



Standard Specification for Copper-Cobalt-Beryllium Alloy and Copper-Nickel-Beryllium Alloy Plate, Sheet, Strip, and Rolled Bar¹

This standard is issued under the fixed designation B 534; 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 covers plate, sheet, strip, and rolled bar. The following alloys are covered:

Copper Alloy UNS No. ²	Previously Used Designation	Nominal Composition, %		
		Beryllium	Cobalt	Nickel
C17500	Alloy 10	0.6	2.5	...
C17510	Alloy 3 or 14	0.4	...	1.8

1.2 The intent is to provide a system of interchangeable alloys.

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

1.4 *This standard does not purport to address 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 The following documents of the issue in effect on date material purchase forms a part of this specification to the extent referenced herein:

2.2 ASTM Standards:

B 194 Specification for Copper-Beryllium Alloy Plate, Sheet, Strip, and Rolled Bar³

B 248 Specification for General Requirements for Wrought Copper and Copper-Alloy Plate, Sheet, Strip, and Rolled Bar³

B 601 Practice for Temper Designations for Copper and Copper Alloys—Wrought and Cast³

¹ This specification is under the jurisdiction of ASTM Committee B-5 on Copper and Copper Alloys and is the direct responsibility of Subcommittee B05.01 on Plate, Sheet, and Strip.

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² 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.

³ Annual Book of ASTM Standards, Vol 02.01.

E 527 Practice for Numbering Metals and Alloys (UNS)⁴

3. Ordering Information

3.1 Orders for material under this specification should include the following information:

3.1.1 Quantity,

3.1.2 Copper alloy UNS number (1.1),

3.1.3 Form of material: plate, sheet, strip, or rolled bar,

3.1.4 Temper (5.1),

3.1.5 Dimensions: thickness and width, and length if applicable,

3.1.6 How furnished: rolls, stock lengths with or without ends, specific lengths with or without ends.

3.1.7 Type of edge, if required: slit, sheared, sawed, square corners, rounded corners, rounded edges, or full-rounded edges (Section 12),

3.1.8 Type of width and straightness tolerances, if required: slit-metal tolerances, square-sheared-metal tolerances, sawed-metal tolerances, straightened or edge-rolled-metal tolerances (12.3),

3.1.9 Special thickness tolerances, if required (12.2),

3.1.10 Tension test or hardness as applicable (Section 6),

3.1.11 Certification if required (see Specification B 248, Section 12),

3.1.12 Mill Test Report, if required (see Specification B 248, Section 14),

3.1.13 Specification number and year of issue, and

3.1.14 Special tests or exceptions, if any.

3.2 When material is purchased for agencies of the U.S. Government, this shall be specified in the contract or purchase order, and the material shall conform to the Supplementary Requirements as defined in the current issue of Specification B 248.

4. Chemical Composition

4.1 The material shall conform to the chemical requirements specified in Table 1.

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

⁴ Annual Book of ASTM Standards, Vol 01.01.