



# UL 60335-2-67

## STANDARD FOR SAFETY

Household and Similar Electrical Appliances -  
Safety - Part 2-67: Particular requirements for floor  
treatment machines, for commercial use

ULNORM.COM : Click to view the full PDF of UL 60335-2-67 2017



ANSI/UL 60335-2-67-2017



Standards Council of Canada  
Conseil canadien des normes

## SCC FOREWORD

### National Standard of Canada

A National Standard of Canada is a standard developed by an SCC-accredited Standards Development Organization (SDO), and approved by the Standards Council of Canada (SCC), in accordance with SCC's Requirements and Guidance-Accreditation for Standards Development Organizations, and Requirements and Guidance-Approval of National Standards of Canada Designation. More information on National Standard requirements can be found at [www.scc.ca](http://www.scc.ca). An SCC-approved standard reflects the consensus of a number of experts whose collective interests provide, to the greatest practicable extent, a balance of representation of affected stakeholders. National Standards of Canada are intended to make a significant and timely contribution to the Canadian interest.

SCC is a Crown corporation within the portfolio of Industry Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts. Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at [www.scc.ca](http://www.scc.ca).

Users should always obtain the latest edition of a National Standard of Canada from the standards development organization responsible for its publication, as these documents are subject to periodic review

ULNORM.COM : Click to view the full PDF of UL 60320-2-67 2017

UL Standard for Safety for Household and Similar Electrical Appliances – Safety – Part 2-67: Particular requirements for floor treatment machines, for commercial use, UL 60335-2-67

First Edition, Dated December 22, 2017

### **Summary of Topics**

***UL 60335-2-67 is an adoption of IEC 60335-2-67, Safety Standard for of Household and Similar Electrical Appliances, Part 2-67: Particular requirements for floor treatment machines, for commercial use (Edition 4, Issued by the IEC March 2003). Please note that the national difference document incorporates all of the U.S. national differences for UL 60335-2-67.***

The new requirements are substantially in accordance with Proposal(s) on this subject dated April 21, 2017 and September 1, 2017.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical photocopying, recording, or otherwise without prior permission of UL.

UL provides this Standard “as is” without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability or fitness for any purpose.

In no event will UL be liable for any special, incidental, consequential, indirect or similar damages, including loss of profits, lost savings, loss of data, or any other damages arising out of the use of or the inability to use this Standard, even if UL or an authorized UL representative has been advised of the possibility of such damage. In no event shall UL’s liability for any damage ever exceed the price paid for this Standard, regardless of the form of the claim.

Users of the electronic versions of UL’s Standards for Safety agree to defend, indemnify, and hold UL harmless from and against any loss, expense, liability, damage, claim, or judgment (including reasonable attorney’s fees) resulting from any error or deviation introduced while purchaser is storing an electronic Standard on the purchaser’s computer system.

ULNORM.COM : Click to view the full PDF of UL 60335-2-67 2017

No Text on This Page

[ULNORM.COM](http://ULNORM.COM) : Click to view the full PDF of UL 60335-2-67 2017



CSA Group  
CAN/CSA-C22.2 No. 60335-2-67:17  
First Edition  
(IEC 60335-2-67:2012, MOD)



Underwriters Laboratories Inc.  
UL 60335-2-67  
First Edition

## Household and Similar Appliances – Safety – Part 2-67: Particular requirements for floor treatment machines, for commercial use

December 22, 2017

This national standard is based on publication IEC 60335-2-67, Edition 4:2012.

ULNORM.COM : Click to view the full PDF of UL 60335-2-67 2017



ANSI/UL 60335-2-67-2017



## **Commitment for Amendments**

This standard is issued jointly by the Canadian Standards Association (operating as “CSA Group”) and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to CSA Group or UL at anytime. Revisions to this standard will be made only after processing according to the standards development procedures of CSA Group and UL. CSA Group and UL will issue revisions to this standard by means of a new edition or revised or additional pages bearing their date of issue.

---

**ISBN 978-1-4883-0766-9 Copyright © 2017**

## **Canadian Standards Association**

All rights reserved. No part of this publication may be reproduced in any form whatsoever without the prior permission of the publisher.

