



Standard Specification for Copper-Zinc-Tin-Bismuth Alloy Rod, Bar and Wire¹

This standard is issued under the fixed designation B967/B967M; 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 reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope*

1.1 This specification establishes the requirements for copper-zinc-tin-bismuth alloy rod, bar and wire of alloy UNS Nos. C49250, C49255, C49260, C49265, C49300, C49340, C49345, C49350, C49355, and C49360 intended for use in plumbing applications and drinking water systems.

1.2 Typically, rod and bar product made to this specification is furnished as straight lengths. Wire (H04) 0.08 to 0.3 in. [2 to 8 mm inclusive] is furnished in coil form, and H50 shapes.

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.

1.4 The following safety hazard caveat pertains only to the test method(s) described in this specification.

1.4.1 *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.*

2. Referenced Documents

2.1 ASTM Standards:²

B249/B249M Specification for General Requirements for Wrought Copper and Copper-Alloy Rod, Bar, Shapes and Forgings

B250/B250M Specification for General Requirements for Wrought Copper Alloy Wire

B846 Terminology for Copper and Copper Alloys

E8/E8M Test Methods for Tension Testing of Metallic Materials

E54 Test Methods for Chemical Analysis of Special Brasses and Bronzes (Withdrawn 2002)³

E62 Test Methods for Chemical Analysis of Copper and Copper Alloys (Photometric Methods) (Withdrawn 2010)³

E92 Test Methods for Vickers Hardness and Knoop Hardness of Metallic Materials

E478 Test Methods for Chemical Analysis of Copper Alloys

E527 Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

2.2 Other Standards:

ISO No. 3110 (AA) Copper Alloys – Determination of Aluminum as an Alloying Element – Volumetric⁴ (International Organization of Standardization)

JIS H 1068:2005 Method for Determination of Bismuth in Copper and Copper Alloys⁵ (Japanese Industrial Standards)

3. General Requirements

3.1 The following sections of Specifications **B249/B249M** for rod and bar and **B250/B250M** for wire constitute a part of this specification:

- 3.1.1 Terminology,
- 3.1.2 Materials and Manufacture,
- 3.1.3 Sampling,
- 3.1.4 Number of Tests and Retests,
- 3.1.5 Specimen Preparation,
- 3.1.6 Certification,
- 3.1.7 Test Reports.

3.2 In addition, when a section with a title identical to that referenced in Appendix X1, above, appears in this specification, it contains additional requirements which supplement those appearing in Specifications **B249/B249M** for rod and bar and **B250/B250M** for wire.

4. Terminology

4.1 For definitions of terms related to copper and copper alloys, refer to Terminology **B846**.

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 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.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from International Organization for Standardization (ISO), ISO Central Secretariat, BIBC II, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland, <http://www.iso.org>.

⁵ Available from Japanese Standards Association (JSA), Mita MT Bldg., 3-13-12 Mita, Minato-ku, Tokyo 108-0073, Japan, <http://www.jsa.or.jp>.