

Translated English of Chinese Standard: GB/T36146-2018

www.ChineseStandard.net → Buy True-PDF → Auto-delivery.

Sales@ChineseStandard.net

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

ICS 77.150.30
H 62

GB/T 36146-2018

Rolled copper foil for lithium ion battery

锂离子电池用压延铜箔

Issued on: May 14, 2018

Implemented on: February 01, 2019

Issued by: State Administration for Market Regulation;

Standardization Administration of the PRC.

Table of Contents

Foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Requirements.....	5
4 Test methods.....	7
5 Inspection rules.....	8
6 Marking, packing, transportation, storing, and certificate of quality.....	10
7 Order form (or contract) content.....	10

Rolled copper foil for lithium ion battery

1 Scope

This Standard specifies the requirements, test methods, inspection rules, marking, packing, transportation, storing, certificate of quality, and order form (or contract) content of rolled copper foil for lithium ion battery.

This Standard applies to the rolled copper foil (hereinafter known as copper foil for short) for manufacture of lithium ion battery.

2 Normative references

The following documents are indispensable for the application of this document. For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

GB/T 5121 (all parts) Methods for chemical analysis of copper and copper alloys

GB/T 5231 Designation and chemical composition of wrought copper and copper alloys

GB/T 8170 Rules of rounding off for numerical values & expression and judgement of limiting values

GB/T 8888 Wrought heavy non-ferrous metal products - packing, marking, transportation, storing and certificate of quality

GB/T 22638.4 Test methods for aluminium and aluminium alloy foils - Part 4: Determination of surface wetting tension

GB/T 26303.3 Measuring methods for dimensions and shapes of wrought copper and copper alloys - Part 3: Sheets and strips

GB/T 29847-2013 Test methods for copper foil used for printed boards

YS/T 668 The sampling method of physical and chemical testing for copper and copper alloys

3.5.2 Oxidation resistance

Copper foil, after heat preservation at $140\text{ }^{\circ}\text{C}\pm 2\text{ }^{\circ}\text{C}$ for 15 min, shall not be oxidized and discolored.

3.5.3 Surface roughness

The surface roughness (Ra value) of copper foil shall not be more than $0.2\text{ }\mu\text{m}$.

3.5.4 Pinhole

The size and number of copper foil pinholes shall be agreed upon by the supplier and the purchaser.

3.5.5 Appearance quality

The surface of copper foil shall be clean, flat, and uniform in color. There shall be no oxidative discoloration, scratches, spots, wrinkles, indentations, fingerprints. There shall be no foreign matters such as dust, grease, salts, copper powder, stains which affect processing and use. The edges shall be neat, without nicks, tears, folds, and wavy edges, etc..

4 Test methods

4.1 Chemical composition

The methods of arbitration analysis of the chemical composition of copper foil shall be in accordance with the provisions of GB/T 5121 (all parts).

4.2 Overall dimensions and their tolerances

4.2.1 Unit area mass

The inspection method for the unit area mass of copper foil shall be in accordance with the provisions of 6.4 in GB/T 29847-2013.

4.2.2 Width

The inspection method for the width of copper foil shall be in accordance with the provisions of GB/T 26303.3.

4.3 Mechanical properties

The tensile strength and percentage elongation after fracture of copper foil shall be determined in accordance with the provisions of 7.1 in GB/T 29847-2013.

4.4 Surface quality

5.5.1 Rounding off for numerical values and judgement of inspection results shall be carried out according to the provisions of GB/T 8170.

5.5.2 When the chemical composition is unqualified, the lot of products is judged to be unqualified.

5.5.3 When the overall dimensions and their tolerances are unqualified, the lot of products represented by the sample is judged to be unqualified.

5.5.4 When the mechanical properties are unqualified, from the lot of products (including the roll of products represented by the unqualified sample), double the number of samples shall be taken for repeated testing. If the repeated test results are all qualified, the lot of products is judged to be qualified. If there are still samples having unqualified properties in the repeated test results, the lot of products is judged to be unqualified; or the supplier inspects roll by roll, and the qualified products are delivered.

5.5.5 When the surface wetting tension, oxidation resistance, roughness, and pinhole are unqualified, from the lot of products (including the roll of products represented by the unqualified sample), double the number of samples shall be taken for repeated testing. If the repeated test results are all qualified, the lot of products is judged to be qualified. If there are still samples having unqualified properties in the repeated test results, the lot of products is judged to be unqualified; or the supplier inspects roll by roll, and the qualified products are delivered.

5.5.6 When the appearance quality is unqualified, this roll of products is judged to be unqualified.

6 Marking, packing, transportation, storing, and certificate of quality

The marking, packing, transportation, storing, and certificate of quality of copper foil shall comply with the provisions of GB/T 8888.

7 Order form (or contract) content

The order form (or contract) for ordering the products listed in this Standard shall include the following contents:

- a) Product name;
- b) Designation;

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 2 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----