SLOVENSKI STANDARD
SIST EN 61951-2:2017

01-september-2017

Nadomešča:
SIST EN 61951-2:2011

Sekundarni členi in baterije z alkalnimi ali drugimi nekislinskimi elektroliti - Sekundarni zatesnjeni členi in baterije za prenosne naprave - 2. del: Nikelj-kovinski hidrid

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

Akkumulatoren und Batterien mit alkalischem oder anderen nichtsäurehaltigen Elektrolyten - Tragbare wiederaufladbare gasdichte Einzelzellen - Teil 2: Nickel-Metallhydrid

Accumulateurs alcalins et autres accumulateurs à électrolyte non acide - Accumulateurs étanches pour applications portables - Partie 2: Nickel-métal hydrure

Ta slovenski standard je istoveten z: **EN 61951-2:2017**

ICS:

29.220.30	Alkalni sekundarni členi in baterije	Alkaline secondary cells and batteries

SIST EN 61951-2:2017 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61951-2

June 2017

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Supersedes EN 61951-2:2011

English Version

Secondary cells and batteries containing alkaline or other non acid electrolytes - Secondary sealed cells and batteries for portable applications - Part 2: Nickel-metal hydride (IEC 61951-2:2017)

Accumulateurs alcalins et autres accumulateurs à électrolyte non acide - Accumulateurs étanches pour applications portables - Partie 2: Nickel-métal hydrure (IEC 61951-2:2017)

Akkumulatoren und Batterien mit alkalischem oder anderen nichtsäurehaltigen Elektrolyten - Tragbare wiederaufladbare gasdichte Einzelzellen - Teil 2: Nickel-Metallhydrid (IEC 61951-2:2017)

This European Standard was approved by CENELEC on 2017-04-26. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

The text of document 21A/623/FDIS, future edition 4 of IEC 61951-2, prepared by SC 21A, Secondary cells and batteries containing alkaline or other non-acid electrolytes, of IEC/TC 21 "Secondary cells and batteries" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61951-2:2017.

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)	2018-01-26
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2020-04-26

This document supersedes EN 61951-2:2011.

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Endorsement notice.

The text of the International Standard IEC 61951-2:2017 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 60051 (series)	NOTE	Harmonized as EN 60051 (series).
IEC 60086 (series)	NOTE	Harmonized as EN 60086 (series).
IEC 61434	NOTE	Harmonized as EN 61434.

Annex ZA
(normative)
Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60050-482	2004	International Electrotechnical Vocabulary (IEV) -- Part 482: Primary and secondary cells and batteries	-	-
IEC 60086-1	-	Primary batteries - Part 1: General	EN 60086-1	-
IEC 60086-2	-	Primary batteries - Part 2: Physical and electrical specifications	EN 60086-2	-
IEC 61959	-	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Mechanical tests for sealed portable secondary cells and batteries	EN 61959	-
IEC 62133-1	-	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	EN 62133-1	-

IEC 61951-2

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

Accumulateurs alcalins et autres accumulateurs à électrolyte non acide – Accumulateurs étanches pour applications portables – Partie 2: Nickel-métal hydrure

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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CONTENTS

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SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES – SECONDARY SEALED CELLS AND BATTERIES FOR PORTABLE APPLICATIONS –

Part 2: Nickel-metal hydride

FOREWORD

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International Standard IEC 61951-2 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.

This fourth edition cancels and replaces the third edition published in 2011 of which it constitutes a technical revision.

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

- addition of battery type;
- addition of 'F' (high recovery type) designation for cells and batteries;
- addition of 'I' (low self-discharge type) designation for cells;

- revision of Figure 3 (6.1.3.1);
- addition of “optional pip” note to positive contact;
- changed leader line position from pip to flats of positive contact (B and G).

The text of this standard is based on the following documents:

FDIS	Report on voting
21A/623/FDIS	21A/629/RVD

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

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

A list of all parts of the IEC 61951 series can be found, under the general title *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary sealed cells and batteries for portable applications*, on the IEC website.

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

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

SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES – SECONDARY SEALED CELLS AND BATTERIES FOR PORTABLE APPLICATIONS –

Part 2: Nickel-metal hydride

1 Scope

This part of IEC 61951 specifies marking, designation, dimensions, tests and requirements for secondary sealed nickel-metal hydride small prismatic, cylindrical and button cells and batteries, suitable for use in any orientation, for portable applications.

