



CSA C22.2 No. 0.23:15

National Standard of Canada

(reaffirmed 2020)



General requirements for battery-powered appliances



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General requirements for battery-powered appliances



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CSA Group
CSA C22.2 No. 0.23-15
First Edition



Underwriters Laboratories Inc.
UL 2595
Second Edition

General Requirements for Battery-Powered Appliances

September 9, 2015



ANSI/UL 2595-2015



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PREFACE

This is the harmonized CSA Group and UL standard for General Requirements for Battery-Powered Appliances. It is the first edition of CSA C22.2 No. 0.23, and the second edition of UL 2595. This edition of UL 2595 supersedes the previous edition published on May 22, 2013.

This harmonized standard was prepared by the CSA Group and Underwriters Laboratories Inc. (UL).

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 Batteries and Battery Systems, under the jurisdiction of the CSA Technical Committee on General Requirements, CE Code, Part II 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.

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

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

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1 Scope

1.1 This standard applies to battery operated appliances. This standard applies to appliances incorporating detachable, integral and separable battery packs. The maximum rated voltage for appliances and battery packs is 75 V d.c.

1.2 This standard also applies to battery-powered appliances that are also operated and/or charged directly from the mains or a non-isolated source, including appliances provided with integral battery chargers. The additional considerations for these constructions are contained in Additional Requirements for Battery Operated Appliances with a Connection to Mains or a Non-isolated Source, Clause 22.

1.3 These requirements are structured so as to be used in conjunction with an end product standard. These requirements are not intended to provide comprehensive evaluation of a battery operated appliance independent of an end-product standard.

1.4 These requirements only address the potential risks unique to the utilization of a battery supply in a product. With the exception of appliances that also have a mains or non-isolated source, these requirements replace or modify the requirements associated with risk of fire and electric shock for mains powered versions of the appliance in the end product standard. See Indent A in Table D1.1.

1.5 Conditions of use of the product that are the basis for test and other evaluations in the standard are retained and applied, as far as practicable, to these products employing a battery supply.

1.6 Battery operated appliances not able to be connected to mains connected power covered by this standard are not considered to be grounded (class I) or double-insulated (class II), appliances and therefore are not required to have basic, supplementary or reinforced insulation. Electric shock hazard is considered to exist only between parts of opposite polarity.

1.7 Battery packs for appliances covered under this standard intended to be charged by a non-isolated charger are to be evaluated by this standard and the requirements for protection against electric shock of the end-product standard. When evaluating a battery pack for protection against electric shock, the construction and test requirements are to be assessed with the battery fitted to the intended charger.

1.8 When evaluating the risk of fire associated with detachable battery packs, consideration has been given to the fact that these battery packs are unattended energy sources and have been evaluated as such in this standard. Detachable battery packs evaluated by this standard are therefore considered to fulfill an effective protection against the risk of fire equivalent to that of the end-product standard.

1.9 Since battery packs for appliances are submitted to different use patterns (such as rough use, high charging and discharging currents) their safety can be evaluated only by this standard and not by using other standards for battery packs, such as the Standard for Household and Commercial Batteries, UL 2054, unless otherwise indicated in this standard.

1.10 This standard does not apply to the safety of battery chargers themselves. However, this standard covers the safe functioning of lithium-ion battery systems.