

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



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

**Accumulateurs alcalins et autres accumulateurs à électrolyte non acide – Exigences de sécurité pour les accumulateurs au lithium pour utilisation dans des applications industrielles**



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## CONTENTS

FOREWORD	4
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 Parameter measurement tolerances	10
5 General safety considerations	10
5.1 General	10
5.2 Insulation and wiring	11
5.3 Venting	11
5.4 Temperature/voltage/current management	11
5.5 Terminal contacts of the battery pack and/or battery system	11
5.6 Assembly of cells, modules, or battery packs into battery systems	11
5.6.1 General	11
5.6.2 Battery system design	12
5.7 Operating region of lithium cells and battery systems for safe use	12
5.8 System lock (or system lock function)	12
5.9 Quality plan	12
6 Type test conditions	12
6.1 General	12
6.2 Test items	13
7 Specific requirements and tests	14
7.1 Charging procedures for test purposes	14
7.2 Reasonably foreseeable misuse	15
7.2.1 External short-circuit test (cell or cell block)	15
7.2.2 Impact test (cell or cell block)	15
7.2.3 Drop test (cell or cell block, and battery system)	16
7.2.4 Thermal abuse test (cell or cell block)	18
7.2.5 Overcharge test (cell or cell block)	19
7.2.6 Forced discharge test (cell or cell block)	19
7.3 Considerations for internal short-circuit – Design evaluation	20
7.3.1 General	20
7.3.2 Internal short-circuit test (cell)	20
7.3.3 Propagation test (battery system)	22
8 Battery system safety (considering functional safety)	23
8.1 General requirements	23
8.2 Battery management system (or battery management unit)	23
8.2.1 Requirements for the BMS	23
8.2.2 Overcharge control of voltage (battery system)	24
8.2.3 Overcharge control of current (battery system)	25
8.2.4 Overheating control (battery system)	26
9 EMC	26
10 Information for safety	26
11 Marking and designation	27
12 Packaging and transport	27
Annex A (normative) Operating region of cells for safe use	28

A.1	General.....	28
A.2	Charging conditions for safe use.....	28
A.3	Considerations on charging voltage.....	28
A.4	Considerations on temperature.....	29
A.5	High temperature range.....	29
A.6	Low temperature range.....	29
A.7	Discharging conditions for safe use.....	30
A.8	Example of operating region.....	30
Annex B (informative)	Procedure of propagation test by laser irradiation (see 7.3.3).....	32
B.1	General.....	32
B.2	Test conditions.....	32
B.2.1	Cell test (preliminary test).....	32
B.2.2	Battery system test (main test).....	33
Annex C (informative)	Procedure of propagation test by methods other than laser (see 7.3.3).....	35
C.1	General.....	35
C.2	Test conditions.....	35
C.3	Methods for initiating the thermal runaway.....	35
Annex D (informative)	Packaging and transport.....	36
Bibliography	.....	37
Figure 1	– Configuration of the impact test.....	16
Figure 2	– Impact location.....	18
Figure 3	– Configuration for the shortest edge drop test.....	18
Figure 4	– Configuration for the corner drop test.....	18
Figure 5	– Jig for pressing.....	21
Figure 6	– Examples of BMS location and battery system configurations.....	24
Figure 7	– Example of the circuit configuration for overcharge control of voltage.....	25
Figure A.1	– An example of operating region for charging of typical lithium ion cells.....	30
Figure A.2	– An example of operating region for discharging of typical lithium ion cells.....	31
Figure B.1	– Example of the test layout.....	33
Figure B.2	– Example of typical temperature trend of the cell.....	33
Table 1	– Sample size for type tests.....	14
Table 2	– Drop test method and condition.....	17

## 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/785/FDIS	21A/787/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).

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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 user 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 consideration 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*