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## High-temperature secondary batteries - Part 1: General requirements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 62984-1:2020 sisaldab Euroopa standardi EN IEC 62984-1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 62984-1:2020 consists of the English text of the European standard EN IEC 62984-1:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 08.05.2020.	Date of Availability of the European standard is 08.05.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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English Version

## High-temperature secondary batteries - Part 1: General requirements (IEC 62984-1:2020)

Batteries d'accumulateurs à haute température - Partie 1:  
Exigences générales  
(IEC 62984-1:2020)

Hochtemperatur-Sekundärbatterien - Teil 1: Allgemeine  
Anforderungen  
(IEC 62984-1:2020)

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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

## European foreword

The text of document 21/1031/FDIS, future edition 1 of IEC 62984-1, prepared by IEC/TC 21 "Secondary cells and batteries" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62984-1:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-01-15
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-04-15

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## Endorsement notice

The text of the International Standard IEC 62984-1:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60721-3-2:2018	NOTE	Harmonized as EN IEC 60721-3-2:2018 (not modified)
IEC 60952 (series)	NOTE	Harmonized as EN 60952 (series)
IEC 61427-2:2015	NOTE	Harmonized as EN 61427-2:2015 (not modified)
IEC 61982 (series)	NOTE	Harmonized as EN 61982 (series)
IEC 62485-2	NOTE	Harmonized as EN IEC 62485-2
CISPR 11	NOTE	Harmonized as EN 55011

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HIGH-TEMPERATURE SECONDARY BATTERIES –****Part 1: General requirements**

## FOREWORD

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International Standard IEC 62984-1 has been prepared by IEC technical committee 21: Secondary cells and batteries.

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

FDIS	Report on voting
21/1031/FDIS	21/1041/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62984 series, published under the general title *High-temperature secondary batteries*, 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 "<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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# HIGH-TEMPERATURE SECONDARY BATTERIES –

## Part 1: General requirements

### 1 Scope

This part of IEC 62984 specifies general aspects, definitions and tests for high-temperature secondary batteries for mobile and/or stationary use and whose nominal voltage does not exceed 1 500 V.

This document does not cover aircraft batteries, which are covered by IEC 60952 (all parts), or batteries for the propulsion of electric road vehicles, covered by IEC 61982 (all parts).

NOTE High-temperature batteries are electrochemical systems whose cells' internal minimum operating temperature is above 100 °C.

### 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 60068-2-1:2007, *Environmental testing – Part 2-1: Tests – Test A: Cold*

IEC 60068-2-2:2007, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

IEC 60068-2-30:2005, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)*

IEC 60068-2-52:2017, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)*

IEC 60068-2-64:2008, *Environmental testing – Part 2-64: Tests – Test Fh: Vibration, broadband random and guidance*

IEC 60068-2-75:2014, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60068-2-78, *Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-4-4, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-5, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*

IEC 61000-4-6, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-11, *Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests*

IEC 61000-4-29, *Electromagnetic compatibility (EMC) – Part 4-29: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests*

IEC 61000-4-34, *Electromagnetic compatibility (EMC) – Part 4-34: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests for equipment with mains current more than 16 A per phase*

IEC 61000-6-3, *Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments*

IEC 61000-6-4, *Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emission standard for industrial environments*

IEC 61373, *Railway applications – Rolling stock equipment – Shock and vibration tests*

IEC 62236-3-2, *Railway applications – Electromagnetic compatibility – Part 3-2: Rolling stock – Apparatus*

IEC 62262, *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)*

CISPR 25, *Vehicles, boats and internal combustion engines – Radio disturbance characteristics – Limits and methods of measurement for the protection of on-board receivers*

### **3 Terms, definitions, symbols and abbreviated terms**

For the purposes of this document, the following terms and definitions apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### **3.1 Battery construction**

##### **3.1.1 cell**

basic functional unit, consisting of an assembly of electrodes, electrolyte, container, terminals and usually separators, that is a source of electric energy obtained by direct conversion of chemical energy

Note 1 to entry: See primary cell and secondary cell.

[SOURCE: IEC 60050-482:2004, 482-01-01]

##### **3.1.2**

##### **secondary cell**

cell which is designed to be electrically recharged