This Standard is subject to review within five years from the date of publication, and suggestions for its improvement will be referred to the appropriate committee. The technical content of IEC and ISO publications is kept under constant review by IEC and ISO. To submit a proposal for change, please send the following information to [inquires@csagroup.org](mailto:inquires@csagroup.org) and include “Proposal for change” in the subject line: Standard designation (number); relevant clause, table, and/or figure number; wording of the proposed change; and rationale for the change.

To purchase CSA Group Standards and related publications, visit CSA Group’s Online Store at [shop.csa.ca](http://shop.csa.ca) or call toll-free 1-800-463-6727 or 416-747-4044.

---

## **Copyright © 2017 Underwriters Laboratories Inc.**

UL’s Standards for Safety are copyrighted by UL. Neither a printed nor electronic copy of a Standard should be altered in any way. All of UL’s Standards and all copyrights, ownerships, and rights regarding those Standards shall remain the sole and exclusive property of UL.

This ANSI/UL Standard for Safety consists of the First Edition. The most recent designation of ANSI/UL 60335-2-67 as an American National Standard (ANSI) occurred on December 22, 2017. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface. The National Difference Page and IEC Foreword are also excluded from the ANSI approval of IEC-based standards.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL’s On-Line Collaborative Standards Development System (CSDS) at <https://csds.ul.com>.

To purchase UL Standards, visit UL’s Standards Sales Site at <http://www.shopulstandards.com/HowToOrder.aspx> or call toll-free 1-888-853-3503.

---

**CONTENTS**

<b>PREFACE</b> .....	6
<b>NATIONAL DIFFERENCES</b> .....	8
<b>FOREWORD</b> .....	9
<b>INTRODUCTION</b> .....	12
1 Scope .....	13
2 Normative references .....	15
3 Terms and definitions .....	17
4 General requirement .....	20
5 General conditions for the tests .....	20
6 Classification .....	21
7 Marking and instructions .....	21
7.14DV Tags .....	28
8 Protection against access to live parts .....	29
9 Starting of motor-operated appliances .....	29
10 Power input and current .....	29
11 Heating .....	30
12 Void .....	30
13 Leakage current and electric strength at operating temperature .....	30
14 Transient overvoltages .....	30
15 Moisture resistance .....	31
16 Leakage current and electric strength .....	32
17 Overload protection of transformers and associated circuits .....	33
18 Endurance .....	33
19 Abnormal operation .....	33
20 Stability and mechanical hazards .....	34
20.103 Fuel tank .....	35
20.104 Internal combustion engine powered machines using liquefied petroleum gas .....	35
21 Mechanical strength .....	35
22 Construction .....	38
22.105 Guards .....	40
23 Internal wiring .....	41
24 Components .....	41
24.1.3ADV.1 General .....	42
24.1.3ADV.2 Overload test .....	42
25 Supply connection and external flexible cords .....	43
26 Terminals for external conductors .....	45
27 Provision for earthing .....	45
28 Screws and connections .....	45
29 Clearances, creepage distances and solid insulation .....	45
30 Resistance to heat and fire .....	45
31 Resistance to rusting .....	46
32 Radiation, toxicity, and similar hazards .....	46

## Annexes

### Annex A (informative) Routine tests

### Annex B (normative) Appliances powered by rechargeable batteries

13 Leakage current and electric strength at operating temperature .....	54
16 Leakage current and electric strength .....	54

### Annex D (normative) Thermal motor protectors

### Annex DVA (informative) Component standards cross reference

### Annex AA (normative) Precast paving slabs

### Annex BB (normative) Requirements for internal combustion engine powered machines using liquefied petroleum gas (LPG)

BB.1 Containers .....	58
BB.1.1 General .....	58
BB.1.2 Containers to be filled by the user .....	59
BB.1.3 Removable containers .....	59
BB.1.3.101DV.1 LP-Gas container bracket load test .....	59
BB.1.4.101DV.1 Non-removable containers .....	60
BB.2 LPG piping .....	60
BB.3 Equipment .....	62
BB.101DV.1 Marking .....	62

### Annex CC (informative) Emission of acoustical noise

CC.1 Noise reduction .....	64
CC.2 Noise test code .....	64
CC.2.1 Emission sound pressure level determination .....	64
CC.2.2 Sound power level determination .....	64
CC.2.3 Operating conditions .....	64
CC.2.4 Measurement uncertainties .....	65
CC.2.5 Information to be recorded .....	65
CC.2.6 Information to be reported .....	65
CC.2.7 Declaration and verification of noise emission values .....	65

