UL 2595

STANDARD FOR SAFETY

General Requirements for Battery-Powered Appliances

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UL Standard for Safety for General Requirements for Battery-Powered Appliances, UL 2595

Third Edition, Dated July 10, 2026

Summary of Topics

This is the new Third Edition ANSI/UL 2595, Standard for General Requirements for Battery-Powered Appliances dated July 10, 2026

The requirements are substantially in accordance with Proposal(s) on this subject dated October 21, 2022, December 12, 2025, and March 27, 2026.

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CSA Group
CSA C22.2 No. 0.23:26
Second Edition

ULSE Inc.
UL 2595
Third Edition

General Requirements for Battery-Powered Appliances

July 10, 2026

Approved American National Standard

ANSI/UL 2595-2026

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ISBN 978-1-4883-2574-8 © 2026 Canadian Standards Association

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This ANSI/UL Standard for Safety consists of the Third Edition.

The most recent designation of ANSI/UL 2595 as an American National Standard (ANSI) occurred on July 10, 2026. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

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PREFACE

This is the harmonized CSA Group and ULSE standard for General Requirements for Battery-Powered Appliances. It is the second edition of CSA C22.2 No. 0.23 and the third edition of UL 2595. This edition of CSA C22.2 No. 0.23 supersedes the previous edition published on September 9, 2015. This edition of UL 2595 supersedes the previous edition published on September 9, 2015.

This harmonized standard was prepared by the CSA Group and ULSE. The efforts and support of the Technical Harmonization Subcommittee 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 Safety of Hand-Held Motor-Operated Electric Tool, 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 the Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

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 ULSE.

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

This Standard is the result of many source documents including IEC 60745-1 Ed. 4.0 b:2006 and IEC 62841-1 Ed. 1.0. This Standard is not based on a single IEC document.

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.

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1 Scope

1.1 This Standard applies to battery powered appliances. This Standard applies to appliances incorporating detachable battery packs, integral batteries and separable battery packs. This Standard also applies to appliances that can readily accept non-rechargeable general purpose batteries. The maximum rated voltage for appliances, detachable battery packs and separable battery packs is 250V d.c.

NOTE: Although this Standard applies to appliances, this does not restrict referring to this Standard by other end-product category standards that share similarities in battery type and electrical and charging systems to those found in battery powered appliances.

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 Section 23, Additional Requirements for Battery Powered Appliances With a Connection to Mains or a Non-isolated Source.

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 powered 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 powered appliances not able to be connected to mains or a non-isolated source are not considered to be Class 0 appliances, Class I (grounded) appliances or Class II (double insulated) appliances and therefore are not required to have basic, supplementary or reinforced insulation. Electric shock hazard is considered to exist only between parts of different potential.

1.7 When evaluating the risk of fire associated with batteries, consideration has been given to the fact that these batteries are unattended energy sources and have been evaluated as such in this Standard. Batteries 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.

1.8 Since batteries for appliances are subjected to different use patterns (such as rough use, high charging and discharging currents) their safety cannot be comprehensively evaluated only using standards for batteries, such as UL 1642, UL 2054, IEC 62133-2, UL 62133, UL 62133-1, UL 62133-2 and CSA C22.2 No. 62133, CSA C22.2 No. 62133-1, CSA C22.2 No. 62133-2 and needs to be evaluated to the broader requirements included in this Standard.

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

1.10 This Standard also addresses requirements covering the use of lithium-ion cells employed in battery systems in appliances. The following is considered within the context of these requirements:

a) These requirements address the risk of fire or explosion of these batteries but do not cover any possible hazards associated with toxicity nor potential hazards associated with transportation or disposal.

b) Battery systems covered by these requirements are not intended to be serviced by the end user.

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