

# PRE-RELEASE VERSION (FDIS)



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**Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for secondary lithium cells and batteries, for use in industrial applications**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## FINAL DRAFT INTERNATIONAL STANDARD (FDIS)

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IEC SC 21A : SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES

SECRETARIAT:

France

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OF INTEREST TO THE FOLLOWING COMMITTEES:

TC 21

HORIZONTAL STANDARD:

FUNCTIONS CONCERNED:

EMC

ENVIRONMENT

QUALITY ASSURANCE

SAFETY

SUBMITTED FOR CENELEC PARALLEL VOTING

NOT SUBMITTED FOR CENELEC PARALLEL VOTING

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Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

TITLE:

**Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

# SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES – SAFETY REQUIREMENTS FOR SECONDARY LITHIUM CELLS AND BATTERIES, FOR USE IN INDUSTRIAL APPLICATIONS

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IEC 62619 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 published in 2017. This edition constitutes a technical revision.

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

- a) new requirements for moving parts;
- b) addition of requirements for hazardous live parts;
- c) addition of requirements for battery system design;
- d) new requirements for system lock;
- e) new requirements for EMC;

f) addition of procedure of propagation test by laser.

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

Draft	Report on voting
21A/XX/FDIS	21A/XX/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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://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](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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# SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES – SAFETY REQUIREMENTS FOR SECONDARY LITHIUM CELLS AND BATTERIES, FOR USE IN INDUSTRIAL APPLICATIONS

## 1 Scope

This document specifies requirements and tests for the safe operation of secondary lithium cells and batteries used in industrial applications, including stationary applications.

When there exists an IEC International Standard specifying test conditions and requirements for cells used in special applications and which is in conflict with this document, the former takes precedence (e.g., IEC 62660 series on road vehicles).

The following are some examples of applications that utilize cells and batteries under the scope of this document:

- Stationary applications: telecom, uninterruptible power supplies (UPS), electrical energy storage system, utility switching, emergency power, and similar applications.
- Motive applications: forklift truck, golf cart, automated guided vehicle (AGV), railway vehicles, and marine vehicles, with the exception of road vehicles.

Since this document covers batteries for various industrial applications, it includes those requirements which are common and minimum to the various applications.

Electrical safety is included only as a part of the risk analysis of Clause 8. In regard to details for addressing electrical safety, the end use application standard requirements need to be considered.

This document applies to cells and batteries. If the battery is divided into smaller units, the smaller unit can be tested as the representative of the battery. The manufacturer clearly declares the tested unit. The manufacturer can add functions, which are present in the final battery to the tested unit.

This document addresses first life cells and batteries. Reuse, repurpose, second life use or similar are not taken into considered by this document.

## 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 62133-2:2017, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary lithium cells, and for batteries made from them, for use in portable applications – Part 2: Lithium systems*

IEC 62620:2014, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for use in industrial applications*

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