
Svinčeno-kislinske zaganjalne baterije - 1. del: Splošne zahteve in preskusne metode

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

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

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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Ta slovenski standard je istoveten z: EN 50342-1:2006/A1:2011

SIST EN 50342-1:2006/A1:2012
<https://standards.iteh.ai/catalog/standards/sist/8b94fc56-5399-4765-ada9-bafb3bbfba7e/sist-en-50342-1-2006-a1-2012>

ICS:

29.220.20	Kislinski sekundarni členi in baterije	Acid secondary cells and batteries
-----------	--	------------------------------------

SIST EN 50342-1:2006/A1:2012 **en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 50342-1:2006/A1:2012

<https://standards.iteh.ai/catalog/standards/sist/8f9f4c56-5399-47b3-ada9-bafb3bbfba7e/sist-en-50342-1-2006-a1-2012>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50342-1/A1

November 2011

ICS 01.080.20; 29.220.20

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

iTeh STANDARD PREVIEW

This amendment A1 modifies the European Standard EN 50342-1:2006; it was approved by CENELEC on 2011-10-17. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland 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

This document (EN 50342-1:2006/A1:2011) has been prepared by the CLC/TC 21X, "Secondary cells and batteries" in cooperation with ZVEI/EUROBAT and is based on different discussions within these organisations.

The following dates are fixed:

- latest date by which the amendment has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2012-10-17
- latest date by which the national standards conflicting
with the amendment have to be withdrawn (dow) 2014-10-17

This amendment is due to Commission Regulation (EU) No 1103/2010 of 29 November 2010 establishing, pursuant to Directive 2006/66/EC of the European Parliament and of the Council, rules as regards capacity labelling of portable secondary (rechargeable) and automotive batteries and accumulators (OJ L 313, 30.11.2010, p. 3–7).

It aims to amend EN 50342-1:2006 in view of precise definitions of the values of accuracy for capacity and cold cranking. For this purpose, the definition of the labelled capacity must be clearly identified, and a method of sampling the batteries as well as the degree of compliance need to be defined more precisely. Additionally, more precise phrasing for the definition of the needed labels is required.

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.

<https://standards.iteh.ai/catalog/standards/sist/8f94c56-5399-47b3-ada9-bafb3bbfba7e/sist-en-50342-1-2006-a1-2012>

2 General requirements

2.1 Identification, labelling

In 2.1 c), **replace** the two hyphenated paragraphs as follows:

- obligatory : nominal capacity C_n (Ah) (see 3.1.2),
- additional on demand reserve capacity $C_{r,n}$ (min) (see 3.1.2),

Replace line d) as follows:

- d) obligatory: the nominal cranking current I_{cc} (see 3.1.1);

Add the following after g):

- h) label size: the capacity C_{20} and the cold cranking current I_{cc} (A) shall be displayed on a separate label or as text on a combined label (e.g. together with additional information of the producer or type mark). The size of the label shall be at least 3 % of the largest side of the battery. The character size high should be at least 3 mm. The label shall be fixed on one of the four sides or on the lid. A multiple labelling is allowed.

4 General test conditions

4.1 Sampling of batteries

Add the following after the last hyphenated paragraph:

Out of different production or sampling lots, 7 batteries shall be selected for testing according to the procedures detailed in 5.1 and 5.3. Six of these batteries shall be used for these tests. In case of equipment failures or technical outliers, one battery can be replaced to repeat one test sequence starting from 5.1.

4.5.1 Batteries filled and charged

Replace the first paragraph as follows:

Initially the batteries are subjected to the following series of tests:

- 1st C_e check,
- 1st cranking performance test;
- 2nd C_e check,
- 2nd cranking performance test;
- 3rd C_e check,
- 3rd cranking performance test.

Replace Table 1 as follows:

Table 1 – Test sequence

Battery ^{a,b}	Subclause	1	2	3	4	5	6
1 st C _e	5.1 or 5.2	X	X	X	X	X	X
1 st cranking performance test	5.3	X	X	X	X	X	X
2 nd C _e	5.1 or 5.2	(X)	(X)	(X)	X	(X)	(X)
2 nd cranking performance test	5.3	(X)	(X)	(X)	X	(X)	(X)
3 rd C _e	5.1 or 5.2	(X)	(X)	(X)	X	(X)	(X)
3 rd cranking performance test	5.3	(X)	(X)	(X)	X	(X)	(X)
Endurance Corrosion	5.6 or 5.7	X					
Endurance Cycling	5.6 or 5.7		X				
Charge retention	5.5			X			
Charge acceptance	5.4				X		
Electrolyte retention	5.10				X		
Vibration resistance	5.9					X	
Water consumption ^c	5.8						X
NOTE (X) denotes that this test needs to be carried out if the previous same test did not achieve the required levels.							
^a Batteries contain a multiple of individual plates and are produced under large-scale volume. It is inevitable to evaluate the degree of compliance under statistical considerations, so one of the batteries 1 to 6 can be replaced by battery 7 for testing starting from 5.1 or 5.3 in case of unexpected deviations below 90 % C _n or test equipment failures during the test. ^b If RC is needed, it can be tested with additional batteries. ^c The test for water consumption should be applied only to "low water loss" and "very low water loss" vented batteries according to 2.3 and to valve regulated batteries.							

5 Tests/methods and requirements

5.1 20 hour capacity check C_e

Replace 5.1.3 as follows:

5.1.3 The capacity C_e is C_e = t x I_n (Ah).

Requirements:

From each test sequence, the maximum value across all 6 tests is taken to calculate the mean value of the 20-hour capacity as

$$\bar{C}_e = \frac{\sum_{i=1}^6 C_{e_i}}{6}$$

The standard deviation is calculated for these data as

$$S = \sqrt{\frac{\sum_{i=1}^6 (C_{e_i} - \bar{C}_e)^2}{5}}$$

The mean value of the capacity should be as target equal to or greater than the labelled capacity C_n.

Due to inevitable statistical deviations, the requirement for compliance of 20-hour capacity has to fulfil the following condition.

$$\frac{(\bar{C}_e - S)}{C_n} \geq 0,95$$

5.3 Cranking performance test

In 5.3.3, **replace** the last sentence of the first paragraph as follows:

The voltage U_f shall be not less than 7,50 V for every of the 6 tested batteries in at least one sequence.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 50342-1:2006/A1:2012

<https://standards.iteh.ai/catalog/standards/sist/8f9f4c56-5399-47b3-ada9-bafb3bbfba7e/sist-en-50342-1-2006-a1-2012>