Designation: B 62 – 02

Standard Specification for Composition Bronze or Ounce Metal Castings[1]

This standard is issued under the fixed designation B 62; 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[2] establishes requirements for an alloy having a composition of copper, tin, lead, and zinc, used for component castings of valves, flanges, and fittings. The common trade name of this alloy is 85-5-5-5; the correct identification is Copper Alloy UNS No. C83600.[3]

1.2 The castings covered are used in products that may be manufactured in advance and supplied from stock from the manufacturer or other dealer.

1.3 The values stated in inch-pound units are to be regarded as the standard. Metric values given in parentheses are for information only.

2. Referenced Documents

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

2.2 *ASTM Standards:*

B 208 Practice for Preparing Tension Test Specimens for Copper-Base Alloys for Sand, Permanent Mold, Centrifugal, and Continuous Castings[4]

B 824 Specification for General Requirements for Copper-Alloy Castings[4]

E 527 Practice for Numbering Metals and Alloys[5]

2.3 *MSS Standards:*

SP-25 Standard Marking System for Valves, Fittings, Flanges and Unions[6]

3. Ordering Information

3.1 Orders for castings under this specification shall include the following:

3.1.1 Quantity of castings required,

3.1.2 Copper Alloy UNS No. (Table 1),

3.1.3 Specification title, number, and year of issue,

3.1.4 Pattern or drawing number and condition (as-cast, machined, and so forth),

3.1.5 Chemical analysis of residual elements, if specified in the purchase order (Specification B 824),

3.1.6 Pressure test requirements, if specified in the purchase order (Specification B 824),

3.1.7 Soundness requirements, if specified in the purchase order (Specification B 824),

3.1.8 Certification, if specified in the purchase order (Specification B 824),

3.1.9 Foundry test report, if specified in the purchase order (Specification B 824),

3.1.10 Witness inspection, if specified in the purchase order (Specification B 824),

3.1.11 ASME Boiler and Pressure Vessel application (Section 9), and

3.1.12 Product marking, if specified in the purchase order (Specification B 824 and Section 10).

3.2 When material is purchased for agencies of the U.S. Government, the Supplementary Requirements in Specification B 824 may be specified.

4. Chemical Composition

4.1 The alloy shall conform to the requirements for major elements specified in Table 1.

4.2 These specification limits do not preclude the presence of other elements. Limits may be established for unnamed elements by agreement between manufacturer or supplier and

[1] This practice 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 Dec. 10, 2002. Published February 2003. Originally approved in 1926. Discontinued June 2002 and reinstated as B 62 – 02. Last previous edition approved in 1993 as B 62 – 93.

[2] For *ASME Boiler and Pressure Vessel Code* applications see related Specification SB-61 of that Code.

[3] The UNS system for copper and copper alloys (see Practice E 527) 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.

[4] *Annual Book of ASTM Standards*, Vol 02.01.

[5] *Annual Book of ASTM Standards*, Vol 01.01.

[6] Available from Manufacturers Standardization Society of the Valve and Fittings Industry, 127 Park Street NE, Vienna, VA 22180-4602.

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