



INTERNATIONAL STANDARD

**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 1: Nickel systems**

This is a preview of IEC 62133-1 Ed. 2.0 en:2026. [Click here to purchase the full version from the ANSI store.](#)

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FOREWORD

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IEC 62133-1 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. It is an International Standard.

This second edition cancels and replaces the first edition of IEC 62133-1 published in 2017. It constitutes a technical revision.

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IEC 62133-1:2017:

- a) removal of the definition "secondary battery";
- b) removal of the definition "portable battery";
- c) "removal of the definition "portable cell";
- d) replacement of the single term "room temperature" with $20\text{ °C} \pm 5\text{ °C}$ in 7.2.3;
- e) modification of Figure 1.

The text of this International Standard is based on the following documents:

Draft	Report on voting
21A/946/FDIS	21A/969/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 International Standard 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/publications.

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.

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,
- withdrawn, or
- revised.

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This part of IEC 62133 specifies requirements and tests for the safe operation of portable sealed secondary nickel cells and batteries containing alkaline 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 (IEV) - Part 482: Primary and secondary cells and batteries*

IEC 61951-1, *Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary sealed cells and batteries for portable applications - Part 1: Nickel-Cadmium*

IEC 61951-2, *Secondary cells and batteries containing alkaline or other non acid electrolytes - Secondary sealed cells and batteries for portable applications - Part 2: Nickel-metal hydride*

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

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IEC 60051 (all parts), *Direct acting indicating analogue electrical measuring instruments and their accessories*

IEC 60664 (all parts), *Insulation coordination for equipment within low-voltage systems*

IEC 61434, *Secondary cells and batteries containing alkaline or other non-acid electrolytes - Guide to designation of current in alkaline secondary cell and battery standards*

IEC TR 61438, *Possible safety and health hazards in the use of alkaline secondary cells and batteries - Guide to equipment manufacturers and users*

IEC TR 62188, *Secondary cells and batteries containing alkaline or other non-acid electrolytes - Design and manufacturing recommendations for portable batteries made from sealed secondary cells*

ISO 8124-1, *Safety of toys - Part 1: Safety aspects related to mechanical and physical properties*
