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Laddningsbara batterier för elfordon (utom litiumbatterier) – Provning av prestanda och livslängd

*Secondary batteries (except lithium) for the propulsion of electric road vehicles –
Performance and endurance tests*

Som svensk standard gäller europastandarden EN 61982:2012. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61982:2012.

Nationellt förord

Europastandarden EN 61982:2012

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61982, First edition, 2012 - Secondary batteries (except lithium) for the propulsion of electric road vehicles - Performance and endurance tests**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61982-1, utgåva 1, 2007, SS-EN 61982-2, utgåva 1, 2003 och SS-EN 61982-3, utgåva 1, 2002, gäller ej fr o m 2015-06-01.

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**Secondary batteries (except lithium) for the propulsion
of electric road vehicles -
Performance and endurance tests
(IEC 61982:2012)**

Accumulateurs (excepté lithium)
pour la propulsion des véhicules
routiers électriques -
Essais de performance et d'endurance
(CEI 61982:2012)

Sekundärbatterien (ausgenommen
Lithium-Batterien) für den Antrieb
von Elektrostraßenfahrzeugen -
Kapazitäts- und Lebensdauerprüfungen
(IEC 61982:2012)

This European Standard was approved by CENELEC on 2012-06-01. 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.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 21/775/FDIS, future edition 1 of IEC 61982, prepared by IEC/TC 21 "Secondary cells and batteries" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61982:2012.

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) 2013-04-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-06-01

This document supersedes EN 61982-1:2006, EN 61982-2:2002 + corrigendum December 2002 and EN 61982-3:2001.

EN 61982:2012 includes the following significant technical changes with respect to EN 61982-1:2006, EN 61982-2:2002 and EN 61982-3:2001:

- clarification of the scope;
- update of some tests, and
- addition of the Annex A dealing with NiMH batteries for the propulsion of hybrid electric vehicles.

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 61982:2012 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 (not modified).
IEC 60254-1:2005	NOTE	Harmonized as EN 60254-1:2005 (not modified).
IEC 60359	NOTE	Harmonized as EN 60359.
IEC 62660-1:2010	NOTE	Harmonized as EN 62660-1:2011 (not modified).
IEC 62660-2:2010	NOTE	Harmonized as EN 62660-2:2011 (not modified).

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 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 60050-482	2004	International Electrotechnical Vocabulary (IEV) - Part 482: Primary and secondary cells and batteries	-	-
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	EN 61434	-

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INTRODUCTION

The first edition of IEC 61982 series was composed of the following three parts:

IEC 61982-1:2006, *Secondary batteries for the propulsion of electric road vehicles – Part 1: Test parameters*

IEC 61982-2:2002, *Secondary batteries for the propulsion of electric road vehicles – Part 2: Dynamic discharge performance test and dynamic endurance test*

IEC 61982-3:2001, *Secondary batteries for the propulsion of electric road vehicles – Part 3: Performance and life testing (traffic compatible, urban use vehicles)*

The current standard IEC 61982:2012 replaces the former IEC 61982 series above.

In terms of lithium ion batteries for automobile application, the following standards are applicable:

IEC 62660-1:2010, *Secondary lithium-ion cells for the propulsion of electric road vehicles – Part 1: Performance testing*

IEC 62660-2:2010, *Secondary lithium-ion cells for the propulsion of electric road vehicles – Part 2: Reliability and abuse testing*

ISO 12405-1:2011, *Electrically propelled road vehicles – Test specification for lithium-ion traction battery packs and systems – Part 1: High-power applications*

ISO 12405-2:2011, *Electrically propelled road vehicles – Test specification for lithium-ion traction battery systems – Part 2: High energy applications* (to be published)

SECONDARY BATTERIES (EXCEPT LITHIUM) FOR THE PROPULSION OF ELECTRIC ROAD VEHICLES –

Performance and endurance tests

1 Scope

This International Standard is applicable to performance and endurance tests for secondary batteries used for vehicle propulsion applications. Its objective is to specify certain essential characteristics of cells, batteries, monoblocks, modules and battery systems used for propulsion of electric road vehicles, including hybrid electric vehicles, together with the relevant test methods for their specification.

The tests may be used specifically to test batteries developed for use in vehicles such as passenger vehicles, motor cycles, commercial vehicles, etc. This standard is not applicable to battery systems for specialist vehicles such as public transport vehicles, refuse collection vehicles or heavy duty vehicles, where the battery is used in the similar way to the industrial vehicles.

The test procedures are defined as a function of the vehicle requirements of performance.

This standard is applicable to lead-acid batteries, Ni/Cd batteries, Ni/MH batteries and sodium based batteries used in electric road vehicles.

Annex A specifies performance and cycle life test procedures of Ni/MH batteries used for the propulsion of hybrid electric vehicle (HEV).

NOTE This standard is not applicable to lithium-ion batteries for automobile application that are specified in IEC 62660-1, IEC 62660-2, ISO 12405-1 and ISO 12405-2 (to be published).

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*

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