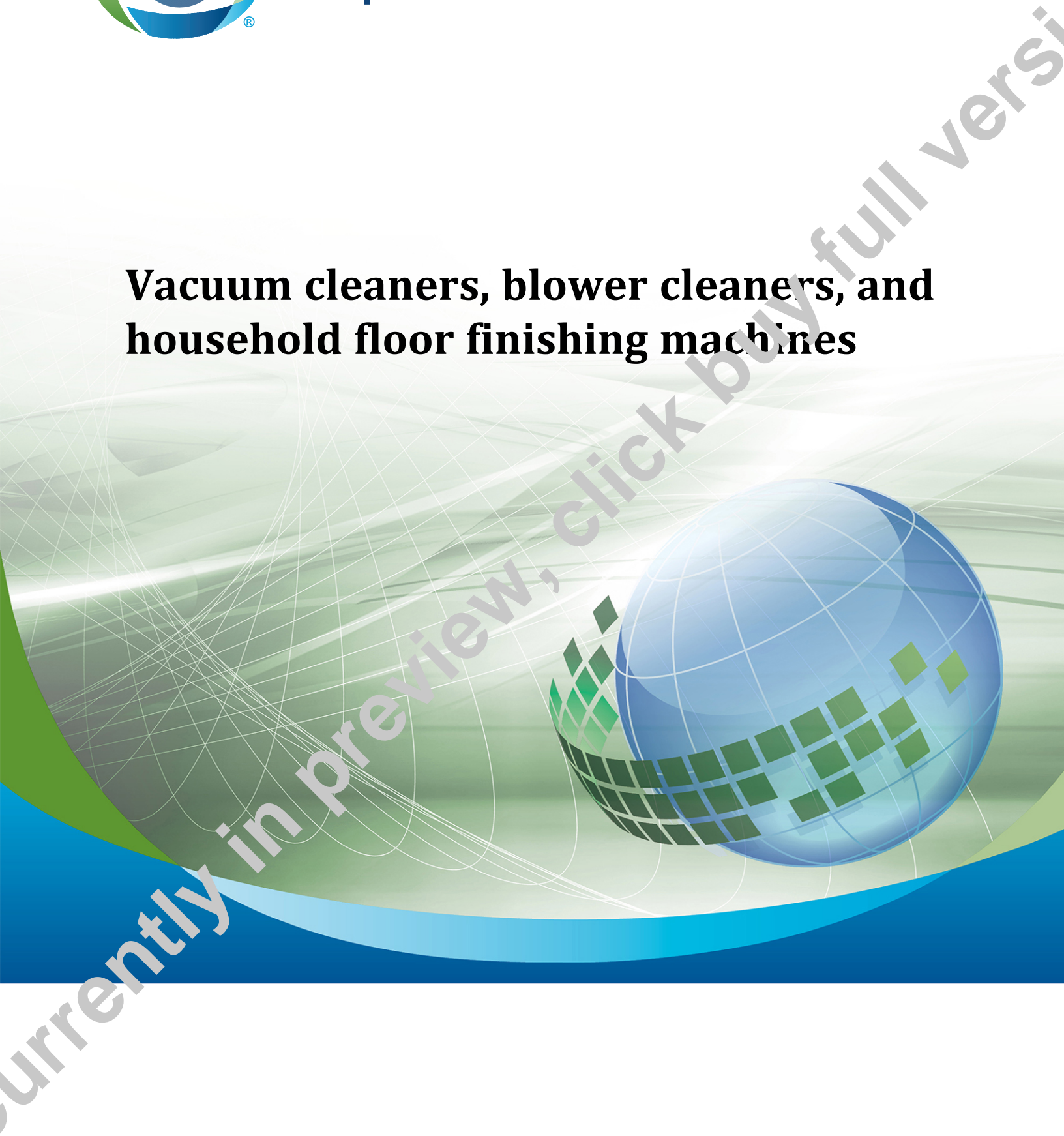




**CSA  
Group**

**C22.2 No. 243-17**

# **Vacuum cleaners, blower cleaners, and household floor finishing machines**



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Underwriters Laboratories Inc.  
UL 1017  
Tenth Edition

## Vacuum Cleaners, Blower Cleaners, and Household Floor Finishing Machines

September 15, 2017



ANSI/UL 1017-2017

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##### **French Language Markings**

**This ANNEX is provided for information only**

## PREFACE

This is the harmonized CSA Group, and UL standard for Vacuum Cleaners, Blower Cleaners, and Household Floor Finishing Machines. It is the sixth edition of CSA C22.2 No. 243, and the tenth edition of UL 1017. This edition of CSA C22.2 No. 243 supersedes the previous edition(s) published in 2015. This edition of UL 1017 supersedes the previous edition(s) published in 2015.

This harmonized standard was prepared by the CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the Vacuum Cleaner industry of both the USA and Canada 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 Integrated Committee 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 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.

### Level of Harmonization

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

An identical standard is a standard that is exactly the same in technical content except for national differences resulting from conflicts in codes and governmental regulations. Presentation is word for word except for editorial changes.

