

SLOVENSKI STANDARD SIST EN 60335-2-2:2003

01-september-2003

BUXca Yý U.

SIST EN 60335-2-2:1997

SIST EN 60335-2-2:1997/A1:1998 SIST EN 60335-2-2:1997/A2:2000

; cgdcX]b^g_]']b'dcXcVb]'YY_lf] b]'UdUfUh]'!'JUfbcgh!'&!&"XY.'DcgYVbY'nU\ hYj Y'nU gYgUb]_Y'dfU\ i ']b'UdUfUhY'nU']ý Yb^Y'g'gYgUb^Ya 'j cXY'fl97'*\$'')!&!&&\$\$&\ gdfYa Yb^YbŁ

Household and similar electrical appliances - Safety -- Part 2-2: Particular requirements for vacuum cleaners and water-suction cleaning appliances (Standards.iten.ar)

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -- Teil 2-2: Besondere Anforderungen für Staubsauger und Wassersauger 794-bf0b-

f0a32ff51ceb/sist-en-60335-2-2-2003

Appareils électrodomestiques et analogues - Sécurité -- Partie 2-2: Règles particulières pour les aspirateurs et les appareils de nettoyage à aspiration d'eau

Ta slovenski standard je istoveten z: EN 60335-2-2:2003

ICS:

13.120 Varnost na domu Domestic safety

97.080 Aparati za nego tal Floor treatment appliances

SIST EN 60335-2-2:2003 en

SIST EN 60335-2-2:2003

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 60335-2-2:2003 https://standards.iteh.ai/catalog/standards/sist/df2c705c-03db-4794-bf0b-f0a32ff51ceb/sist-en-60335-2-2-2003

EUROPEAN STANDARD

EN 60335-2-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2003

ICS 13.120; 97.080

Supersedes EN 60335-2-2:1995

English version

Household and similar electrical appliances – Safety

Part 2-2: Particular requirements for vacuum cleaners and water-suction cleaning appliances

(IEC 60335-2-2:2002, modified)

Appareils électrodomestiques et analogues – Sécurité
Partie 2-2: Règles particulières pour les aspirateurs et les appareils de nettoyage à aspiration d'eau (CEI 60335-2-2:2002, modifiée)

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke Teil 2-2: Besondere Anforderungen für Staubsauger und Wassersauger (IEC 60335-2-2:2002, 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, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

SIST EN 60335-2-2:2003

https://standards.iteh.ai/catalog/standards/sist/df2c705c-03db-4794-bf0b-

f0a32ff51ceb/sist-en-60335-2-2-2003

European Committee for Electrotechnical Standardization Comité Européen de Normalisation Electrotechnique

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

Europäisches Komitee für Elektrotechnische Normung

Foreword

The text of document 61/2110/FDIS, future fifth edition of IEC 60335-2-2, 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 60335-2-2 on 2003-03-01.

This European Standard replaces EN 60335-2-2:1995 + A1:1998 + 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 vacuum cleaners and water-suction cleaning appliances.

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; (standards.iteh.ai)

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

SIST EN 60335-2-2:2003

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.

f0a32ff51ceb/sist-en-60335-2-2-2003

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 60335-2-2:2002 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

6 Classification

p 6.1 Replace the text of the modification by:

Vacuum cleaners intended for household use only, other than centrally-sited vacuum cleaners, and vacuum cleaners for animal grooming shall be class II or class III.

Other vacuum cleaners and water suction cleaning appliances shall be class I, class II or class III.

22 Construction

p 22.40 Delete the addition.

p Add:

iTeh STANI (normative) REVIEW

Normative references to international publications with their corresponding European publications

Publication	https://si Year	tandards.iteh.ai/catalog/standards/sist/df2c705c-03db-4794 <u>Title</u> f0a32ff51ceb/sist-en-60335-2-2-2003	-bt0b- EN/HD	<u>Year</u>
ISO 3864	_1)	Safety colours and safety signs	_	
ISO 6344-2	_1)	Coated abrasives – Grain size analysis – Part 2: Determination of grain size distribution of macrogrits P12 to P220	-	-

¹⁾ undated reference

SIST EN 60335-2-2:2003

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 60335-2-2:2003 https://standards.iteh.ai/catalog/standards/sist/df2c705c-03db-4794-bf0b-f0a32ff51ceb/sist-en-60335-2-2-2003

INTERNATIONAL STANDARD

IEC 60335-2-2

Fifth edition 2002-05

Household and similar electrical appliances – Safety –

Part 2-2:

Particular requirements for vacuum cleaners and water-suction cleaning appliances

Appareils électrodomestiques et analogues – Sécurité –

Partie 2-2:

Règles particulières pour les aspirateurs et les appareils de nettoyage à aspiration d'eau

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 60355-2-2:2003 — Copyright - all rights reserved https://standards.itefl.ai/catalog/standards/sist/dl2c/05c-03db-4794-bf0b-

No part of this 2 publication may be reproduced 063 utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale International Electrotechnical Commission Международная Электротехническая Комиссия PRICE CODE

.