### Annex DD (informative) Emission of vibration

DD.1 Reduction of vibration .....	68
DD.2 Information on vibration emission .....	68

**Annex 101.DVA (normative) Requirements for internal combustion engine powered machines using fuels such as, but not limited to, ethanol-gasoline blends, gasoline, bio-diesel, and diesel**

101.DVA.1 Test liquids .....	.69
101.DVA.2 Marking and instructions .....	.70
101.DVA.3 Moisture resistance .....	.71
101.DVA.4 Stability and mechanical hazards .....	.71
101.DVA.5 Mechanical strength .....	.73
101.DVA.6 Construction .....	.75
101.DVA.7 Resistance to heat and fire .....	.77
101.DVA.8 Resistance to rusting .....	.78

**Annex 101.DVB (normative) Component standards****Annex 101.DVC (normative) Tabs used in electrical quick-connect terminals**

101.DVC.1 General .....	.82
101.DVC.2 Material requirements .....	.82
101.DVC.3 Dimensional requirements .....	.82

**Bibliography**

ULNORM.COM : Click to view the full PDF of UL 60335-2-67 2017

## PREFACE

This is the harmonized CSA Group and UL standard for Household and Similar Appliances – Safety – Part 2-67: Particular requirements for floor treatment machines, for commercial use. It is the first edition of CAN/CSA-C22.2 No. 60335-2-67, and the first edition of UL 60335-2-67. This edition of CAN/CSA C22.2 No. 60335-2-67 replaces the previous edition published in 2001 as CAN/CSA-E60335-2-67 (adopted IEC 60335-2-67: 1997).

This harmonized standard is based on IEC Publication 60335-2-67: Edition 4, Household and similar electrical appliances – Safety – Part 2-67: Particular requirements for floor treatment machines, for commercial use, issued March 2012. IEC 60335-2-67 is copyrighted by the IEC.

This harmonized standard was prepared by CSA Group, and Underwriters Laboratories Inc. (UL). The efforts and support of the Technical Harmonization Committee, 335K are gratefully acknowledged.

This standard is considered suitable for use for conformity assessment within the stated scope of the standard.

This standard was reviewed by the CSA Subcommittee on Electrical Motor and Battery-Operated Cleaning Appliances for Industrial and Commercial Use, under the jurisdiction of the CSA Technical Committee on Consumer and Commercial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee. This standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

This Standard has been approved by the American National Standards Institute (ANSI) as an American National Standard.

### Application of Standard

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

**Note:** Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

CAN/CSA-C22.2 No. 60335-2-67, is to be used in conjunction with the first edition of CAN/CSA-C22.2 No. 60335-1:11. The requirements for floor treatment machines, for commercial use, are contained in this Part 2 Standard and CAN/CSA No. 60335-1:11. Requirements of this Part 2 Standard, where stated, amend the requirements of CAN/CSA-C22.2 No. 60335-1:11. Where a particular subclause of CAN/CSA-C22.2 No. 60335-1:11 is not mentioned in CAN/CSA-C22.2 No. 60335-2-67, the CAN/CSA-C22.2 No. 60335-1:11 subclause applies.

UL 60335-2-67 is to be used in conjunction with the fifth edition of UL 60335-1. Requirements of this Part 2 Standard, where stated, amend the requirements of UL 60335-1. Where a particular subclause of UL 60335-1 is not mentioned in UL 60335-2-67, the UL 60335-1 subclause applies.

### Level of Harmonization

This standard adopts the IEC text with national differences.

This standard is published as an equivalent standard for CSA Group and UL.

An equivalent standard is a standard that is substantially the same in technical content, except as follows: Technical national differences are allowed for codes and governmental regulations as well as those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental climatic, geographical, technological, or infrastructural factors, scientific justification, or the level of protection that the country considers appropriate. Presentation is word for word except for editorial changes.

All national differences from the IEC text are included in the CSA Group and UL versions of the standard. While the technical content is the same in each organization's version, the format and presentation may differ.

### **Reasons for differences from IEC**

Differences from the IEC are being added in order to address regulatory and safety situations present in the US and Canada.

