



Designation: B249/B249M – 17

Standard Specification for General Requirements for Wrought Copper and Copper- Alloy Rod, Bar, Shapes and Forgings¹

This standard is issued under the fixed designation B249/B249M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon (ε) indicates an editorial change since the last revision or reappraisal.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This specification² establishes the general requirements common to wrought copper and copper alloy rod, bar, shapes, and forgings which shall apply to Specifications B16/B16M, B21/B21M, B98/B98M, B124/B124M, B138/B138M, B139/B139M, B140/B140M, B150/B150M, B151/B151M, B187/B187M, B196/B196M, B283/B283M, B301/B301M, B371/B371M, B411/B411M, B441, B453/B453M, B455, B570, B870, B927/B927M, B929, B967/B967M, and B974/B974M to the extent referenced therein.

1.2 The chemical composition, physical and mechanical properties, and all other requirements not included in this specification are prescribed in the product specification.

1.3 *Units*—The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.3.1 Within the text the SI values are given in brackets.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This specification is under the jurisdiction of ASTM Committee B05 on Copper and Copper Alloys and is the direct responsibility of Subcommittee B05.02 on Rod, Bar, Wire, Shapes and Forgings.

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² For ASME Boiler and Pressure Vessel Code applications see related Specifications SB-249 in Section II of that Code.

2. Referenced Documents

2.1 ASTM Standards:³

- B16/B16M Specification for Free-Cutting Brass Rod, Bar and Shapes for Use in Screw Machines
- B21/B21M Specification for Naval Brass Rod, Bar, and Shapes
- B98/B98M Specification for Copper-Silicon Alloy Rod, Bar and Shapes
- B124/B124M Specification for Copper and Copper Alloy Forging Rod, Bar, and Shapes
- B138/B138M Specification for Manganese Bronze Rod, Bar, and Shapes
- B139/B139M Specification for Phosphor Bronze Rod, Bar, and Shapes
- B140/B140M Specification for Copper-Zinc-Lead (Red Brass or Hardware Bronze) Rod, Bar, and Shapes
- B150/B150M Specification for Aluminum Bronze Rod, Bar, and Shapes
- B151/B151M Specification for Copper-Nickel-Zinc Alloy (Nickel Silver) and Copper-Nickel Rod and Bar
- B154 Test Method for Mercurous Nitrate Test for Copper Alloys
- B187/B187M Specification for Copper, Bus Bar, Rod, and Shapes and General Purpose Rod, Bar, and Shapes
- B193 Test Method for Resistivity of Electrical Conductor Materials
- B194 Specification for Copper-Beryllium Alloy Plate, Sheet, Strip, and Rolled Bar
- B196/B196M Specification for Copper-Beryllium Alloy Rod and Bar
- B283/B283M Specification for Copper and Copper-Alloy Die Forgings (Hot-Pressed)
- B301/B301M Specification for Free-Cutting Copper Rod, Bar, Wire, and Shapes
- B371/B371M Specification for Copper-Zinc-Silicon Alloy Rod

³ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

*A Summary of Changes section appears at the end of this standard