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

GB/T 26311-2024

Replacing GB/T 26311-2010

Rod, bar and wire of recycled copper and copper alloy

再生铜及铜合金棒线材

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document replaces GB/T 26311-2010 "Secondary copper and copper alloy bars". Compared with GB/T 26311-2010, except for structural adjustments and In addition to editorial changes, the main technical changes are as follows:

- a) The scope of the standard has been changed (see Chapter 1, Chapter 1 of the.2010 edition);
- b) The definition of "secondary copper and copper alloy products" has been deleted (see 3.1 of the.2010 edition);
- c) Added recycled materials, pre-consumer materials, post-consumer materials, recycled copper raw materials, recycled copper alloy raw materials, recycled cathode copper, recycled Terms and definitions of zinc ingots, recycled lead ingots, etc. (see Chapter 3);
- d) Deleted the "R" in front of the brand name (see Table 1 of the.2010 edition);
- e) Changed the status indication method from "M, R, Y2, Y, Z" to "O60, M30, H02, H04, M07"; changed the specification range The range is changed from "7~80" to "1.5~80.0" (see Table 1, Table 1 of the.2010 edition);
- f) Product categories have been expanded to include high copper, ordinary brass, and bronze; TU1, TZr0.2, H70, H68, H65, H62, H59, 22 grades and corresponding states and specifications such as HPb62-3, HPb61-3, HPb58-2.8; added H50 and HR02 states; added The wire specifications (see Table 1);

- g) The order of marking has been changed (see 4.2, 4.1.2 of the 2010 edition);
- h) Added marking of recycled material ratio (see 4.2);
- i) Added "Requirements and calculation methods for the proportion of recycled materials" (see Chapter 5 and Appendix A);
- j) Changed the chemical composition requirements from "sum of other impurities" to "sum of elements listed in Cu" (see Table 4, 2010 edition) Table 3);

1 Scope

China's national product standard for rod, bar and wire made from recycled copper and copper alloy. It specifies the designations, the requirements, the test methods, the inspection rules and the marking, packaging, transport and storage. Copper is the most recycled of the industrial metals and it recycles without loss: the metal that comes out of a scrap furnace is chemically the same as the metal that came out of the mine, and China, which consumes more copper than any other country and mines relatively little of it, has a strategic interest in using it. What a standard for recycled material has to address is not the copper but everything that arrives with it. Scrap is a mixture with a history - it carries the alloying elements of whatever it used to be, the tin and lead of a bronze fitting, the zinc of a brass, the nickel and iron of plated or joined parts, the aluminium of a mixed load, and the residues of solder, coating and insulation. Some of those elements are harmless at the levels involved; others are not, and the ones that matter are the tramp elements that embrittle the metal in hot working or ruin its conductivity at concentrations far below what would be noticed in an analysis of the major constituents. Bismuth and lead cause hot shortness at parts per million; iron and phosphorus destroy electrical conductivity out of proportion to their amount. So the standard sets the designations and the composition limits that make the material usable, and specifies the mechanical properties, the electrical conductivity where it is required, the surface quality and the dimensional tolerances - so that recycled rod and wire can be bought against a specification rather than on trust. Issued on 29 September 2024 and in force since 1 April 2025, it replaces GB/T 26311-2010.

2 Rods, wires and profiles

GB/T 34505 Room temperature tensile test method for copper and copper alloy materials

GB/T 38470-2023 Recycled copper alloy raw materials

GB/T 38471-2023 Recycled copper raw materials
 YS/T 336 Fractographic inspection method for copper, nickel and their alloy tubes and bars
 YS/T 482 Analysis of copper and copper alloys
 Spark discharge atomic emission spectrometry
 YS/T 483 Analysis method of copper and copper alloys-X-ray fluorescence spectrometry (wavelength dispersive type)

YS/T 649 Copper and copper alloy extruded rods YS/T 668 Sampling methods for physical and chemical testing of copper and copper alloys YS/T 759 Copper and copper alloy cast bars

GB/T 4423 Copper and copper alloy drawn bars

GB/T 5121 (all parts) Chemical analysis methods for copper and copper alloys

GB/T 5231 Grades and chemical compositions of processed copper and copper alloys

GB/T 8170 Rules for rounding off values and expression and determination of limit values

GB/T 8888 Packaging, marking, transportation, storage and quality certification of heavy non-ferrous metal processing products

GB/T 10119 Determination of dezincification corrosion resistance of brass

GB/T 10567.2 Test method for residual stress in copper and copper alloy processed materials - Ammonia fumigation test method

GB/T 13587 Copper and copper alloy waste

GB/T 21181 Secondary lead and lead alloy ingots

GB/T 21651-2018 Recycled zinc and zinc alloy ingots

GB/T 21652 Copper and copper alloy wire

GB/T 26303.2 Test methods for dimensions of copper and copper alloy processed materials Part