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# INTERNATIONAL STANDARD

**Secondary cells and batteries containing alkaline or other non-acid electrolytes - Vented nickel-cadmium prismatic rechargeable cells and batteries for use in industrial applications**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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# Secondary cells and batteries containing alkaline or other non-acid electrolytes - Vented nickel-cadmium prismatic rechargeable cells and batteries for use in industrial applications

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IEC 60623 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 sixth edition cancels and replaces the fifth edition published in 2017. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) added a test for internal DC resistance;

b) added a subclause for pulse power calculation;

c) added a test for constant power measurement;

d) added a subclause on the determination of durability parameters.

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

| Draft | Report on voting |
|---|---|
| 21A/935/CDV | 21A/959/RVC |

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 http://www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at http://www.iec.ch/publications.

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

– reconfirmed,
– withdrawn, or
– revised.

# 1 Scope

This document specifies marking, designation, dimensions, tests and requirements for vented nickel-cadmium prismatic secondary single cells and battery systems made of them for use in industrial applications.

NOTE In this context, "prismatic" refers to cells having rectangular sides and base.

When there exists an IEC standard specifying test conditions and requirements for cells used in special applications and which is in conflict with this document, the former takes precedence.

# 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 60050-482:2004/AMD2:2020, *International Electrotechnical Vocabulary (IEV) - Part 482: Primary and secondary cells and batteries*

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 60417, Graphical symbols for use on equipment, available at http://www.graphical-symbols.info/equipment

# 3 Terms, definitions, symbols and abbreviated terms

## 3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-482:2004 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

– IEC Electropedia: available at https://www.electropedia.org/
– ISO Online browsing platform: available at https://www.iso.org/obp

**3.1.1**
**vented cell**
secondary cell having a cover provided with an opening through which products of electrolysis and evaporation are allowed to escape freely from the cell to the atmosphere

Note 1 to entry: The opening can be fitted with a venting system.

Note 2 to entry: The vented cell is the smallest unit manufactured in series, and the primary vehicle for electrical characterization.

**3.1.2**
**monobloc battery**
battery with multiple separate but electrically connected cell compartments each of which is designed to house an assembly of electrodes, electrolyte, terminals or interconnections and possible separators