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

GB/T 19639.1-2014

Replacing GB/T 19639.1-2005

**Technical conditions of small-sized valve-regulated lead-acid
batteries**

通用阀控式铅酸蓄电池 第1部分：技术条件

(English Translation)

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Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms, abbreviations and symbols
 - 3.1 Terms
 - 3.2 Acronyms
 - 3.3 Symbol

Foreword

GB/T 19639 "General VRLAB" is divided into two parts.

--- Part 1. Technical conditions;

--- Part 2. Specifications Model;

This part of GB/T 19639 Part 1.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB/T 19639.1-2005 "Small VRLA battery technology conditions" and GB/T 19639.1-2005 Compared to the main changes are as follows.

- Standard name changed to "Universal VRLAB Part 1. technical conditions";
- Content does not increase the scope of application (see Chapter 1);
- Add content "Normative references" (see Chapter 2);
- Increase the "Abbreviations" modify "terms, symbols" content (see Chapter 3, Chapter 3, 2005);
- Add, modify "batteries look" test content; (see 41, 2005, version 4.1.);
- Increased by "1 hour rate capacity of the" technical requirements and test methods (see 4.2.2 and 5.4.2);
- Delete "seven minutes-rate discharge" Technical requirements and test methods (see the 2005 edition 4.4 and 5.6);
- Add, modify "the maximum discharge current" technical requirements and test methods (see 4.4 and 564 in 2005, version 4.6 and 5.8.);

- Edit "vent" technical requirements (see 47, 2005 4.10.);
- Add, modify "life cycle" technical requirements and test methods (see 4.13 and 515, 2005 4.16.1 and 5.18.2.);
- Edit "vibration resistance" Technical requirements and test methods; (see 4.11, and 5131, 2005 4.14 and 5.16.);
- Original standard "trickle discharge life" to "life at room temperature floating charge" (see 4141, 2005 4.16.2.);
- Edit "floating charge life at room temperature" test method (see 5161, 2005 5.18.3.);
- Add "material flame resistance of the" technical requirements and test methods (see 4.15 and 5.17);
- Increase the "floating charge high temperature life testing" approach (see 5.16.2);
- "Preconditioning test performed before the" --- modify test methods (see 522, 2005 5.2.);
- Edit "over-discharge test" method (see 5.7, 2005 5.9).

This section uses redrafted law revision using IEC 61056-1:2012 "common lead-acid battery (VRLA) - Part 1. General To Requirements, functional characteristics test methods " this part of IEC 61056-1:2012 The main differences are as follows.

- Edit "Normative references" (see Chapter 2);
- Reprogramming "terms, abbreviations and symbols" (see Chapter 3);
- Increase the "explosion-proof" technical requirements and test methods (see 4.9,5.11);
- Improve the "life cycle" technical requirements; (see 4.13);
- Add "material flame resistance of the" technical requirements and test methods (see 4.15);
- Increase "Inspection Rules" (see Chapter 6);
- Increase "logo, packaging, transportation, storage" (see Chapter 7).

This part is proposed by the China Electrical Equipment Industrial Association.

The lead-acid batteries in part by the National Standardization Technical Committee (SAC/TC69) centralized.

This part mainly drafted by. AMD Power Co., Ltd., Jiangsu Leoch Battery Co., Ltd., Jiangsu Wah Fu limited storage technology shares the company, the Shenyang Institute of batteries, Fujian Yaheng Power Technology Group Co., Ltd., Jiangsu Su in Battery Technology Development Co., Ltd., Fujian Fujian China Power Company.

1 Scope

This section GB/T 19639 specifies the general VRLA (hereinafter referred to as battery) technical requirements, test methods, inspection rules, marking, packaging, transportation and storage.

This section applies to emergency lighting equipment, uninterruptible power supplies, mobile measurement equipment, rated capacity of 65Ah (including 65Ah) or less A variety of DC power supply batteries. Such single cell lead-acid battery, the electrode plate may be mounted in the rectangular slot, it can be wound Electrodes mounted in the cylinder. Sulfuric acid electrolyte in the battery is not flowing between the electrodes or adsorption pore structure or in a colloidal form.

This section does not apply to batteries for other purposes, such as lead-acid starter batteries, traction lead-acid batteries, fixed-valve Lead-acid batteries, sealed lead-acid battery electric power, miniature VRLAB.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 2408-2008 Plastics - Determination of burning behavior of horizontal and vertical (IEC 60695-11-10:1999, IDT) GB/T 2900.41 Electrotechnical terminology cells and batteries [GB/T 2900.41-2008, IEC 60050 (482).2003, IDT] GB/T 12804-2011 laboratory glassware cylinder (ISO 4788:2005, NEQ) GB/T 12805-2011 laboratory glassware Burettes (ISO 385:2005, NEQ) GB/T 19639.2 General VRLAB Part 2. Specifications Model (GB/T 19639.2-2014, IEC 61056-2:2012, MOD) JB/T 9461-1999 groove mercury barometer technical conditions

3.1 Terms

Terminology GB/T 2900.41, as defined in applicable to this document.

3.2 Acronyms

DOD --- depth of discharge (depthofdischarge).

3.3 Symbol

C20 --- 20 hour rate nominal capacity, the unit is Ah (Ah);

C1 --- 1 hour rate nominal capacity, the unit is Ah (Ah);

Ca --- 20 hour rate the actual capacity of the unit is Ah (Ah);

Ca1 --- 1 hour rate the actual capacity of the unit is Ah (Ah);

--- Single battery GE amount of gas evolved in milliliters per ampere hour (mL/Ah · h);