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NATIONAL STANDARD

ANSI/CAN/UL/ULC 2580:2022

STANDARD FOR SAFETY

Batteries for Use In Electric Vehicles

Approved American National Standard
ANSI
ANSI/UL 2580-2022

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UL Standard for Safety for Batteries for Use In Electric Vehicles, ANSI/CAN/UL/ULC 2580

Third Edition, Dated March 11, 2020

Summary of Topics

This revision of ANSI/CAN/UL/ULC 2580 dated June 28, 2022 includes the following changes:

- ***Added an exception for use of orange cable or sleeving on systems of 60 Vdc or higher in 10.2.***

- ***Clarified the use and triggering method for internal short circuit trigger cells in C2.1.1 and C2.1.2.***

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The revised requirements are substantially in accordance with Proposal(s) on this subject dated October 8, 2021 and March 25, 2022.

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MARCH 11, 2020
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ANSI/CAN/UL/ULC 2580:2022

Standard for Batteries for Use In Electric Vehicles

First Edition – October, 2011
Second Edition – December, 2013

Third Edition

March 11, 2020

This ANSI/CAN/UL Safety Standard consists of the Third Edition including revisions through June 28, 2022.

The most recent designation of ANSI/UL 2580 as an American National Standard (ANSI) occurred on June 28, 2022. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, Preface or SCC Foreword.

This standard has been designated as a National Standard of Canada (NSC) on June 28, 2022.

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Preface

This is the Third Edition of ANSI/CAN/UL/ULC 2580, Standard for Safety for Batteries for Use In Electric Vehicles.

UL is accredited by the American National Standards Institute (ANSI) and the Standards Council of Canada (SCC) as a Standards Development Organization (SDO). ULC Standards is accredited by the Standards Council of Canada (SCC) as a Standards Development Organization (SDO).

This Standard has been developed in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization.

This ANSI/CAN/UL/ULC 2580 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization. In the event that no revisions are issued for a period of four years from the date of publication, action to revise, reaffirm, or withdraw the standard shall be initiated.

Annex A, Annex B, Annex D, and Annex E are identified as Normative, as such, form mandatory parts of this Standard.

Annex C, identified as Informative, is for information purposes only.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

This joint American National Standard and National Standard of Canada is based on, and now supersedes, the Second Edition of UL 2580 and the First Edition of CAN/ULC-S2580-13.

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

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This Edition of the Standard has been formally approved by the UL Standards Technical Panel (STP) on Batteries for Use in Electric Vehicles, STP 2580.

This list represents the STP 2580 membership when the final text in this standard was balloted. Since that time, changes in the membership may have occurred.

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This Standard is intended to be used for conformity assessment.

The intended primary application of this standard is stated in its scope. It is important to note that it remains the responsibility of the user of the standard to judge its suitability for this particular application.

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INTRODUCTION

1 Scope

1.1 These requirements cover electrical energy storage assemblies such as battery packs and combination battery pack-electrochemical capacitor assemblies and the subassembly/modules that make up these assemblies for use in electric-powered vehicles as defined in this standard.

1.2 This standard evaluates the electrical energy storage assembly's ability to safely withstand simulated abuse conditions and prevents any exposure of persons to hazards as a result of the abuse. This standard evaluates the electric energy storage assembly and modules based upon the manufacturer's specified charge and discharge parameters at specified temperatures. It does not evaluate the assembly's interaction with other control systems within the vehicle.

1.3 This standard does not evaluate the performance or reliability of these devices.

1.4 This standard does not include requirements for the evaluation of batteries for light electric vehicles such as electrical assist bicycles, wheel chairs, electric scooters and similar devices as defined in UL/ULC 2271.

2 Components

2.1 Except as indicated in 2.2, a component of a product covered by this Standard shall comply with the requirements for that component. See Annex A for a list of Standards covering components generally used in the products covered by this Standard. A component shall comply with the Standards of CSA or UL Standards as appropriate for the country where the product is to be used.

2.2 A component is not required to comply with a specific requirement that:

a) Involves a feature or characteristic not required in the application of the component in the product covered by this standard; or

b) Is superseded by a requirement in this standard.

3 Units of Measurement

3.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information. The values given in SI (metric) units shall be normative.

4 Undated References

4.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

5 Reference Publications

5.1 Throughout this standard, the CSA and ULC standard references apply to products intended for use in Canada, while the UL standard references apply to products intended for use in the United States. Combined references are commonly separated by a slash (" / ").

5.2 The following standards are referenced in this standard, and portions of these referenced standards as identified in this standard may be essential for compliance.

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