



Standard Specification for General Requirements for Copper Alloy Castings¹

This standard is issued under the fixed designation B824; 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 U.S. Department of Defense.

1. Scope*

1.1 This specification establishes general requirements common to ASTM copper alloy casting specifications B22/B22M, B61, B62, B66, B67, B148, B176, B271/B271M, B369, B427, B505/B505M, B584, B763/B763M, B770, and B806. These requirements apply to the casting specifications to the extent referenced therein.

1.1.1 In the event of conflict between this specification and a casting specification, the requirements of the casting specification shall take precedence.

1.2 The chemical composition and other requirements not included in this specification shall be prescribed in the casting product specifications.

1.3 *Units*—The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 No precise quantitative relationship can be stated between the properties of the metal in various locations of the same casting or between the properties of castings and those of a test bar casting from the same metal. (See [Appendix X1](#).)²

2. Referenced Documents

2.1 The following documents, of the issue in effect on date of casting purchase, form, part of this specification to the extent referenced herein:

2.2 *ASTM Standards*:³

B22/B22M Specification for Bronze Castings for Bridges and Turntables

B61 Specification for Steam or Valve Bronze Castings

B62 Specification for Composition Bronze or Ounce Metal Castings

B66 Specification for Bronze Castings for Steam Locomotive Wearing Parts

B67 Specification for Car and Tender Journal Bearings, Lined

B148 Specification for Aluminum-Bronze Sand Castings

B176 Specification for Copper-Alloy Die Castings

B193 Test Method for Resistivity of Electrical Conductor Materials

B194 Specification for Copper-Beryllium Alloy Plate, Sheet, Strip, and Rolled Bar

B208 Practice for Preparing Tension Test Specimens for Copper Alloy Sand, Permanent Mold, Centrifugal, and Continuous Castings

B271/B271M Specification for Copper-Base Alloy Centrifugal Castings

B369 Specification for Copper-Nickel Alloy Castings

B427 Specification for Gear Bronze Alloy Castings

B505/B505M Specification for Copper Alloy Continuous Castings

B584 Specification for Copper Alloy Sand Castings for General Applications

B763/B763M Specification for Copper Alloy Sand Castings for Valve Applications

B770 Specification for Copper-Beryllium Alloy Sand Castings for General Applications

B806 Specification for Copper Alloy Permanent Mold Castings for General Applications

B846 Terminology for Copper and Copper Alloys

E8/E8M Test Methods for Tension Testing of Metallic Materials

E10 Test Method for Brinell Hardness of Metallic Materials

E18 Test Methods for Rockwell Hardness of Metallic Materials

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E54 Test Methods for Chemical Analysis of Special Brasses and Bronzes (Withdrawn 2002)⁴

¹ This specification is under the jurisdiction of ASTM Committee B05 on Copper and Copper Alloys and is the direct responsibility of Subcommittee B05.05 on Castings and Ingots for Remelting.

Current edition approved Oct. 15, 2016. Published October 2016. Originally approved in 1992. Last previous edition approved in 2014 as B824 – 14. DOI: 10.1520/B0824-16.

² For *ASME Boiler and Pressure Vessel Code* application, see related specification in Section II of that code.

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.

⁴ The last approved version of this historical standard is referenced on www.astm.org.