
Sekundarni člani in baterije z alkalnimi ali drugimi nekislinskimi elektroliti - Varnostne zahteve za prenosne zatesnjene sekundarne člene in za baterije, narejene iz njih, za uporabo v prenosnih napravah - 2. del: Litijevi sistemi - Dopolnilo A1

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

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Accumulateurs alcalins et autres accumulateurs à électrolyte non acide - Exigences de sécurité, pour les accumulateurs portables à piles, et pour les batteries qui en sont constituées, destinées à l'utilisation dans des applications portables - Partie 1: Systèmes au lithium

Ta slovenski standard je istoveten z: EN 62133-2:2017/A1:2021

ICS:

29.220.30	Alkalni sekundarni člani in baterije	Alkaline secondary cells and batteries
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SIST EN 62133-2:2017/A1:2021 en

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EUROPEAN STANDARD

EN 62133-2:2017/A1

NORME EUROPÉENNE

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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/AMD1:2021)

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
(IEC 62133-2:2017/AMD1:2021)

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

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This amendment A1 modifies the European Standard EN 62133-2:2017; it was approved by CENELEC on 2021-08-19. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 62133-2:2017/A1:2021 (E)**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.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2022-05-19 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2024-08-19 document have to be withdrawn

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Endorsement notice**iTeh STANDARD PREVIEW**

The text of the International Standard IEC 62133-2:2017/AMD1:2021 was approved by CENELEC as a European Standard without any modification.

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

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

[SIST EN 62133-2:2017/A1:2021](https://standards.iteh.ai/catalog/standards/sist/b87fca8f-bd2d-4a44-b203-1b9-029e45/cis-62133-2:2017-a1:2021)

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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

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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****AMENDMENT 1****FOREWORD**

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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.

IEC 62133-2:2017/AMD1:2021
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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/.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
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7.1.2 Second procedure

Replace the existing second paragraph and Table 2 with the following:

After stabilization for 1 h to 4 h at an ambient temperature of the highest test temperature and the lowest test temperature, respectively, as specified in Table 2, cells are charged by using the upper limit charging voltage and maximum charging current, until the charging current is reduced to $0,05 I_1$ A, using a constant current to constant voltage charging method.

NOTE The voltage and current can vary depending upon the temperature range (e.g. between T_2 and T_3 or between T_1 and T_4 of Figure A.1).

Stabilization time within the specified time range should allow for thermal equilibrium to be reached where possible.

Table 2 – Condition of charging procedure

Upper limit charging voltage	Maximum charging current	Charging temperature upper limit	Charging temperature lower limit
Specified by the manufacturer of cells	Specified by the manufacturer of cells	Specified by the manufacturer of cells	Specified by the manufacturer of cells

7.3.5 Crush (cells)

b) Test

Replace the first paragraph of list item b) with the following:

Each fully charged cell, charged according to the second procedure in 7.1.2, is immediately transferred and crushed between two flat surfaces in an ambient temperature. The force for the crushing is applied by a device exerting a force of $13 \text{ kN} \pm 0,78 \text{ kN}$. Once the maximum force has been applied, or an abrupt voltage drop of one-third of the original voltage has been obtained, the force is released.

7.3.6 Over-charging of battery

Replace the existing list item a) with the following list item a):

a) Requirements

Battery overcharge protection circuitry, if provided in the battery, shall be capable of protecting the cells to prevent fire or explosion.

7.3.9 Design evaluation – Forced internal short-circuit (cells)

Replace the existing Table 5 with the following new Table 5:

Table 5 – Ambient temperature for cell test ^a

Test item	Test at lowest test temperature °C	Test at highest test temperature °C
b) 2) ii)	Lower limit charging temperature ± 2	Upper limit charging temperature ± 2
b) 2) iv)	Lower limit charging temperature ± 2	Upper limit charging temperature ± 2
b) 3) i) A	Lower limit charging temperature ± 2	Upper limit charging temperature ± 2
b) 3) ii) A	Lower limit charging temperature ± 2	Upper limit charging temperature ± 2
^a The test is conducted using conditions in Table 2.		

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Annex F (informative)

Component standards references

Replace the existing content of Annex F with the following:

Components relied upon for safety of the battery should comply with their appropriate component standard if applicable. The list in Table F.1 is not considered a comprehensive list of all potential component safety standards that may apply. In addition, country and regional component safety standards as well as international component safety standards may be considered if they are suitable for the component in question, and the component is being used in the battery circuit in accordance with the protective component's specifications. See Table F.1 for some component standards that may apply to battery components.

Table F.1 – Example component standard references

Component	IEC standard reference
Fuse	IEC 60127 (all parts), <i>Miniature fuses</i>
PTC device	IEC 60738-1, <i>Thermistors – Directly heated positive temperature coefficient – Part 1: Generic specification</i>
Thermal link	IEC 60691, <i>Thermal-links – Requirements and application guide</i>

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