### **Interpretations**

The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

### **IEC Copyright**

For CSA Group, the text, figures, and tables of International Electrotechnical Commission Publication 60335-2-67, Household and similar electrical appliances – Safety – Part 2-67: Particular requirements for floor treatment machines, for commercial use, copyright 2012, are used in this standard with the consent of the International Electrotechnical Commission. The IEC Foreword and Introduction are not a part of the requirements of this standard but are included for information purposes only.

These materials are subject to copyright claims of IEC and UL. No part of this publication may be reproduced in any form, including an electronic retrieval system, without the prior written permission of UL. All requests pertaining to this Standard should be submitted to UL.

## NATIONAL DIFFERENCES

### GENERAL

In the CSA Group and UL publications of this standard, National Differences from the text of International Electrotechnical Commission (IEC) Publication 60335-2-67, Household and similar electrical appliances – Safety – Part 2-67: Particular requirements for floor treatment machines, for commercial use, copyright 2012 are indicated by notations (differences) and are presented in bold text. The national difference type is included in the body.

There are five types of National Differences as noted below. The difference type is noted on the first line of the National Difference in the standard. The standard may not include all types of these National Differences.

**DR** – These are National Differences based on the **national regulatory requirements**.

**D1** – These are National Differences which are based on **basic safety principles and requirements**, elimination of which would compromise safety for consumers and users of products.

**D2** – These are National Differences from IEC requirements based on existing **safety practices**. These requirements reflect national safety practices, where empirical substantiation (for the IEC or national requirement) is not available or the text has not been included in the IEC standard.

**DC** – These are National Differences based on the **component standards** and will not be deleted until a particular component standard is harmonized with the IEC component standard.

**DE** – These are National Differences based on **editorial comments or corrections**.

Each national difference contains a description of what the national difference entails. Typically one of the following words is used to explain how the text of the national difference is to be applied to the base IEC text:

**Addition / Add** - An addition entails adding a complete new numbered clause, subclause, table, figure, or annex. Addition is not meant to include adding select words to the base IEC text.

**Modification / Modify** - A modification is an altering of the existing base IEC text such as the addition, replacement or deletion of certain words or the replacement of an entire clause, subclause, table, figure, or annex of the base IEC text.

**Deletion / Delete** - A deletion entails complete deletion of an entire numbered clause, subclause, table, figure, or annex without any replacement text.

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

---

### HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY – Part 2-67: Particular requirements for floor treatment machines, for commercial use

## FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. 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 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 IEC National Committees.

3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.

4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.

5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.

6) All users should ensure that they have the latest edition of this publication.

7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.

8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.

9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60335-2-67 has been prepared by subcommittee 61J: Electrical motor-operated cleaning appliances for commercial use, of IEC technical committee 61: Safety of household and similar electrical appliances.

This fourth edition cancels and replaces the third edition published in 2002 and its Amendment 1 (2005). It constitutes a technical revision.

The principal changes in this edition as compared with the third edition of IEC 60335-2-67 are as follows (minor changes are not listed):

- the title has been changed for better distinction with regard to IEC 60335-2-72;
- the scope has been revised editorially to avoid misunderstandings;
- terms and definitions has been revised with regard to the requirements revised;
- the standard has been revised in general and updated regarding state-of-the-art, as far as necessary, in particular some changes have been made to Clauses 15, 22, and 25;
- a new Annex BB (LPG requirements) was added;
- a new Annex CC 'Emission of acoustical noise' was added;
- a new Annex DD 'Emission of vibration' was added.

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

FDIS	Report on voting
61J/489/FDIS	61J/498/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 publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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 fifth edition (2010) 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 floor treatment machines for commercial use.

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.

A list of all parts of the IEC 60335 series, under the general title: *Household and similar electrical appliances – Safety*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under “<http://webstore.iec.ch>” in the data related to the specific publication. At this date, the publication will be

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

**IMPORTANT** – The ‘colour inside’ logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

**101DV DE Modify Note 1 and the paragraph following it in the Part 2 Foreword by replacing it with the following:**

Note 1 When “Part 1” is mentioned in this standard, it refers to CAN/CSA-C22.2 No. 60335-1-11/UL 60335-1 (5<sup>th</sup> Ed.)

