

Plii-happe käivitusakud. Osa 1: Üldised nõuded ja katsetusmeetodid

Lead-acid starter batteries - Part 1: General requirements and methods of test

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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Lead-acid starter batteries
Part 1: General requirements and methods of test

Batteries d'accumulateurs
de démarrage au plomb
Partie 1: Prescriptions générales
et méthodes d'essais

Blei-Akkumulatoren-Starterbatterien
Teil 1: Allgemeine Anforderungen
und Prüfungen

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CENELEC

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Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 21X, Secondary cells and batteries. A draft amendment (prA4) to EN 50342:2001 was submitted to the Unique Acceptance Procedure and was approved by CENELEC on 2004-12-01 to be combined with the existing documents and published as EN 50342-1.

This European Standard supersedes EN 50342:2001 + A1:2001 + A2:2001 + corrigendum March 2003 + A3:2004 and is the result of a detailed review of the existing documents resulting in a series of changes of an editorial nature designed to make it more clearly defined and consistent.

Annex A of EN 50342:2001, which described the European Type Number for starter batteries (ETN), was removed due to the cessation of its operation by an external company.

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) 2006-11-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2007-12-01

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1 General

1.1 Scope

This standard is applicable to lead-acid batteries with a nominal voltage of 12 V, used primarily as a power source for the starting of internal combustion engines, lighting and also for auxiliary equipment of internal combustion engine vehicles. These batteries are commonly called "starter batteries". Batteries with a nominal voltage of 6 V are also included within the scope of this standard. All referenced voltages have to be divided by two for 6 V batteries.

This standard is applicable to batteries for the following purposes:

- batteries for passenger cars,
- batteries for commercial and industrial vehicles for normal use,
- batteries for commercial and industrial vehicles for severe use.

This standard is not applicable to batteries for other purposes, for example the starting of railcar internal combustion engines.

1.2 Object

The object of this standard is to specify

- general requirements;
- certain essential functional characteristics, the relevant test methods and results required, for several classes and types of starter batteries.

1.3 Designation of starter batteries - Electrolyte density and open circuit voltage

1.3.1 Batteries are classified according to their types

- vented (flooded) battery: a secondary battery having a cover provided with one or more openings through which gaseous products may escape;
- valve regulated (with gas recombination) battery (VRLA): a secondary battery which is closed under normal conditions but which has an arrangement that allows the escape of gas if the internal pressure exceeds a predetermined value. The battery cannot receive addition to the electrolyte.

In this type of battery, the electrolyte is immobilised.

1.3.2 Electrolyte density and open circuit voltage

The density of the electrolyte in all fully charged vented batteries shall be in the range 1,27 kg/l to 1,30 kg/l at 25 °C unless otherwise specified by the manufacturer.

The open circuit voltage (OCV), of fully charged batteries after a minimum 24 h stand on open circuit, shall be in the range 12,70 V to 12,90 V for vented types and 12,80 V minimum for valve regulated types at 25 °C unless otherwise specified by the manufacturer.

The manufacturer shall specify the electrolyte density (or OCV) and tolerance. If such information is not available, vented battery testing shall be carried out with a density of $1,28 \text{ kg/l} \pm 0,01 \text{ kg/l}$ at 25 °C or an OCV of $12,76 \text{ V} \pm 0,06 \text{ V}$ at 25 °C and valve regulated battery testing shall be carried out with a minimum OCV of 12,80 V.