

## **Safety requirements for secondary batteries and battery installations - Part 3: Traction batteries**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50272-3:2003 sisaldab Euroopa standardi EN 50272-3:2002 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 05.02.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50272-3:2003 consists of the English text of the European standard EN 50272-3:2002.</p> <p>This document is endorsed on 05.02.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This standard applies to secondary batteries and battery installations used for electric vehicles, e.g. in electric industrial trucks (including lift trucks, tow trucks, cleaning machines, automatic guided vehicles), in battery powered locomotives, in electric road vehicles (e.g. passenger and good vehicles, golf carts, bicycles, wheel chairs. The nominal voltages are limited to 1000 V d.c., respectively and describe the principal measures for protection against hazards generally from electricity, gas emission and electrolyte</p>	<p><b>Scope:</b></p> <p>This standard applies to secondary batteries and battery installations used for electric vehicles, e.g. in electric industrial trucks (including lift trucks, tow trucks, cleaning machines, automatic guided vehicles), in battery powered locomotives, in electric road vehicles (e.g. passenger and good vehicles, golf carts, bicycles, wheel chairs. The nominal voltages are limited to 1000 V d.c., respectively and describe the principal measures for protection against hazards generally from electricity, gas emission and electrolyte</p>
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English version

## **Safety requirements for secondary batteries and battery installations Part 3: Traction batteries**

Règles de sécurité pour les batteries  
et les installations de batteries  
Partie 3: Batteries de traction

Sicherheitsanforderungen an Batterien  
und Batterieanlagen  
Teil 3: Antriebsbatterien für  
Elektrofahrzeuge

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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.

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# **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

This European Standard was prepared by the Technical Committee CENELEC TC 21X, Secondary cells and batteries.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50272-3 on 2002-07-01.

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) 2003-07-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2005-07-01

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## 1 Scope

This standard applies to secondary batteries and battery installations used for electric vehicles, e.g. in electric industrial trucks (including - lift trucks, tow trucks, cleaning machines, automatic guided vehicles), in battery powered locomotives, in electric road vehicles (e.g. passenger and goods vehicles, golf carts, bicycles, wheelchairs).

The nominal voltages are limited to 1 000 V a.c. and 1 500 V d.c. respectively and describe the principal measures for protection against hazards generally from electricity, gas emission and electrolyte.

It provides requirements on safety aspects associated with the installation, use, inspection, maintenance and disposal of batteries.

It covers lead-acid, nickel cadmium and other alkaline secondary batteries.

NOTE It is intended to amend this standard to include other battery systems when they become available.

## 2 Normative references

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).

EN 166	1995	Personal eye-protection - Specifications
EN 1175-1	1998	Safety of electrical trucks - Electrical requirements Part 1: General requirements for battery powered trucks
EN 1987-1	1987	Electrically propelled road vehicles - Specific requirements for safety - Part 1: On board energy storage
EN 60204-1	1986	Electrical equipment of industrial machines Part 1: General requirements
EN 60900	1993	Hand tools for live working up to 1 kV a.c. and 1,5 kV d.c.
EN 61140	2001	Protection against electric shock - Common aspects for installation and equipment (IEC 61140:1997)
EN 61429 + A11	1996 1998	Marking of secondary cells and batteries with the international recycling symbol ISO 7000-1135 and indications regarding directives 93/86/EEC and 91/157/EEC
HD 22.1 S3	1997	Rubber insulated cables of rated voltages up to and including 450 V/750 V - Part 1: General requirements
IEC 60364-4-41	1992	Electrical installations of buildings - Part 4: Protection for safety - Chapter 41: Protection against electric shock
IEC 60050-486	1991	International Electrotechnical Vocabulary - Chapter 486: Secondary cells and batteries
IEC/TR3 61431	1995	Guide for the use of monitor systems for lead-acid traction batteries
ISO 7000	1989	Graphical symbols for use on equipment - Index and synopsis