

ICS 43.120
CCS T 47



中华人民共和国国家标准
NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 38031-2025
Replaces GB 38031-2020

Electric Vehicles Traction Battery Safety Requirements
电动汽车用动力蓄电池安全要求
(English Translation)

Issued on 2025-03-28

Implemented on 2026-07-01

Jointly Issued by
State Administration for Market Regulation of the People's Republic of China &
Standardization Administration of the People's Republic of China

CONTENTS

Foreword	II
Introduction	IV
1 Scope	1
2 Normative References	1
3 Terms and Definitions	1
4 Symbols and Abbreviations	3
4.1 Symbols	3
4.2 Abbreviations	3
5 Safety Requirements	3
5.1 Safety Requirements for Battery Cell	3
5.2 Safety Requirements for Battery Pack or System	3
6 Test Conditions	5
6.1 General Conditions	5
6.2 Accuracies of Measuring Instruments and Meters	6
6.3 Tolerances during Testing Process	6
6.4 Data Record and Record Interval	6
7 Test Preparation	7
7.1 Test Preparation for Battery Cell	7
7.2 Test Preparation for Battery Pack or System	7
8 Test Methods	8
8.1 Safety Test Methods of Battery Cell	8
8.2 Safety Test Methods of Battery Pack or System	10
9 Criteria for Determination of One Type	22
10 Implementation of This Standard	24
Annex A (Informative) Typical Configurations of Battery Pack and System	25
Annex B (Normative) Test Methods for Isolation Resistance of Battery Pack or System	27
Annex C (Normative) Thermal Propagation Analysis and Verification Report	29
Bibliography	33

Electric Vehicles Traction Battery Safety Requirements

1 SCOPE

This document specifies the safety requirements for traction battery (hereinafter referred to as “battery”) cells, battery packs or systems for electric vehicles, and describes the corresponding test methods.

This document is applicable to the traction battery for electric vehicles.

2 NORMATIVE REFERENCES

The following referenced documents are indispensable for the application of this document. For dated references, only the editions cited apply. For undated references, the latest editions of the normative document (including any amendments) apply.

GB/T 2423.4	Environmental testing for electric and electronic products - Part 2: Test method - Test Db: Damp heat, cyclic (12h+12h cycle)
GB/T 2423.17-2024	Environmental testing for electric and electronic products - Part 2: Test method - Test Ka: Salt mist
GB/T 2423.43	Environmental testing for electric and electronic products - Part 2: Test methods - Mounting of specimens for vibration impact and similar dynamic tests
GB/T 2423.56	Environmental testing - Part 2: Test methods - Test Fh: Vibration, broadband random and guidance
GB/T 4208-2017	Degrees of protection provided by enclosure (IP code)
GB/T 19596	Terminology of electric vehicles
GB/T 28046.4-2011	Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 4: Climatic loads

3 TERMS AND DEFINITIONS

For the purpose of this document, the terms and definitions established in GB/T 19596 and the followings apply.

3.1 battery cell

basic functional unit, which realizes mutual conversion between chemical energy and electric energy

Note: It generally consists of electrodes, separators, electrolyte, container and terminals, and is designed to be electrically recharged.

3.2 battery module

a combination, intended as a power source, of more than one battery cell in series and/or parallel connection

3.3 battery pack

unit which obtains electric energy from external sources and can output electric energy to external devices

Note: It generally consists of battery cells, battery management module (excluding BCU), battery enclosure and the relevant accessories (cooling components, connection cables, etc.).

3.4 battery system

energy storage device comprising one or more battery packs and the relevant accessories, e.g., management system, high-voltage circuits, low-voltage circuits, and mechanical assemblies, etc.

3.5 battery subsystem



ChinaAutoRegs

中国汽车标准译文库

The following pages are left blank intentionally.

- 现成译文，到款即发。
 - 下单前可任取样页验证译文质量。
 - 免费提供正规普通增值税数电发票。
 - 请联系手机/微信: [13306496964](tel:13306496964)/Email: standardtrans@foxmail.com 获取完整译文。
 - 本英文译本为纯人工专业精翻版本，保证语法术语准确率和专业度！
 - 专业源于专注|ChinaAutoRegs 始终专注于汽车标准翻译领域！
 - 「中国汽车标准译文库」已收录上千个现行汽车国家标准和行业标准的英文版译本，涵盖传统燃油车、新能源汽车和摩托车标准化体系！独家打造千万级汽车专业术语库和记忆库。
-
- ◆ The English Translation of this document (GB, GB/T, QC/T, CNCA, CQC, CAV, etc.) is readily available, and delivered immediately upon payment.
 - ◆ You may request for sample pages to your preference before placing an order.
 - ◆ Please contact standardtrans@foxmail.com for the complete PDF version in English.
 - ◆ Almost all of Chinese automotive/automobile standards, regulations and norms in effect have been included in our well-established database, providing one-stop, up-to-date, efficient and professional solution.
-