



Standard Specification for Copper Alloy Sand Castings for General Applications¹

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

1. Scope*

1.1 This specification covers requirements for copper alloy sand castings for general applications. Nominal compositions of the alloys defined by this specification are shown in [Table 1](#).² This is a composite specification replacing former documents as shown in [Table 1](#).

NOTE 1—Other copper alloy castings are included in the following ASTM Specifications: [B22/B22M](#), [B61](#), [B62](#), [B66](#), [B67](#), [B148](#), [B176](#), [B271/B271M](#), [B369](#), [B427](#), [B505/B505M](#), [B763/B763M](#), [B770](#), and [B806](#).

1.2 Component part castings produced to this specification may be manufactured in advance and supplied from stock. In such cases the manufacturer shall maintain a general quality certification of all castings without specific record or date of casting for a specific casting.

1.3 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.

2. Referenced Documents

2.1 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

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.

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² The UNS system for copper and copper alloys (see Practice [E527](#)) is a simple expansion of the former standard designation system accomplished by the addition of a prefix “C” and a suffix “00”. The suffix can be used to accommodate composition variations of the base alloy.

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.

[B67](#) Specification for Car and Tender Journal Bearings, Lined

[B148](#) Specification for Aluminum-Bronze Sand Castings

[B176](#) Specification for Copper-Alloy Die Castings

[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

[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

[B824](#) Specification for General Requirements for Copper Alloy Castings

[B846](#) Terminology for Copper and Copper Alloys

[E255](#) Practice for Sampling Copper and Copper Alloys for the Determination of Chemical Composition

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

2.2 ASME Code:

ASME Boiler and Pressure Vessel Code⁴

3. Terminology

3.1 Definitions of terms relating to copper alloys can be found in Terminology [B846](#).

4. General Requirements

4.1 The following sections of Specification [B824](#) form a part of this specification. In the event of a conflict between this specification and Specification [B824](#), the requirements of this specification shall take precedence.

4.1.1 Terminology,

⁴ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Two Park Ave., New York, NY 10016-5990, <http://www.asme.org>.