



Designation: B 122/B122M – 95

Standard Specification for Copper-Nickel-Tin Alloy, Copper-Nickel-Zinc Alloy (Nickel Silver), and Copper-Nickel Alloy Plate, Sheet, Strip, and Rolled Bar¹

This standard is issued under the fixed designation B 122/B122M; 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 covers copper-nickel-tin alloy, copper-nickel-zinc alloy (nickel silver), and copper-nickel alloy plate, sheet, strip, and rolled bar. The following alloys are covered:²

Copper Alloy UNS No. ²	Previously Used Designation	Nominal Composition, %				Chro- mium
		Copper	Nickel	Zinc	Tin	
C70600	...	90	10	...	...	...
C71000	6	80	20	...	...	...
C71500	5	70	30	...	...	...
C72200	...	85	15	...	...	0.5
C72500	...	89	9	...	2	...
C73500	1	72	18	10	...	...
C74000	9	70	10	20	...	...
C74500	3	65	10	24	...	...
C75200	2	65	18	17	...	...
C76200	8	59	12	29	...	...
C77000	4	55	18	27	...	...

NOTE 1—Plates of copper-nickel alloy Copper Alloy UNS Nos. C70600, C71500, and C72200 for use as tube plates in surface condensers and heat exchangers are covered by Specification B 171.

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

1.2.1 When the product is ordered in inch-pound units, the inch-pound units are to be regarded as the standard except grain size is always specified in millimeters.

1.2.2 When the product is ordered in SI units, the SI units are to be regarded as the standard.

¹ This specification is under the jurisdiction of ASTM Committee B05 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.

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 171 Specification for Copper-Alloy Plate and Sheet for Pressure Vessels, Condensers, and Heat Exchangers³

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

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 Alloy number (Section 1),

3.1.1.1 Whether the alloy ordered will be used in applications requiring it to be welded (see Table 1, Footnote B),

3.1.2 Temper (Section 5),

3.1.3 Dimensions: thickness and width (see 9.2 and 9.3),

3.1.4 Type of edge, if required: slit, sheared, sawed, square corners, rounded corners, rounded edges, or full rounded edges (see 9.6),

3.1.5 How furnished: flat or rolls,

3.1.6 Length (see 9.4), and

3.1.7 Weight: total for each size.

3.1.8 ASTM Specification B 122/B 122M, year of issue.

3.2 In addition, when material is purchased for agencies of the U.S. Government, it shall conform to the Supplementary Requirements as defined in Specification B 248 when specified in the contract or purchase order.

4. Chemical Composition

4.1 The material shall conform to the chemical composition prescribed in Table 1.

4.2 These specification limits do not preclude the presence of other elements. Limits may be established for unnamed

³ Annual Book of ASTM Standards, Vol 02.01.

⁴ Annual Book of ASTM Standards, Vol 01.01.