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Colour inside

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems (IEC 62133-2:2017 + IEC 62133-2:2017/AMD1:2021)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62133-2:2017+A1:2021 sisaldab Euroopa standardi EN 62133-2:2017 ja selle muudatuse A1:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 62133-2:2017+A1:2021 consists of the English text of the European standard EN 62133-2:2017 and its amendment A1:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 12.05.2017, muudatus A1 03.09.2021.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 12.05.2017, for A1 03.09.2021.
Muudatusega A1 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega A1 A1 . Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The start and finish of text introduced or altered by amendment A1 is indicated in the text by tags A1 A1 . The standard is available from the Estonian Centre for Standardisation and Accreditation.

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ICS 29.220.30

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English Version

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems
(IEC 62133-2:2017 + IEC 62133-2:2017/AMD1:2021)

Accumulateurs alcalins et autres accumulateurs à électrolyte non acide - Exigences de sécurité pour les accumulateurs portables étanches, et pour les batteries qui en sont constituées, destinés à l'utilisation dans des applications portables - Partie 2: Systèmes au lithium
(IEC 62133-2:2017 + IEC 62133-2:2017/AMD1:2021)

Sekundärzellen und -batterien mit alkalischen oder anderen nichtsäurehaltigen Elektrolyten - Sicherheitsanforderungen für tragbare gasdichte Akkumulatoren und daraus hergestellte Batterien für die Verwendung in tragbaren Geräten - Teil 2: Lithiumsysteme
(IEC 62133-2:2017 + IEC 62133-2:2017/AMD1:2021)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

The text of document 21A/620/FDIS, future edition 1 of IEC 62133-2, prepared by SC 21A "Secondary cells and batteries containing alkaline or other non-acid electrolytes", of IEC/TC 21 "Secondary cells and batteries" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62133-2:2017.

The following dates are fixed:

- latest date by which the document has to be implemented (dop) 2017-12-14
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with (dow) 2020-03-14
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IEC 60051	NOTE	Harmonized in EN 60051 series.
IEC 60664	NOTE	Harmonized in EN 60664 series.
IEC 61434	NOTE	Harmonized as EN 61434.
IEC 62281	NOTE	Harmonized as EN 62281.

A1 Amendment A1 European foreword

The text of document 21A/760/FDIS, future IEC 62133-2/AMD1, prepared by SC 21A “Secondary cells and batteries containing alkaline or other non-acid electrolytes” of IEC/TC 21 “Secondary cells and batteries” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62133-2:2017/A1:2021.

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Secondary cells and batteries containing alkaline or other non-acid electrolytes
– Safety requirements for portable sealed secondary cells, and for batteries
made from them, for use in portable applications –
Part 2: Lithium systems**

**Accumulateurs alcalins et autres accumulateurs à électrolyte non acide –
Exigences de sécurité pour les accumulateurs au lithium portables étanches,
et pour les batteries qui en sont constituées, destinés à l'utilisation dans des
applications portables –
Partie 2: Systèmes au lithium**



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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Secondary cells and batteries containing alkaline or other non-acid electrolytes
– Safety requirements for portable sealed secondary cells, and for batteries
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Part 2: Lithium systems**

**Accumulateurs alcalins et autres accumulateurs à électrolyte non acide –
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et pour les batteries qui en sont constituées, destinés à l'utilisation dans des
applications portables –
Partie 2: Systèmes au lithium**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES – SAFETY REQUIREMENTS FOR PORTABLE SEALED SECONDARY CELLS, AND FOR BATTERIES MADE FROM THEM, FOR USE IN PORTABLE APPLICATIONS –

Part 2: Lithium systems

FOREWORD

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International Standard IEC 62133-2 has been prepared by subcommittee 21A: Secondary cells and batteries containing alkaline or other non-acid electrolytes, of IEC technical committee 21: Secondary cells and batteries.

This first edition cancels and replaces the second edition of IEC 62133 published in 2012. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 62133:2012:

- separation of nickel systems into a separate Part 1;
- inclusion of coin cell requirements;
- update of assembly of cells into batteries (5.6);

- mechanical tests [vibration, shock] (7.3.8.1, 7.3.8.2);
- insertion of IEC TR 62914 within the Bibliography.

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

FDIS	Report on voting
21A/620/FDIS	21A/628/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.

The following different practices of a less permanent nature exist in the countries indicated below.

7.3.9: Design evaluation – Forced internal short-circuit test only applies to Korea, Japan, Switzerland and France.

A list of all parts of the IEC 62133 series, published under the general title *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications*, can be found on the IEC website.

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Amendment 1 to IEC 62133-2:2017 has been prepared by subcommittee 21A: Secondary cells and batteries containing alkaline or other non-acid electrolytes, of IEC technical committee 21: Secondary cells and batteries.

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

FDIS	Report on voting
21A/760/FDIS	21A/729B/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications/.

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SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES – SAFETY REQUIREMENTS FOR PORTABLE SEALED SECONDARY CELLS, AND FOR BATTERIES MADE FROM THEM, FOR USE IN PORTABLE APPLICATIONS –

Part 2: Lithium systems

1 Scope

This part of IEC 62133 specifies requirements and tests for the safe operation of portable sealed secondary lithium cells and batteries containing non-acid electrolyte, under intended use and reasonably foreseeable misuse.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-482:2004, *International Electrotechnical Vocabulary – Part 482: Primary and secondary cells and batteries* (available at <http://www.electropedia.org>)

IEC 61960, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for portable applications*

ISO/IEC Guide 51, *Safety aspects – Guidelines for their inclusion in standards*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-482, ISO/IEC Guide 51 and the following apply.

3.1

safety

freedom from unacceptable risk

3.2

risk

combination of the probability of occurrence of harm and the severity of that harm

3.3

harm

physical injury or damage to the health of people or damage to property or to the environment

3.4

hazard

potential source of harm