



**SLOVENSKI STANDARD**  
**SIST EN 60622:1997**  
**01-februar-1997**

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**Sealed nickel-cadmium prismatic rechargeable single cells**

Sealed nickel-cadmium prismatic rechargeable single cells

Wiederaufladbare gasdichte prismatische Nickel-Cadmium-Einzelzellen

Éléments parallélépipédiques rechargeables étanches au nickel-cadmium

**Ta slovenski standard je istoveten z: EN 60622:1995**

[SIST EN 60622:1997](https://standards.iteh.ai/catalog/standards/sist/b85d26a3-66b9-4cd1-a790-7f33b31efe28/sist-en-60622-1997)

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**ICS:**

29.220.30 Alkaline secondary cells and batteries

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60622**

August 1995

ICS 29.220.30

Descriptors: Alkaline batteries, nickel-cadmium batteries, parallelepipedic shape, designation, marking, dimensions, electrical tests, mechanical tests

English version

**Sealed nickel-cadmium prismatic rechargeable single cells  
(IEC 622:1988 + A2:1992 + corrigendum 1992)**

Éléments individuels parallélépipédiques  
rechargeables étanches au  
nickel-cadmium  
(CEI 622:1988 + A2:1992 +  
corrigendum 1992)

Wiederaufladbare gasdichte  
prismatische  
Nickel-Cadmium-Einzelzellen  
(IEC 622:1988 + A2:1992 +  
Corrigendum 1992)

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This European Standard was approved by CENELEC on 1995-07-04. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

### Foreword

The text of the International Standard IEC 622:1988 with its amendment 2:1992 (including amendment 1:1989) and its corrigendum August 1992, prepared by SC 21A, Alkaline secondary cells and batteries, of IEC TC 21, Secondary cells and batteries, was submitted to the formal vote and was approved by CENELEC as EN 60622 on 1995-07-04 without any modification.

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) 1996-07-15
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1996-07-15

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex ZA is normative.  
Annex ZA has been added by CENELEC.

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### Endorsement notice

The text of the International Standard IEC 622:1988 with its amendment 2:1992 (including amendment 1:1989) and its corrigendum August 1992 was approved by CENELEC as a European Standard without any modification.

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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 51	series	Direct acting indicating analogue electrical-measuring instruments and their accessories	EN 60051	series
IEC 410	1973	Sampling plans and procedures for inspection by attributes	-	-
IEC 417	1973	Graphical symbols for use on equipment Index, survey and compilation of the single sheets	HD 243 S12 <sup>1)</sup>	1995
IEC 485	1974	Digital electronic d.c. voltmeters and d.c. electronic analogue-to-digital converters	-	-

1) HD 243 S12 includes supplements A:1974 to M:1994 to IEC 417.

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Commission Electrotechnique Internationale  
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**Eléments individuels parallélépipédiques rechargeables  
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**Sealed nickel-cadmium prismatic rechargeable  
single cells**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## SEALED NICKEL-CADMIUM PRISMATIC RECHARGEABLE SINGLE CELLS

## FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

## PREFACE

This standard has been prepared by Sub-Committee 21A: Alkaline Secondary Cells and Batteries, of IEC Technical Committee No. 21: Secondary Cells and Batteries.

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

Six Months' Rule	Report on Voting	Two Months' Procedure	Report on Voting
21A(CO)47	21A(CO)49	21A(CO)53	21A(CO)55

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

*The following IEC publications are quoted in this standard:*

- Publications Nos. 51: Direct acting indicating analogue electrical measuring instruments and their accessories.  
 410 (1973): Sampling plans and procedures for inspection by attributes.  
 417 (1973): Graphical symbols for use on equipment. Index, survey and compilation of the single sheets.  
 485 (1974): Digital electronic d.c. voltmeters and d.c. electronic analogue-to-digital converters.

# SEALED NICKEL-CADMIUM PRISMATIC RECHARGEABLE SINGLE CELLS

## SECTION ONE – GENERAL

### 1.1 Scope

This standard specifies tests and requirements for sealed nickel-cadmium prismatic rechargeable single cells.

*Note.* – In this context “prismatic” refers to cells having rectangular sides and base.

### 1.2 Definitions

For the purpose of this standard, the following definitions apply.

#### 1.2.1 Sealed cell

A 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. The cell may be equipped with a safety device to prevent dangerously high internal pressure. The cell does not require addition to the electrolyte and is designed to operate during its life in its original sealed state.

#### 1.2.2 Nominal voltage

The nominal voltage of a single sealed nickel-cadmium prismatic rechargeable cell is 1.2 V.

#### 1.2.3 Rated capacity

The quantity of electricity  $C_5$  in Ah (ampere hours) declared by the manufacturer which a single cell can deliver at the 5 h discharge rate to a final voltage of 1.0 V at 20 °C after charging, storing and discharging under the conditions specified in Section Four.

### 1.3 Measuring instruments

The measuring instruments used for the tests shall be selected to meet the magnitude of the parameters to be measured. Equipment shall be regularly calibrated to ensure that it shall at all times have the degree of accuracy given below.

#### 1.3.1 Voltage measurement

The instruments used for voltage measurement shall be voltmeters having an accuracy class of 0.5 or better as defined in IEC Publication 51 for analogue instruments and IEC Publication 485 for digital instruments.

The resistance of voltmeters shall be at least 1000  $\Omega/V$ .

### 1.3.2 Current measurement

The instruments used for current measurement shall be ammeters having an accuracy class of 0.5 or better as defined in IEC Publication 51 for analogue instruments. Digital instruments shall be of the same accuracy. This accuracy class shall be maintained for the assembly of ammeter, shunt and leads.

### 1.3.3 Temperature measurement

The instruments used for temperature measurement shall be thermometers having a graduated or digital scale in which the value of each graduation or digit is not in excess of one degree Celsius.

The absolute accuracy of the instrument shall be at least 0.5 °C.

### 1.3.4 Time measurement

Time measurement shall be to an accuracy of 0.1% or better.

## SECTION TWO – DESIGNATION AND MARKING (standards.iteh.ai)

### 2.1 Cell designation

Sealed nickel-cadmium prismatic rechargeable cells shall be designated by the letters "KC" followed by a third letter referring to the type of positive plate:

- P for cells with pocket plates;
- S for cells with sintered plates.

A fourth letter L, M, H or X signifies

- low rate of discharge (L)\*;
- medium rate of discharge (M)\*;
- high rate of discharge (H)\*;
- very high rate of discharge (X)\*.

This group of four letters shall be followed by a group of figures indicative of the rated capacity of the cells in ampere-hours.

*For example:* KCSH 15.

\* These types of cells are recommended for the following discharge rates:

L typically up to 0.5 C<sub>5</sub>A.  
 M typically above 0.5 C<sub>5</sub>A and up to 3.5 C<sub>5</sub>A.  
 H typically above 3.5 C<sub>5</sub>A and up to 7 C<sub>5</sub>A.  
 X typically above 7 C<sub>5</sub>A.