
Translated English of Chinese Standard: GB/T33014.2-2016

www.ChineseStandard.net

Sales@ChineseStandard.net

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

ICS 77.150.30

H 62

GB/T 2040-2017

Replacing GB/T 2040-2008

Copper and copper alloy sheet

GB/T 2040-2017 How to BUY & immediately GET a full-copy of this standard?

1. www.ChineseStandard.net;
2. Search --> Add to Cart --> Checkout (3-steps);
3. No action is required - Full-copy of this standard will be automatically & immediately delivered to your EMAIL address in 0~60 minutes.
4. Support: Sales@ChineseStandard.net. Wayne, Sales manager

Issued on: May 31, 2017

Implemented on: December 1, 2017

Issued by: General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China;

Standardization Administration of the People's Republic of China.

Table of Contents

Foreword.....	3
1 Scope.....	5
2 Normative references.....	5
3 Requirements.....	6
4 Test method	16
5 Inspection rules.....	17
6 Marking, packaging, transportation, storage and quality certificate.....	19
7 Order (or contract) content.....	19

Foreword

This Standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard replaces GB/T 2040-2008 "Sheet of copper and copper alloy".

Compared with GB/T 2040-2008, the main changes in this Standard are as follows:

- ADD 5 designations, i.e. TFe0.1, TFe2.5, H66, HSn88-1, BZn18-26 and the corresponding requirements;
- ADD the code name of copper and copper alloys;
- MODIFY the designation and state of alloys;
- MODIFY the specification range of pure copper, oxygen-free copper and TCr0.5 sheets;
- MODIFY the performance of some sheets;
- DELETE the provisions of Rockwell hardness;
- MODIFY the "Dimension measurement method" TO "The test method for dimension of sheets is in accordance with the provisions of GB/T 26303.3";
- ADD the reference to YS/T 482 "Methods for analysis of copper and copper alloys - The atomic emission spectrometry" and YS/T 483 "Methods for analysis of copper and copper alloys - X-Ray fluorescence spectrometric (wavelength dispersive)";
- MODIFY the tensile test sample number according to the provisions of GB/T 228.1-2010;
- ADD the provision of "The sampling method shall comply with the provisions of YS/T 668; the sample for mechanical properties and process performance shall be prepared according to the provisions of YS/T 815".

This Standard is proposed by China Nonferrous Metals Industry Association.

The Standard is under the jurisdiction of National Technical Committee on Nonferrous Metals of Standardization Administration of China (SAC/TC 243).

Drafting organizations of this Standard: Chinalco Luoyang Copper Co., Ltd., Ningbo Xingye Shengtai Group Co., Ltd., Anhui Truchum Advanced Materials & Technology Co., Ltd., Shanxi Chunlei Copper Co., Ltd., Tongling Jinvi Copper Co., Ltd., Shaoxing Electric Co., Ltd., Kaimailong Precision Copper Sheets & Strips (Henan) Co., Ltd.,

Copper and copper alloy sheet

1 Scope

This Standard specifies the requirements, test methods, inspection rules and marking, packaging, transportation, storage, quality certificates and order (or contract) contents of copper and copper alloy sheets.

This Standard applies to wrought copper and copper alloy sheets for general purpose (hereinafter referred to as sheets).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the dated edition cited applies. For undated references, the latest edition of the referenced document (including all amendments) applies.

GB/T 228.1-2010 Metallic materials - Tensile testing - Part 1: Method of test at room temperature

GB/T 232 Metallic materials - Bend test

GB/T 351 Metallic materials - Resistivity measurement method

GB/T 4340.1 Metallic materials - Vickers hardness test - Part 1: Test method

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 6147 Test method for thermoelectric power of precision resistance alloys

GB/T 6148 Test method for temperature-resistance coefficient of precision resistance alloys

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

GB/T 17793 Wrought copper and copper alloy plate, sheet and strip for general purposes - Dimensions and tolerances

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

YS/T 347 Copper and copper alloys - Estimation of average grain size

YS/T 478 The method for electrical conductivity measurement of copper and copper alloys by use of eddy current

YS/T 482 Methods for analysis of copper and copper alloys - The atomic emission spectrometry

YS/T 483 Methods for analysis of copper and copper alloys - X-Ray fluorescence spectrometric (wavelength dispersive)

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

YS/T 815 Preparation method of test pieces for mechanical and technological properties of copper and copper alloys

3 Requirements

3.1 Product classification

3.1.1 Designation, state and specification

The designation, state and specification of sheets shall comply with the provisions of Table 1.

2010. The Vickers hardness test method shall comply with the provisions of GB/T 4340.1.

4.4 Bend test

The bend test method for sheets shall comply with the provisions of GB/T 232.

4.5 Grain size

The grain size test method for sheets shall comply with the provisions of YS/T 347.

4.6 Electrical properties

4.6.1 The resistivity test method for sheets shall comply with the provisions of GB/T 351 or YS/T 478, and the arbitration shall comply with the provisions of GB/T 351.

4.6.2 The resistance temperature coefficient test method for sheets shall comply with the provisions of GB/T 6148.

4.6.3 The thermo-electromotive force test method for sheets shall comply with the provisions of GB/T 6147.

4.7 Surface quality

The surface quality of sheets shall be inspected visually.

5 Inspection rules

5.1 Inspection and acceptance

5.1.1 The sheets shall be inspected by the technical supervision department of the supply party, to ensure that the product quality comply with the provisions of this Standard (or the order contract); the quality certificate shall be filled.

5.1.2 The demand party shall inspect the products received in accordance with the provisions of this Standard and the order (or contract). If the inspection result is inconsistent with the provisions of this Standard and the order (or contract), the demand party shall notify the supply party within 3 months after receiving the product, to settle this issue through negotiation between the supply and demand parties. If arbitration is required, arbitration sampling will be conducted at the demand party's jointly by the supply and demand parties.

5.2 Batching

The sheets shall be submitted for acceptance in batches, AND each batch shall be composed of the same designation, state and specification. The weight of each batch

Electrical properties	Randomly take two sheets from each batch, and randomly take one sample from each sheet	3.7	4.6
Surface quality	One by one	3.8	4.7

5.5 Determination of test results

5.5.1 When the chemical composition test results are not qualified, then the whole batch is determined as disqualified.

5.5.2 When the dimensions and surface quality are not qualified, then the corresponding sheet is determined as disqualified.

5.5.3 When the test results of mechanical properties, bend test, grain size and electrical properties are not qualified, it shall, from this batch (including the sheet that is determined disqualified), re-take double quantities of samples to conduct repeated test for the corresponding disqualified item. If all the samples are qualified through repeated tests, then the whole batch is determined as qualified; if there is still one sample disqualified through repeated tests, then the whole batch is determined as disqualified, or the supply party shall inspect one by one and deliver the qualified sheets.

6 Marking, packaging, transportation, storage and quality certificate

The markings, packaging, transportation, storage and quality certificates of the sheets shall comply with the provisions of GB/T 8888.

7 Order (or contract) content

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

- a) Product name;
- b) Designation;
- c) State;
- d) Dimension specifications;
- e) Weight or number of sheets;
- f) Allowable dimension deviation (for higher grade, advanced grade OR those

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 -----