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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 47292.2-2026

Lithium-ion battery good manufacturing practice - Part 2: Battery material control

锂离子电池生产质量管理 第2部分：电池材料管控

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1 Scope

GB/T 47292.2-2026 is the Chinese national standard covering controlling the materials that go into a cell - the incoming inspection of active materials, foils, separators and electrolyte, the storage and handling under controlled humidity, the metallic contamination control and the batch traceability. Part 2 of the series, first edition, in force from 1 April 2027, the companion of Part 1. It was issued on 31 March 2026 and takes effect on 1 April 2027, as a first edition. This page is published from the official record of the 2026 edition; the clause

text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the requirements for supplier management, incoming material receipt, incoming material inspection, incoming material storage, and traceability of battery materials involved in the production process of lithium ion cells and batteries. This document applies to the battery material control of manufacturers of power, energy storage, and consumer lithium ion cells and batteries.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the version corresponding to that date is applicable to this document; for undated references, the latest version (including all amendments) is applicable to this document.

GB/T 47292.1-2026, Lithium ion battery good manufacturing practice - Part 1. General requirements

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 lithium ion cell A rechargeable device that achieves the conversion between chemical energy and electrical energy through the movement of lithium ions between the positive electrode and the negative electrode. Note

1.It includes electrodes, separator, electrolyte, container and terminals, etc. Note

2.Lithium ion cell is also generally referred to as "cell". [Source: GB/T 47292.1-2026, 3.1]

3.2 lithium ion battery An energy storage device consisting of one or more electrically connected cells or modules, capable of obtaining electrical energy from external sources and outputting electrical energy externally, and equipped with a battery management circuit. Note

1.The battery management circuit usually has the functions of management or protection against overcharge, overcurrent, over discharge and/or overtemperature, so as to ensure the safety, performance and/or service life of the battery. Note

2.The battery can be equipped with a protective enclosure and provided with terminals or other interconnection devices. Note

3.The battery is also generally referred to as "battery pack" or "battery system". [Source: GB/T 47292.1-2026, 3.2]

3.3 gravimetric capacity Electrochemical capacity of a unit mass of active material under

specified conditions for charging or discharging.

Note. The unit is milliampere-hours per gram (mAh/g). [Source: GB/T 20252-2014, 3.1, modified]

4 Abbreviated terms

For the purposes of this document, the following abbreviated terms apply. APQP. Advanced Product Quality Planning CPK. Complex Process Capability Index IPD. Integrated Product Development SDS. Safety Data Sheet SPC. Statistical Process Control

5.1 Supplier resource pool management

5.1.1 Supplier selection The requirements for the enterprise's supplier selection are as follows:

a) The enterprise shall define the required level of the supplier quality management system for each category of materials;

b) The enterprise shall establish a supplier admission evaluation mechanism. The evaluation shall at least cover financial status, technical capability, quality system capability, project management capability, traceability management, change management, etc.;

c) The enterprise shall establish admission evaluation criteria and conduct evaluations in accordance with the criteria. Only suppliers meeting the admission evaluation criteria may be admitted into the enterprise's system.

5.1.2 Supplier performance monitoring The enterprise shall establish a supplier performance monitoring mechanism based on the following requirements.

a) The enterprise shall establish a periodic supplier performance evaluation mechanism, with the evaluation frequency being not less than once per quarter;

b) The performance evaluation dimensions shall include the supplier's product quality performance, delivery, cost, service capability, etc.;

c) The enterprise shall establish an improvement mechanism for suppliers failing the performance evaluation to ensure that suppliers have the capability to deliver qualified products.

5.1.3 Supplier re-evaluation mechanism The enterprise shall establish a re-evaluation mechanism according to the importance of the battery materials supplied by the supplier.

a) For key suppliers, an audit covering all manufacturing processes shall be conducted annually;

b) For non-key suppliers, an audit covering all manufacturing processes shall be conducted at least once every three years;

c) On-site audits should be given priority as the re-evaluation method, or online audits may be conducted in combination with supplier performance.

5.1.4 Supplier classification and exit management The enterprise's supplier classification and exit management shall satisfy the following requirements.

a) The enterprise shall classify suppliers based on quantitative indicators such as supplier performance evaluation results and re-evaluation results;

5.2 Supplier battery material development management

5.2.1 Process specification The enterprise shall establish a battery material development management process and establish a digital management system to monitor the battery material development process.

a) For power lithium ion cells, battery material development shall be planned and implemented in accordance with the APQP requirements;

b) For energy storage or consumer lithium ion cells, the IPD development process or an equivalent development process may be adopted for battery material development management.

5.2.2 Project plan management The enterprise shall develop a battery material development plan in conjunction with the project plan, complete the battery material design freeze before project design freeze, and complete production part and production process approval for battery materials before project mass production and delivery.

5.2.3 Design approval The enterprise shall require suppliers to conduct testing on battery materials. The test items shall cover material drawings, technical documentation, and applicable laws and regulations.

5.2.4 Special characteristic management The enterprise shall require suppliers to control special characteristics as follows:

a) Suppliers shall give priority to controlling special characteristics by design or error-proofing of tooling;

b) Where control by design or error-proofing of tooling cannot be adopted as the preferred solution, SPC monitoring shall be implemented to ensure that the special characteristics remain stable within the tolerance range and to reduce the risk of variation.

Note. Process capability control of power lithium ion cell materials shall refer to the requirements of IATF 16949.The corresponding requirements for process capability control of other types of battery materials shall be determined by the enterprise.

5.2.5 Production process approval Before mass production of battery materials, the enterprise shall approve and release the production process of the battery materials. The release conditions shall satisfy the following requirements.