DRAFT TANZANIA STANDARD

(Draft for comments only)

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

TANZANIA BUREAU OF STANDARDS
1. National Foreword

This draft Tanzania Standard is being prepared by the TBS Extra Low Voltage and Energy Storage Technical Committee (TBS/EDC 2), under the supervision of the Electrotechnical Divisional Standards Committee (EDC)

This draft Tanzania Standard is an adoption of the International Standard IEC 60095-1:2018 Lead acid starter batteries – Part 1: General requirements and methods of test which has been prepared by the International Electrotechnical Commission and is the revised version of TZS 144-1:2017, Lead acid starter batteries–Part 1: General requirements and methods of test.

2. Terminology and conventions

Some terminologies and certain conventions are not identical with those used in Tanzania Standards; attention is drawn especially to the following:

1) The comma has been used as a decimal marker for metric dimensions. In Tanzania Standards, it is current practice to use “full point” on the baseline as the decimal marker.

2) Where the words “International Standard(s)” appear, referring to this standard they should read “Tanzania Standard(s)”. 

3. Technical changes with respect to previous (fourth) edition

This fifth edition will cancel and replace the fourth edition published in 2017. This edition constitutes a technical revision

This edition includes the following significant technical changes with respect to the previous edition:

(a) Charge acceptance test;
(b) Cranking performance test;
(c) Charge retention test;
(d) Endurance test added;
(e) Sampling of batteries;
(f) Charging method.
INTERNATIONAL STANDARD

Lead-acid starter batteries –
Part 1: General requirements and methods of test
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LEAD-ACID STARTER BATTERIES – Part 1: General

requirements and methods of test

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.

3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.

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5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.

6) All users should ensure that they have the latest edition of this publication.

7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.

8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.

9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60095-1 has been prepared by IEC technical committee 21: Secondary cells and batteries.

This eighth edition cancels and replaces the seventh edition published in 2006. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) charge acceptance test;

b) cranking performance test;

c) charge retention test; and

d) endurance test added.
The text of this International Standard is based on the following documents:

<table>
<thead>
<tr>
<th>FDIS</th>
<th>Report on voting</th>
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<tbody>
<tr>
<td>21/974/FDIS</td>
<td>21/987/RVD</td>
</tr>
</tbody>
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Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60095 series, published under the general title *Lead-acid starter batteries*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.
LEAD-ACID STARTER BATTERIES –
Part 1: General requirements and methods of test

1 Scope

This part of IEC 60095 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 for auxiliary equipment of internal combustion engine vehicles. These batteries are commonly called “starter batteries”.

This document is applicable to batteries for the following purposes:

• batteries for passenger cars;
• batteries for commercial and industrial vehicles.

This document is not applicable to batteries for other purposes, such as the starting of railcar internal combustion engines or for motorcycles and other power sport vehicles.

This document defines many general properties of lead-acid batteries. Single sections can be referenced in other parts of the IEC 60095 series even if the application is excluded in the scope of this document.

This document specifies the:

• general requirements;
• essential functional characteristics, relevant test methods and results required,

for several classes of starter batteries:

• according to the general type of application;
• according to the type of product.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. 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, International Electrotechnical Vocabulary – Chapter 482: Primary and secondary cells and batteries

IEC 60095-2, Lead-acid starter batteries – Part 2: Dimensions of batteries and dimensions and marking of terminals

IEC 60095-4, Lead-acid starter batteries – Part 4: Dimensions of batteries for heavy vehicles

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-482 and the following apply.