For price, see current catalogue

CONTENTS

FO	REWORD	3			
INT	RODUCTION	5			
1	Scope	6			
2	Normative references	6			
3	Definitions	7			
4	General requirement	8			
5	General conditions for the tests	8			
6	Classification	8			
7	Marking and instructions	8			
8	Protection against access to live parts	9			
9	Starting of motor-operated appliances	10			
10	Power input and current	10			
11	Heating	10			
12	Void	10			
13	Leakage current and electric strength at operating temperature	10			
14	Transient overvoltages	11			
15	Moisture resistance	11			
16	Leakage current and electric strength	12			
17	Overload protection of transformers and associated circuits	12			
18	Endurance	12			
19	Abnormal operation	12			
20	Stability and mechanical hazards	13			
21	Mechanical strength	14			
22	Construction	15			
23	Internal wiring	16			
24	Components	.16			
25	Supply connection and external flexible cords Terminals for external conductors DARD PREVIEW	16			
26	Terminals for external conductors DARD PREVIEW	.17			
27	Provision for earthing (standards.iteh.ai)	.17			
28	Screws and connections	.17			
29	Clearances, creepage distances and solid insulation https://standards.iteh.ai/catalog/standards/sist/df2c705c-03db-4794-bf0b-	.17			
30	Resistance to heat and fire 10x32ff5-1ceb/sist-cn-60335-2-2-2-2003	. 17			
31	Resistance to rusting	. 17			
32	Radiation, toxicity and similar hazards	. 17			
Anı	nexes	.21			
Bib	Bibliography				
Fig	ure 101 – Apparatus for testing the abrasion resistance of current-carrying hoses	. 18			
Figure 102 – Apparatus for testing the resistance to flexing of current-carrying hoses19					
_	Figure 103 – Configuration of the hose for the freezing treatment				
Fig	Figure 104 – Flexing positions for the hose after removal from the freezing cabinet20				

INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-2: Particular requirements for vacuum cleaners and water-suction cleaning appliances

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 1993 and its amendments 1 (1998) and 2 (1999). It constitutes a technical revision.

The text of this standard is based on the following documents:

FDIS Report on voting
61/2110/PDTSEN 60335-2-2:261/2143/RVD
https://standards.ireh.ai/catalog/standards/sisv/di2c705c-03db-4794-bf0b

f0a32ff51ceb/sist-en-60335-2-2-2003

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 vacuum cleaners and water-suction cleaning appliances.

-4-

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.

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.

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.

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.

- 3.1.9: Normal operation is defined differently (USA).
- 6.1: Class 0 appliances are allowed (Canada, Japan, USA).
- 6.1: Household vacuum cleaners are required to be class II or class III (Denmark, France, Italy, Netherlands, Norway and Turkey).
- 6.2: IPX4 is not required (USA).
- 7.1: The additional marking for appliance outlets for accessories is not required (USA).
- 10.1: The power input of booster settings is taken into account (USA).
- 11.5: Booster settings are activated every 2 min out of 8 min (USA).
- 11.7: The test is carried out with one-third of the cord unreeled until steady conditions are established (USA).
- 15.2: The test is carried out differently (USA) ards.iteh.ai)
- 16.3: The test is carried out differently (USA).
- 21.101: The tests are carried out differently (Canada and USA).
- 21.102: The tests are carried out differently (Canada and USA) 05c-03db-4794-bf0b-
- 21.103: The tests are carried differently (Cahada and USA) 2-2-2003
- 21.104: This test is not carried out (USA).
- 25.1: An appliance inlet may be provided if the connector is locked in position (USA).
- 25.7: Lighter cords are allowed for vacuum cleaners for household use, other than centrally-sited types (USA).

60335-2-2 © IEC:2002(E)

- 5 -

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.

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN 60335-2-2:2003</u> https://standards.iteh.ai/catalog/standards/sist/df2c705c-03db-4794-bf0b-f0a32ff51ceb/sist-en-60335-2-2-2003