



**NSAI**  
Standards

Irish Standard  
I.S. EN 62675:2014

Secondary cells and batteries containing  
alkaline or other non-acid electrolytes -  
Sealed nickel-metal hydride prismatic  
rechargeable single cells

**I.S. EN 62675:2014**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

EN 62675:2014

*Published:*

2014-11-07

*This document was published under the authority of the NSAI and comes into effect on:*

2014-11-27

ICS number:

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD

**EN 62675**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2014

ICS 29.220.99

English Version

**Secondary cells and batteries containing alkaline or other non-acid electrolytes - Sealed nickel-metal hydride prismatic rechargeable single cells  
(IEC 62675:2014)**

Accumulateurs alcalins et autres accumulateurs à électrolyte non acide - Éléments individuels parallélépipédiques rechargeables étanches au nickel-métal hydrure  
(CEI 62675:2014)

Akkumulatoren und Batterien mit alkalischem oder anderen nichtsäurehaltigen Elektrolyten - Prismatische wiederaufladbare gasdichte Nickel-Metallhydrid-Einzelzellen für industrielle Anwendungen  
(IEC 62675:2014)

This European Standard was approved by CENELEC on 2014-10-01. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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**

## Foreword

The text of document 21A/550/FDIS, future edition 1 of IEC 62675, 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 62675:2014.

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) 2015-07-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-10-01

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

## Endorsement notice

The text of the International Standard IEC 62675:2014 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	Harmonised as EN 60051 Series.
IEC 61434	NOTE	Harmonised 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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-482	2004	International Electrotechnical Vocabulary- (IEV) -- Part 482: Primary and secondary cells and batteries		-

This page is intentionally left blank



**IEC 62675**

Edition 1.0 2014-08

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

---

**Secondary cells and batteries containing alkaline or other non-acid electrolytes – Sealed nickel-metal hydride prismatic rechargeable single cells**

**Accumulateurs alcalins et autres accumulateurs à électrolyte non acide – Éléments individuels parallélépipédiques rechargeables étanches au nickel-métal hydrure**





## THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2014 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
Fax: +41 22 919 03 00  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

### About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

### About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

#### IEC Catalogue - [webstore.iec.ch/catalogue](http://webstore.iec.ch/catalogue)

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

#### IEC publications search - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

#### IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

#### Electropedia - [www.electropedia.org](http://www.electropedia.org)

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in 14 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

#### IEC Glossary - [std.iec.ch/glossary](http://std.iec.ch/glossary)

More than 55 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

#### IEC Customer Service Centre - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: [csc@iec.ch](mailto:csc@iec.ch).

### A propos de l'IEC

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

### A propos des publications IEC

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

#### Catalogue IEC - [webstore.iec.ch/catalogue](http://webstore.iec.ch/catalogue)

Application autonome pour consulter tous les renseignements bibliographiques sur les Normes internationales, Spécifications techniques, Rapports techniques et autres documents de l'IEC. Disponible pour PC, Mac OS, tablettes Android et iPad.

#### Recherche de publications IEC - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études,...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

#### IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

#### Electropedia - [www.electropedia.org](http://www.electropedia.org)

Le premier dictionnaire en ligne de termes électroniques et électriques. Il contient plus de 30 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans 14 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

#### Glossaire IEC - [std.iec.ch/glossary](http://std.iec.ch/glossary)

Plus de 55 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

#### Service Clients - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: [csc@iec.ch](mailto:csc@iec.ch).





**IEC 62675**

Edition 1.0 2014-08

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

---

**Secondary cells and batteries containing alkaline or other non-acid electrolytes – Sealed nickel-metal hydride prismatic rechargeable single cells**

**Accumulateurs alcalins et autres accumulateurs à électrolyte non acide – Éléments individuels parallélépipédiques rechargeables étanches au nickel-métal hydrure**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

PRICE CODE  
CODE PRIX



---

ICS 29.220.99

ISBN 978-2-8322-1845-7

**Warning! Make sure that you obtained this publication from an authorized distributor.  
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

## CONTENTS

FOREWORD .....	4
1 Scope .....	6
2 Normative references .....	6
3 Terms and definitions .....	6
4 Parameter measurement tolerances .....	7
5 Designation and marking .....	7
5.1 Cell designation .....	7
5.2 Cell termination.....	8
5.3 Marking.....	8
5.4 Safety recommendations.....	8
6 Dimensions.....	8
7 Electrical tests .....	10
7.1 General.....	10
7.2 Charging procedure for test purposes .....	10
7.3 Discharge performance .....	10
7.3.1 General .....	10
7.3.2 Discharge performance at 20 °C .....	10
7.3.3 Discharge performance at +5 °C .....	11
7.3.4 Discharge performance at –18 °C .....	11
7.3.5 High rate current test.....	12
7.4 Charge retention .....	12
7.5 Endurance .....	13
7.5.1 Endurance in cycles.....	13
7.5.2 Permanent charge endurance .....	13
7.6 Charge acceptance at constant voltage.....	14
7.7 Overcharge .....	14
7.8 Vent plug operation.....	14
7.9 Safety device operation .....	14
7.10 Gas leakage test.....	15
7.11 Storage.....	15
8 Mechanical tests.....	15
9 Physical appearance .....	15
10 Conditions for approval and acceptance .....	15
10.1 Type approval.....	15
10.2 Batch acceptance .....	16
Bibliography.....	17
Figure 1 – Example of a sealed prismatic cell in steel container with two terminals and four lugs .....	8
Figure 2 – Example of a sealed prismatic cell in plastic container with two terminals .....	9
Table 1 – Dimensions for sealed nickel-metal hydride prismatic cells in steel containers.....	9
Table 2 – Dimensions for sealed nickel-metal hydride prismatic cells in plastic containers.....	9

Table 3 – Measurement tolerances in millimetres (valid for widths and lengths) .....	10
Table 4 – Discharge performance at 20 °C.....	11
Table 5 – Discharge performance at +5 °C.....	11
Table 6 – Discharge performance at –18 °C.....	12
Table 7 – High currents values.....	12
Table 8 – Endurance in cycles .....	13
Table 9 – Sequence of tests for type approval .....	16
Table 10 – Recommended test sequence for batch acceptance .....	16

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SECONDARY CELLS AND BATTERIES CONTAINING  
ALKALINE OR OTHER NON-ACID ELECTROLYTES –  
SEALED NICKEL-METAL HYDRIDE PRISMATIC  
RECHARGEABLE SINGLE CELLS**

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62675 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.

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

FDIS	Report on voting
21A/550/FDIS	21A/560/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.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site 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 – SEALED NICKEL-METAL HYDRIDE PRISMATIC RECHARGEABLE SINGLE CELLS

## 1 Scope

This International Standard specifies marking, designation, dimensions, tests and requirements for sealed nickel-metal hydride prismatic secondary single cells.

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 standard, the former takes precedence.

## 2 Normative references

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.

IEC 60050-482:2004, *International Electrotechnical Vocabulary (IEV) – Part 482: Primary and secondary cells and batteries*

## 3 Terms and definitions

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

### 3.1

#### **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.]

### 3.2

#### **nominal voltage**

suitable approximate value of voltage used to designate or identify the voltage of a cell or battery

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

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
  - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-