### Reasons for Differences from IEC

There is no corresponding IEC standard.

### 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.

# Vacuum Cleaners, Blower Cleaners, And Household Floor Finishing Machines

## 1 Scope

1.1 This Standard applies to motor-operated vacuum cleaners and blower cleaners, floor sweepers, and to household use floor finishing machines to be employed in accordance with C22.1, C22.2 No. 0, and ANSI/NFPA 70.

1.2 These requirements cover:

- a) Household, commercial, and coin-operated vacuum cleaning machines and blower cleaners, intended for indoor or outdoor use or both;
- b) Household, commercial, and coin-operated wet pick-up, dry pick-up, permanently mounted, portable, and central vacuum cleaners and blower cleaner systems;
- c) Household electrically powered floor finishing machines, including floor polishers, floor scrubbers, floor sanders, rug shampooers, rug and floor washers, and similar machines;
- d) Appliances covered by this Standard that are marked as being provided with double insulation and that employ double insulation in place of grounding in accordance with the Exception to Clause 4.16.1;
- e) Portable rechargeable battery-powered appliances for indoor or outdoor use with rechargeable non-user and user-replaceable batteries; see Clause 7;
- f) Current-carrying hoses for use with vacuum cleaner/motorized nozzle combination appliances intended for household, dry pick-up, indoor use; see Clause 8;
- g) Current-carrying hoses for use with motorized nozzles intended for use with central vacuum cleaning systems intended for household, dry pick-up, indoor use; see Clause 8;
- h) Wet pick-up current-carrying hoses for use with household, indoor use carpet cleaning equipment; see Clause 8;
- i) Grounded current-carrying hoses for use with motorized nozzles intended for household indoor use; see Clause 8;
- j) Electrified wall valves for connection of current-carrying hose/motorized nozzle combinations for central vacuum cleaning systems intended for household use; see Clause 8;
- k) Household, indoor use, wet/dry vacuum cleaning machines with a steam-cleaning attachment (such as a vacuum provided with a steam generator in the nozzle), where the vacuum is the prominent feature of the appliance as evidenced by the electrical rating of the vacuum function being greater than the electrical rating of the steam-cleaning function; see also Clause 2.3.3. A steam cleaner provided with a vacuum attachment, where the steam-cleaning function is the prominent feature, is covered under the requirements of C22.2 No. 64 and UL 499; and
- l) Household and commercial floor sweepers.

- m) Vacuum cleaners intended for installation in recreational vehicles (R/V) or marine vessels;
- n) Appliances powered through a vehicle battery adapter.

1.3 These requirements do not cover appliances rated more than 250 V. An appliance that utilizes some other source of energy, such as gas or steam, in addition to electric energy is to be investigated under these requirements and under such additional requirements as are applicable to the appliance under consideration.

1.4 These requirements do not cover appliances for use in locations such as those areas of hospitals, laboratories, institutions, and the like where dispersion of pathological, chemical, physical, radioactive or other agents could produce a risk to health. Appliances intended for use in such locations are investigated under these requirements and under such additional requirements as are applicable to the appliance, with appropriate consideration being given to the specific intended use.

1.5 These requirements apply only to a specific type or types of appliances, such as a vacuum cleaner or floor finishing machine, if the requirement is so identified by specific reference to the type or types involved. Absence of such specific reference or use of the term "appliance" indicates that the requirement applies to all appliances covered by this standard.

1.6 Internal-combustion engine powered floor cleaning machines for industrial/commercial use, such as floor buffers, scrubbers, sweepers, extractors, and polishers, are covered under UL 558.

1.7 These requirements do not cover machines that generate pressure in excess of 2.5 MPa (360 psi).

## 2 General

### 2.1 Attachments

2.1.1 A functional attachment that is recommended, made available, or packaged with an appliance by the manufacturer for use with an appliance shall be included in the investigation of the appliance.

*Exception No. 1: A non-electrical attachment, such as a crevice tool, an upholstery brush, or the like, that has no driven parts and is intended to facilitate a cleaning operation without the use of a liquid need not be investigated.*

*Exception No. 2: A non-electrical attachment that has no driven parts and is intended to facilitate a cleaning operation with the use of a liquid need not be investigated when intended for use with a wet pick-up vacuum cleaner or household extractor.*

2.1.2 An electrical attachment provided with line-voltage electrical contacts on the underside of the attachment and in close proximity to the surface to be cleaned shall comply with the following:

- a) Based on the anticipated build-up of dust or dirt on the bottom of the attachment and the possibility of a conductive path being established between the electrical contacts, there shall not be an increase in the risk of fire due to the shorting of the electrical contacts. The attachment shall be tested as described in the abnormal operation – shorted electrical contact test, Clause 5.10.3.
- b) During the anticipated cleaning of the attachment, there shall not be an increase in the risk of electric shock to the user. The attachment, while connected to the appliance, shall be tested as described in the cleaning test, Clause 5.12.9.