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**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/T 5008.1-2023**

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**Lead-acid starter batteries - Part 1: Technical conditions and  
methods of test**

**(English Translation)**

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### Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization - Part 1.Rules for the Structure and Drafting of Standardizing Documents.

This Document is Part 1 of GB/T 5008 Lead-Acid Starter Batteries. GB/T 5008 has published

the following parts.

- Part 1.Technical Conditions and Methods of Test;
- Part 2.Dimensions of Batteries and Dimensions and Marking of Terminals;
- Part 3.Kinds of Products and Specifications and Dimensions and Marking of Terminals for Heavy Vehicles.

This Document replaced GB/T 5008.1-2013 Lead-Acid Starter Batteries - Part 1.Technical Conditions and Methods of Test. Compared with GB/T 5008.1-2013, this Document has made

the technical changes as follows besides the structural adjustments and editorial modifications.

- Add Class D and content in "battery classification by performance" (see 3.3.1 of this Edition);
- Change the technical requirements for "charging acceptance capability" (see 4.5 of this

Edition; 4.5 of the 2013 Edition);

--- Change the technical requirements for "cycle endurance capacity" (see 4.8.3 of this Edition; 4.8 of the 2013 Edition);

--- Add technical requirements for "deep discharge recovery capability" (see 4.14 of this Edition);

--- Add technical requirements for "parking condition cycle capability" (see 4.15 of this Edition);

--- Change the requirements for the exit-factor time of "test samples" (see 5.2.1.1 of this Edition; 5.2.1.1 of the 2013 Edition);

--- Change the "test process" of the high temperature corrosion test (see 5.9.1.2 of this Edition; 5.9.1.2 of the 2013 Edition);

--- Change the "test process" of the cyclic endurance test I (see 5.9.2.2 of this Edition; 5.9.2.2

of the 2013 Edition);

--- Change the "cyclic endurance test II" (see 5.9.3 of this Edition; 5.9.3 of the 2013 Edition);

--- Add the test method of "vibration resistance of Class-D batteries" (see 5.11 of this Edition);

--- Add the test method of "deep discharge recovery capability" (see 5.15 of this Edition);

--- Add the test method of "parking condition cycle capability" (see 5.16 of this Edition);

--- Change the test items and sample quantity of "battery type inspection" (see 6.1.2 of this Edition; 6.1.2 of the 2013 Edition);

--- Change the "battery casing material mark" (see C.1 of this Edition; A.1 of the 2013 Edition);

--- Change the "warning sign" (see C.2 of this Edition; A.2 of the 2013 Edition)

This Document modified and adopted IEC 60095-1:2018 Lead-Acid Starter Batteries - Part 1.

General Requirements and Methods of Test.

Compared with IEC 60095-1:2018, this Document has many adjustments in structure. See

Appendix A for a comparison list of structural number changes between the two documents.

Compared with IEC 60095-1:2018, this Document has many technical differences, and the involved clauses are marked with a vertical single line (|) in the outer margin of the page. A list

of these technical differences and their causes is provided in Appendix B.

This Document made the following editorial changes.

--- In order to coordinate with the existing standards, change the name of the standard into Lead-Acid Starter Batteries - Part 1. General Requirements and Methods of Test.

Please note some contents of this Document may involve patents. The issuing agency of this

Document shall not assume the responsibility to identify these patents.

This Document was proposed by China Electrical Equipment Industry Association.

This Document shall be under the jurisdiction of National Technical Committee on Lead-Acid

Battery of Standardization Administration of China (SAC/TC 69).

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The historical editions replaced by this Standard are as follows.

--- GB/T 5008.1-1985 was first-time published in 1985; first-time revised in 1991;  
second-time

revised in 2005; third-time revised in 2013;

--- It is fourth-time revised hereby.

## 1 Scope

This Document specifies the classification, technical requirements, inspection rules and marking, packaging, transportation and storage requirements of lead-acid starter batteries (hereinafter referred to as batteries), and describes the corresponding test methods.

## 2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates

indicated are applicable to this Document; for the undated documents, only the latest version

(including all the amendments) is applicable to this Document.

GB/T 2900.41 Electrotechnical terminology - Primary and secondary cells and batteries  
(GB/T 2900.41-2008, IEC 60050-482.2003, IDT)

GB/T 5008.2 Lead-acid starter batteries - Part 2. Dimensions of batteries and dimensions and marking of terminals (GB/T 5008.2-2023, IEC 60095-2.2021, MOD)

## 3 Terms, Definitions, Symbols and Classification

A low-water loss battery that does not require maintenance during its service life, provided that

specified conditions are met.