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 60086-1, *Primary batteries – Part 1: General*

IEC 60086-2, *Primary batteries – Part 2: Physical and electrical specifications*

IEC 61959, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Mechanical tests for sealed portable secondary cells and batteries*

IEC 62133-1, *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*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-482 and the following 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
nominal voltage
suitable approximate value of the voltage used to designate or identify a cell or a battery

Note 1 to entry: The nominal voltage of a sealed nickel-metal hydride rechargeable single cell is 1,2 V.

Note 2 to entry: The nominal voltage of a battery of n series connected cells is equal to n times the nominal voltage of a single cell.

[SOURCE: IEC 60050-482:2004, 482-03-31, modified – Addition of Notes 1 and 2 to entry.]

3.2
rated capacity
capacity value of a cell or battery determined under specified conditions and declared by the manufacturer

Note 1 to entry: The rated capacity is the quantity of electricity C_5 Ah (ampere-hours) declared by the manufacturer which a single cell can deliver during a 5 h period when charging, storing and discharging under the conditions specified in 7.3.2.

Note 2 to entry: The capacity of a battery is the quantity of electricity C_5 Ah (ampere-hours) declared by the manufacturer which a battery can deliver during a 5 h period, when charged, stored and discharged under the procedure described in 7.3.2.

[SOURCE: IEC 60050-482:2004, 482-03-15, modified – Addition of Notes 1 and 2 to entry.]

3.3
small prismatic cell
cell in the form of a rectangular parallelepiped whose width and thickness dimensions are not more than 25 mm

3.4
cylindrical cell
cell of circular cross-section in which the overall height is equal to, or greater than the overall diameter

3.5
button cell
cell of circular cross-section in which the overall height is less than the overall diameter

3.6
nickel-metal hydride cell
cell containing a nickel hydroxide compound for the positive electrode, a hydrogen absorbing alloy for the negative electrode, and potassium hydroxide or other alkaline solution as electrolyte

Note 1 to entry: Positive electrodes are isolated from negative electrodes by a separator

3.7
nickel-metal hydride battery
assembly of secondary cell(s) as a source of electrical energy characterized by its voltage, size, terminal arrangement, capacity and rate capability

3.8
sealed cell
cell which remains closed and does not release either gas or liquid when operated within the limits of charge and temperature specified by the manufacturer

Note 1 to entry: The cell is equipped with a safety device to prevent dangerously high internal pressure.

Note 2 to entry: The cell does not require addition to the electrolyte and is designed to operate during its life in its original sealed state.

Note 3 to entry: The nickel-metal hydride cell, however, may release gas towards the end of its life due to the accumulation of hydrogen in the cell.

[SOURCE: IEC 60050-482:2004, 482-05-17, modified – The existing note has been developed into Notes 1, 2 and 3 to entry.]

3.9
portable cell
cell designed mainly for use in an easily hand-carried battery

3.10
battery for portable applications
battery for use in device or appliance which is conveniently hand-carried

3.11
surface temperature limited cell
cell which performs a function that prevents the temperature increase from a certain standard point even at the moment of an abnormal occurrence such as short circuit of cell

3.12
high recovery type cell or battery
cell or battery which has lower “permanent capacity loss” than normal type after storage

Note 1 to entry: It is defined as “high recovery type” in 7.10.2, Table 22.

3.13
low self-discharge type cell
cell which is able to retain higher charge capacity than normal type after storage by reducing self-discharge

Note 1 to entry: It is defined as “low self-discharge type” in 7.4.

3.14
9 V type nickel-metal hydride battery
nickel-metal hydride battery which is interchangeable with 9 V primary batteries and is composed of cylindrical cells, small prismatic cells or button cells

4 Parameter measurement tolerances

The overall accuracy of controlled or measured values, relative to the specified or actual values, shall be within the following tolerances:

a) ±1 % for voltage;

b) ±1 % for current;

c) ±1 % for capacity;

d) ±2 °C for temperature;

e) ±0,1 % for time;

f) ±0,1 mm for dimensions;

g) ±5 % for humidity.

These tolerances comprise the combined accuracy of the measuring instruments, the measurement techniques used and all other sources of error in the test procedure.

The details of the instrumentation used shall be provided in each report of results.