

Secondary cells and batteries containing alkaline or other non-acid electrolytes — Nickel-cadmium prismatic secondary single cells with partial gas recombination

The European Standard EN 62259:2004 has the status of a
British Standard

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National foreword

This British Standard is the official English language version of EN 62259:2004. It is identical with IEC 62259:2003.

The UK participation in its preparation was entrusted to Technical Committee PEL/21/1, Secondary cells and batteries containing alkaline and other non-acidic electrolytes, which has the responsibility to:

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**Secondary cells and batteries containing alkaline
or other non-acid electrolytes –
Nickel-cadmium prismatic secondary single cells
with partial gas recombination
(IEC 62259:2003)**

Accumulateurs alcalins et autres
accumulateurs à électrolyte non acide -
Eléments d'accumulateurs individuels
parallélépipédiques au nickel-cadmium
à recombinaison partielle des gaz
(CEI 62259:2003)

Sekundärzellen und -batterien mit
alkalischem oder anderen
nichtsäurehaltigen Elektrolyten -
Wiederaufladbare prismatische Nickel-
Cadmium-Einzelzellen mit teilweiser
Gasrekombination
(IEC 62259:2003)

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CENELEC

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

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Foreword

The text of document 21A/386/FDIS, future edition 1 of IEC 62259, 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 was approved by CENELEC as EN 62259 on 2003-12-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2004-09-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2006-12-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62259:2003 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 60622	NOTE	Harmonized as EN 60622:2003 (not modified).
IEC 60623	NOTE	Harmonized as EN 60623:2001 (not modified).

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INTRODUCTION

Traditionally the manufacturers and users of alkaline secondary cells and batteries have expressed the current used to charge and discharge these cells and batteries as a multiple of the capacity. For example, a current of 20 A used to charge a cell with a rated capacity (C Ah) of 100 Ah would be expressed as $C/5$ A or $0,2 C$ A. This method of current designation has been used in earlier standards relating to alkaline secondary cells and batteries.

Comments have been made, however, that this method of current designation is dimensionally incorrect in that a multiple of the capacity (ampere-hours) will be in ampere-hours and not, as required for current, in amperes. As a result of these comments, the method described in IEC 61434 has been used in this standard.

In brief, the method states the reference test current (I_t) is expressed as

$$I_t \text{ A} = C_n \text{ Ah} / 1 \text{ h}$$

where

C_n is the rated capacity declared by the manufacturer in ampere hours (Ah), and

n is the time base in hours (h) for which the rated capacity is declared.

SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES – NICKEL-CADMIUM PRISMATIC SECONDARY SINGLE CELLS WITH PARTIAL GAS RECOMBINATION

1 Scope

This International Standard specifies marking, designation, dimensions, tests and requirements for vented nickel-cadmium prismatic secondary single cells where special provisions have been made in order to have partial or, under very specific conditions, full gas recombination.

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 shall take precedence.

2 Normative references

The following referenced documents are indispensable for the application 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 60050-486, *International Electrotechnical Vocabulary (IEV) – Chapter 486: Secondary cells and batteries*

IEC 60051 (all parts), *Direct acting indicating analogue electrical measuring instruments and their accessories*

IEC 60410, *Sampling plans and procedures for inspection by attributes*

IEC 60417-DB:2002¹, *Graphical symbols for use on equipment*

IEC 60485, *Digital electronic d.c. voltmeters and d.c. electronic analogue-to-digital converters*

IEC 61434, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Guide to the designation of current in alkaline secondary cell and battery standards*

IEC 61438, *Possible safety and health hazards in the use of alkaline secondary cells and batteries – Guide to equipment manufacturers and users*

¹ "DB" refers to the IEC on-line database.