This part 2 supplements or modifies the corresponding clauses in CAN/CSA-C22.2 No. 60335-1 Ed 1: 2011-10-31 / UL 60335-1 Ed. 5: 2011-10-31 (based on IEC 60335-1 Ed. 4.2:2006), so as to convert that publication into the CSA/UL standard: Particular requirements for floor treatment machines for commercial use.

**102DV DE Modify the paragraph following Note 3 in the Part 2 Foreword by replacing it with the following:**

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

**103DV DE Modification by adding the following text at the end of the Part 2 Foreword:**

The numbering system in this Standard uses a space instead of a comma to indicate thousands and uses a comma instead of a period to indicate a decimal point. For example, 1 000 means 1, 000 and 1, 01 means 1.01.

**104DV D2 Modification by adding the following text to Clause DV.2 of the Part 1 Foreword:**

Relevant requirements for components are listed in Annex 101.DVB.

## 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 and takes into account the way in which electromagnetic phenomena can affect the safe operation of appliances.

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.

When a part 2 standard does not include additional requirements to cover hazards dealt with in Part 1, Part 1 applies.

NOTE 1 This means that the technical committees responsible for the part 2 standards have determined that it is not necessary to specify particular requirements for the appliance in question over and above the general requirements.

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.

NOTE 2 Horizontal and generic standards covering a hazard are not applicable since they have been taken into consideration when developing the general and particular requirements for the IEC 60335 series of standards. For example, in the case of temperature requirements for surfaces on many appliances, generic standards, such as ISO 13732-1 for hot surfaces, are not applicable in addition to Part 1 or part 2 standards.

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 that 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 2-67: Particular requirements for floor treatment machines, for commercial use

## 1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of powered floor treatment machines intended for commercial indoor or outdoor use for the following applications:

- scrubbing,
- wet or dry pick-up,
- polishing and dry buffing,
- application of wax, sealing products and powder based detergents,
- shampooing,
- stripping, grinding and scarifying

of floors with an artificial surface.

Their cleaning motion is more lateral or periodic than linear.

NOTE 101 By contrast, the cleaning motion of machines covered by IEC 60335-2-72 is more linear than lateral or periodic.

NOTE 102 This standard applies to machines for COMMERCIAL USE. The following list, although not comprehensive, gives an indication of locations that are included in the scope:

- public use areas such as hotels, schools, hospitals;
- industrial locations, for example factories and manufacturing shops;
- retail outlets, for example shops and supermarkets;
- business premises, for example offices and banks;
- all uses other than normal housekeeping purposes.

They are not equipped with a TRACTION DRIVE. The following power systems are covered:

- internal combustion engines,
- mains powered motors up to a RATED VOLTAGE of 250 V for single-phase appliances and 480 V for other appliances,
- battery-powered motors.

Battery powered machines may be equipped with a built-in battery charger.

This standard does not apply to

- vacuum cleaners and water-suction cleaning appliances for household use (IEC 60335-2-2);
- floor treatment appliances for household use according to IEC 60335-2-10;
- spray extraction machines for COMMERCIAL USE (IEC 60335-2-68);
- wet and dry vacuum cleaners, including power brush, for COMMERCIAL USE (IEC 60335-2-69);
- floor treatment machines with or without TRACTION DRIVE, for COMMERCIAL USE, according to IEC 60335-2-72;
- hand-held and transportable motor-operated electric TOOLS (IEC 60745 series, IEC 61029 series);
- machines designed for use in corrosive or explosive environments (dust, vapour or gas);
- machines designed for picking up hazardous dusts (as defined in IEC 60335-2-69), inflammable substances, or glowing particles;
- machines designed for use in vehicles or on board of ships or aircraft.

NOTE 103 Attention is drawn to the fact that in many countries, additional requirements on the safe use of the equipment covered can be specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities.

**1DV DE Modify Clause 1 of the Part 2 as follows:**

**1DV.1 In the paragraph following NOTE 102, replace the second sentence and the dashed list with the following:**

**They include the following energy sources or power systems, or combinations of them:**

- mains up to a rated voltage of 250 V for single-phase appliances and 480 V for other appliances;
- internal combustion engines;
- batteries supplying 150 V or less;
- double layer (ultra) capacitors;
- fuel cells.

**Energy sources or power systems utilizing both BATTERY and mains are excluded.**