



Standard Specification for Manganese Bronze Rod, Bar, and Shapes¹

This standard is issued under the fixed designation B 138/B 138M; 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.

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

1. Scope *

1.1 This specification establishes the requirements for manganese bronze rod, bar and shapes produced in Copper Alloy UNS No. C67000, C67500, or C67600.

1.2 The values stated in inch-pound units or SI units are to be regarded separately in the standard. Within the text, the SI values are given in brackets. The values stated in each system of units are not exact equivalents; each system is independent of the other. Combining values from the two systems may result in nonconformance with the specification.

1.3 The following safety hazard caveat pertains only to the Performance Requirements section of this specification. *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.*

1.4 **Warning**—Mercury is a definite health hazard in use and disposal.

NOTE 1—Product suitable for hot forging applications is available under Specification B 124/B 124M.

2. Referenced Documents

2.1 ASTM Standards:

B 124/B 124M Specification for Copper and Copper-Alloy Forging Rod, Bar, and Shapes²

B 154 Test Method for Mercurous Nitrate Test for Copper and Copper Alloys²

B 249/B 249M Specification for General Requirements for Wrought Copper and Copper-Alloy Rod, Bar, Shapes and Forgings²

B 858 Test Method for Determination of Susceptibility to Stress Corrosion Cracking in Copper Alloys Using an Ammonia Vapor Test²

E 8 Test Methods for Tension Testing of Metallic Materials³

E 8M Test Methods for Tension Testing of Metallic Materials (Metric)³

E 54 Test Methods for Chemical Analysis of Special Brasses and Bronzes⁴

E 62 Test Methods for Chemical Analysis of Copper and Copper Alloys (Photometric)⁴

E 478 Test Methods for Chemical Analysis of Copper Alloys⁵

3. General Requirements

3.1 The following sections of Specification B 249/B 249M constitute a part of this specification:

- 3.1.1 Terminology,
- 3.1.2 Materials and Manufacture,
- 3.1.3 Workmanship, Finish and Appearance,
- 3.1.4 Sampling,
- 3.1.5 Number of Tests and Retests,
- 3.1.6 Specimen Preparation,
- 3.1.7 Test Methods,
- 3.1.8 Significance of Numerical Limits,
- 3.1.9 Inspection,
- 3.1.10 Rejection and Rehearing,
- 3.1.11 Certification,
- 3.1.12 Test Report,
- 3.1.13 Packaging and Package Marking, and
- 3.1.14 Supplementary Requirements.

3.2 In addition, when a section with a title identical to one of those referenced in 3.1 appears in this specification, it contains additional requirements which supplement those appearing in Specification B 249/B 249M.

4. Ordering Information

4.1 Include the following when ordering:

- 4.1.1 ASTM designation and year of issue,
- 4.1.2 Copper Alloy UNS No. designation (for example, C67000),
- 4.1.3 Temper,
- 4.1.4 Form of product (for example, round, hexagonal),
- 4.1.5 Dimensions (for example, diameter, distance between parallel surfaces),

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 Annual Book of ASTM Standards, Vol 02.01.

³ Annual Book of ASTM Standards, Vol 03.01.

⁴ Annual Book of ASTM Standards, Vol 03.05.

⁵ Annual Book of ASTM Standards, Vol 03.06.

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