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NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA

**GB 38031-2025**

Replacing GB 38031-2020

**Electric vehicles traction battery safety requirements**

电动汽车用动力蓄电池安全要求

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## Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This document replaces GB 38031-2020 "Electric vehicles traction battery safety requirements". Compared with GB 38031-2020, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- CHANGE the scope (see Chapter 1; Chapter 1 of the 2020 edition);
- ADD the definition of battery subsystem (see 3.5);
- CHANGE the definition of leakage (see 3.14; 3.13 of the 2020 edition);
- ADD the definition of thermal events (see 3.15);
- ADD the safety requirements and test methods for battery cells after fast charging cycles (see 5.1.7 and 8.1.8);
- CHANGE the safety requirements and test methods for battery pack or system vibration (see 5.2.1 and 8.2.1; 5.2.1 and 8.2.1 of the 2020 edition);
- CHANGE the safety requirements for mechanical shock of battery packs or systems (see 5.2.2; 5.2.2 of the 2020 edition);
- CHANGE the safety requirements for simulated collision of battery packs or systems (see 5.2.3; 5.2.3 of the 2020 edition);
- CHANGE the safety requirements and test methods for extrusion of battery packs or systems (see 5.2.4 and 8.2.4; 5.2.4 and 8.2.4 of the 2020 edition);
- CHANGE the safety requirements for damp heat cycling of battery packs or systems (see 5.2.5; 5.2.5 of the 2020 edition);
- CHANGE the safety requirements for water immersion of battery packs or systems (see 5.2.6; 5.2.6 of the 2020 edition);
- CHANGE the safety requirements and test methods for thermal stability of battery packs or systems (see 5.2.7, 8.2.7 and Appendix C; 5.2.7, 8.2.7 and Appendix C of the 2020 edition);
- CHANGE the safety requirements and test methods for temperature shock of battery packs or systems (see 5.2.8 and 8.2.8; 5.2.8 and 8.2.8 of the 2020 edition);
- CHANGE the safety requirements and test methods for battery pack or system salt

- spray (see 5.2.9 and 8.2.9; 5.2.9 and 8.2.9 of the 2020 edition);
- CHANGE the safety requirements and test methods for battery pack or system high altitude (see 5.2.10 and 8.2.10; 5.2.10 and 8.2.10 of the 2020 edition);
  - CHANGE the safety requirements and test methods for battery pack or system overtemperature protection (see 5.2.11 and 8.2.11; 5.2.11 and 8.2.11 of the 2020 edition);
  - CHANGE the safety requirements and test methods for battery pack or system overcurrent protection (see 5.2.12 and 8.2.12; 5.2.12 and 8.2.12 of the 2020 edition);
  - CHANGE the safety requirements for external short-circuit protection of battery packs or systems (see 5.2.13; 5.2.13 of the 2020 edition);
  - CHANGE the safety requirements and test methods for overcharge protection of battery packs or systems (see 5.2.14 and 8.2.14; 5.2.14 and 8.2.14 of the 2020 edition);
  - CHANGE the safety requirements for over-discharge protection of battery packs or systems (see 5.2.15; 5.2.15 of the 2020 edition);
  - ADD the safety requirements and test methods for bottom impact of battery packs, systems or vehicles (see 5.2.16 and 8.2.16);
  - CHANGE the requirements for actual capacity (see 6.1.9; 6.1.9 of the 2020 edition);
  - CHANGE the accuracy of measuring instruments and meters, test process errors, data recording, recording intervals (see 6.2, 6.3 and 6.4; 6.2, 6.3 and 6.4 of the 2020 edition);
  - CHANGE the requirements for pretreatment of battery cells, battery packs or systems (see 7.1.2 and 7.2.2; 7.1.2 and 7.2.2 of the 2020 edition);
  - CHANGE the test method for over-discharge of battery cells (see 8.1.2; 8.1.2 of the 2020 edition);
  - CHANGE the test method for heating of battery cells (see 8.1.5; 8.1.5 of the 2020 edition);
  - CHANGE the test method for extrusion of battery cells (see 8.1.7; 8.1.7 of the 2020 edition);
  - ADD the same type determination (see Chapter 9);
  - CHANGE the test method for insulation resistance of battery packs or systems (see Appendix B; Appendix B of the 2020 edition).

Please note that some of the contents of this document may involve patents. The issuing agency of this document does not assume the responsibility for identifying patents.

This document was proposed by AND shall be under the jurisdiction of the Ministry of Industry and Information Technology of the People's Republic of China.

This standard replaces the standard previously issued as follows:

- It was first published in 2020 as GB 38031-2020;
- This is the first revision.