspection.

p Add:

Annex ZC
(normative)**Normative references to international publications
with their corresponding European publications**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60436	— ¹⁾	Methods for measuring the performance of electric dishwashers	— ²⁾	
IEC 61770	— ⁴⁾	Electric appliances connected to the water mains - Avoidance of backsiphonage and failure of hose-sets	EN 61770	1999 ³⁾
ISO 1817	1999	Rubber, vulcanised – Determination of the effect of liquids	—	—

¹⁾ undated reference

²⁾ EN 50242, which is related to, but not directly equivalent with IEC 60436 , applies instead.

³⁾ valid edition at date of issue

INTERNATIONAL STANDARD

IEC
60335-2-5

Fifth edition
2002-03

**Household and similar electrical appliances –
Safety –**

**Part 2-5:
Particular requirements for dishwashers**

*Appareils électrodomestiques et analogues –
Sécurité –*

*Partie 2-5:
Règles particulières pour les lave-vaisselle*



Reference number
IEC 60335-2-5:2002(E)

Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

Further information on IEC publications

The technical content of IEC publications is kept under constant review by the IEC, thus ensuring that the content reflects current technology. Information relating to this publication, including its validity, is available in the IEC Catalogue of publications (see below) in addition to new editions, amendments and corrigenda. Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is also available from the following:

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- **Catalogue of IEC publications**
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INTERNATIONAL STANDARD

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –****Part 2-5: Particular requirements for dishwashers**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

This part of International Standard IEC 60335 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

This fifth edition cancels and replaces the fourth edition published in 1992 and its amendments 1 (1999) and 2 (1999). It constitutes a technical revision.

The text of this part of IEC 60335 is based on the following documents:

FDIS	Report on Voting
61/2099/FDIS	61/2130/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the fourth edition (2001) of that standard.

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

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC 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 in Part 1 is to be adapted accordingly.

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- *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 associated noun are also in bold.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

The following differences exist in the countries indicated below.

- 6.1: Appliances may be of class 0I, if the rated voltage does not exceed 150 V (Japan).
- 20.102: A 30 000 cycle endurance test is carried out on door interlocks (USA).
- 25.7: The supply cord is required to have a free length of at least 1,5 m (USA).
- Annex AA: The detergent and rinsing agent are different (USA).
- Annex BB: Different tests are carried out (USA).

The contents of the corrigendum of May 2003 have been included in this copy.

INTRODUCTION

It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

This standard recognizes the internationally accepted level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of appliances when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice.

This standard takes into account the requirements of IEC 60364 as far as possible so that there is compatibility with the wiring rules when the appliance is connected to the supply mains. However, national wiring rules may differ.

If an appliance within the scope of this standard also incorporates functions that are covered by another part 2 of IEC 60335, the relevant part 2 is applied to each function separately, as far as is reasonable. If applicable, the influence of one function on the other is taken into account.

This standard is a product family standard dealing with the safety of appliances and takes precedence over horizontal and generic standards covering the same subject.

An appliance that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features which impair the level of safety covered by these requirements.

An appliance employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be considered to comply with the standard.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-5: Particular requirements for dishwashers

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electric dishwashers for household use 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.

As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by all persons in and around the home. However, in general, it does not take into account

- the use of appliances by young children or infirm persons without supervision;
- playing with the appliance by young children.

NOTE 101 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.

NOTE 102 This standard does not apply to

- commercial electric dishwashing machines (IEC 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).

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60436, *Methods for measuring the performance of electric dishwashers*

ISO 1817:1999, *Rubber, vulcanized – Determination of the effect of liquids*

3 Definitions

This clause of Part 1 is applicable except as follows.