

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

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

See Eesti standard EVS-EN 50342-1:2015+A1+A2:2021 sisaldab Euroopa standardi 0342-1:2015 ja selle muudatuste A1:2018 ja A2:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 50342-1:2015+A1+A2:2021 consists of the English text of the European standard EN 50342-1:2015 and its amendments A1:2018 and A2:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.11.2015, muudatused A1 30.11.2018 ja A2 08.10.2021.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 20.11.2015, for A1 30.11.2018 and A2 08.10.2021.
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ICS 29.220.20

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English Version

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

This European Standard was approved by CENELEC on 2015-10-05. Amendment A1 modifies was approved by CENELEC on 2018-08-06. Amendment A2 was approved by CENELEC on 2021-08-17. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard and its amendments the status of a national standard without any alteration.

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

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European foreword

This document (EN 50342-1:2015) has been prepared by CLC/TC 21X "Secondary cells and batteries".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-10-05
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2018-10-05

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This document supersedes EN 50342-1:2006.

EN 50342, *Lead-acid starter batteries*, is currently composed of the following parts:

- *Part 1: General requirements and methods of test* [the present document];
- *Part 2: Dimensions of batteries and marking of terminals*;
- *Part 3: Terminal system for batteries with 36 V nominal voltage*;
- *Part 4: Dimensions of batteries for heavy vehicles*;
- *Part 5: Properties of battery housings and handles*;
- *Part 6: Batteries for Micro-Cycle Applications* [currently at Formal Vote stage];
- *Part 7: General requirements and methods of tests for motorcycle batteries* [currently at Formal Vote stage].

EN 50342-1:2015 includes the following significant technical changes with respect to EN 50342-1:2006:

- a) The following topics have been reworked/changed in the new version:
 - 1) simplified structure;
 - 2) correction of errors;
 - 3) updated to actual state of art of lead acid batteries;
 - 4) definition of new requirement levels and a new system for identification.
- b) The following test procedures and requirements have been updated:
 - 1) charging procedure (reworked);
 - 2) cold cranking procedure (reworked);
 - 3) charge retention (reworked);

- 4) deep discharge (new);
- 5) cycling (reworked);
- 6) water consumption;
- 7) vibration test procedures (reworked and new requirement level V4 added for heavy trucks).

A1 Amendment A1 European foreword

This document (EN 50342-1:2015/A1:2018) has been prepared by CLC/TC 21X "Secondary cells and batteries", the secretariat of which is held by DKE.

The following dates are fixed:

- latest date by which this document has (dop) 2019-05-30
to be implemented at national level by
publication of an identical national
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A₂ Amendment A2 European foreword

This document (EN 50342-1:2015/A2:2021) has been prepared by CLC/TC 21X “Secondary cells and batteries”.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-08-17
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2024-08-17

TC 21X working group 3 has agreed to implement the following changes with respect to EN 50342-1:2015/A1:2018:

- Deletion of high current discharge after water consumption test. This is not needed as a dedicated corrosion test is available in the document.
- Limitation of the maximum discharge time in cranking performance test. Batteries with high power capability might be damaged if discharge until the cut off voltage of 6,0 V is reached. To prevent this the maximum discharge time of the second step of the cranking performance test has been limited to 180 s.

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Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website. **A₂**

1 Scope

This European 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 need to be divided by two for 6 V batteries.

This European Standard is applicable to batteries for the following purposes:

- batteries for passenger cars,
- batteries for commercial and industrial vehicles.

This European Standard is not applicable to batteries for other purposes, for example the starting of railcar internal combustion engines or for motorcycles.

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.

EN 50342–2, *Lead-acid starter batteries — Part 2: Dimensions of batteries and marking of terminals*

EN 50342–4, *Lead-acid starter batteries — Part 4: Dimensions of batteries for heavy vehicles*

EN 50342-5, *Lead-acid starter batteries — Part 5: Properties of battery housings and handles*

EN 50342–6, *Lead-acid starter batteries — Part 6: Batteries for Micro-Cycle Applications*

EN 61429, *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 (IEC 61429)*

IEC 60050–482, *International Electrotechnical Vocabulary — Part 482: Primary and secondary cells and batteries*

3 General

3.1 Introduction

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.

For general definitions of terms see IEC 60050-482, Part 482 of the International Electro-technical Vocabulary (IEV).