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

GB/T 47393-2026

**Technical guidelines for the directional recycling of waste
lithium battery chemicals**

废弃锂电池化学品定向循环利用技术指南

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China Petroleum and Chemical Industry Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Waste Chemicals Disposal (SAC/TC294). This document was drafted by: Guangdong Bangpu Recycling Technology Co., Ltd., GEM Co., Ltd., and Quzhou Huayou Resource Recycling Technology Co., Ltd. The company, Jinchuan Group Nickel Salt Co., Ltd., Xiamen Tungsten Co., Ltd., CNOOC Tianjin Chemical Research and Design Institute Co., Ltd., Tianjin Muhua Tsinghua Research & Development Co., Ltd., Hunan Jinkai Recycling Technology Co., Ltd., Guangzhou Ruishang Chemical New Materials Co., Ltd., Yichang Bangpu Recycling Technology Co., Ltd. Technology Co., Ltd., Hefei University of Technology, Sichuan Shukuang Recycling Technology Co., Ltd., Zhejiang Xinyao Recycling Technology Co., Ltd., Shenzhen Jiecheng Nickel Cobalt New Energy Technology Co., Ltd., Jiangsu Daheng Environmental Technology Co., Ltd., Guizhou Normal University, Shenzhen Xinwangda Renewable Materials Technology Research Institute Limited Liability Company, Zhejiang Wilson New Materials Co., Ltd., Zhejiang New Era Zhongneng Technology Co., Ltd., Sichuan Xinghongbo Technology Development Co., Ltd. company. The main drafters of this document are. Yu Haijun, Xu Kaihua, Xu Wei, Zhang Xia, Gao Qianqian, Zhao Meijing, Zhao Wei, Yan Qunxuan, Liang Zhanxing, and Wang Hao. Xie Liping, He Donglin, Hao Chao, Yang Haoyu, Liu Quanjun, Yang Hengxiu, Xiang Junhua, Liu Baishan, Liu Luping, Chen Minzhang, Xie Yinghao, Zhang Kun, Wang Zhigang Wang Qiang, Pu Yunping, Tan Qunying, Zhang Weixin, Hua Han, Deng Mingsen, Gao Aolei, Liu Zhipeng, Chen Shiqiang, Cui Fan, Ming Jianwei, Wei Tao. Guidelines for the Targeted Recycling Technology of Waste Lithium Battery Chemicals

1 Scope

GB/T 47393-2026 is the Chinese national standard covering recovering the chemicals from spent lithium batteries as materials rather than as metals - regenerating the cathode compound directly instead of leaching it back to sulfates and rebuilding it, which saves most of the energy of the loop. First edition, in force since 1 October 2026. It was issued on 31 March 2026 and takes effect on 1 October 2026, as a first edition. The document is under the responsibility of the China Petroleum and Chemical Industry Federation. 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 provides the basic principles, circular industrial chain, types of recyclable resources, and other aspects of the targeted recycling of waste lithium battery chemicals. Guidance on recycling pathways and targeted recycling technologies. This document applies to the circular economy sector of recycling and utilizing waste lithium battery chemicals. Other waste battery chemical recycling industries should refer to... Follow the instructions.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 7119 Evaluation Guidelines for Water-Saving Enterprises

GB 17167 General Rules for the Configuration and Management of Energy Measuring Instruments in Energy-Using Units

GB/T 24789 General Rules for the Configuration and Management of Water Metering Instruments for Water Users

GB/T 29115 Guidelines for Evaluation of Raw Material Conservation in Industrial Enterprises

GB/T 33060 Treatment and Disposal Methods for Waste Liquid in Waste Battery Disposal

GB/T 33598.2 Recycling and reuse of vehicle power batteries - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 34695 and GB/T 39161 apply to this document.

4 Basic Principles

4.1 It is advisable to follow the principles of reduction, resource utilization and reuse, and the technology should have achieved a certain scale of application and be proven by practice to be feasible and economically reasonable.

4.2 It is advisable to apply the theory of circular economy development and adopt measures such as cleaner production and comprehensive resource utilization to build a model for enterprises to develop a circular economy.

4.3 It is advisable to reduce resource consumption and waste generation, and improve the resource utilization of solid waste and secondary energy through technological innovation or integration. To achieve the maximization of resource and energy utilization efficiency within the industry.

4.4 It is advisable to adopt a complete integrated supply chain, from battery recycling and dismantling, to recycled lithium-ion battery black powder, metal salts (solutions), precursors, and cathode materials. A well-planned layout is recommended to improve the recycling rate of waste lithium battery chemicals and reduce the generation of solid waste. A distributed layout is not advisable.

4.5 New projects should be located in chemical industrial parks to develop the recycling industry, and existing projects should be relocated to chemical industrial parks.