



Standard Specification for Seamless Copper and Copper-Alloy Rectangular Waveguide Tube¹

This standard is issued under the fixed designation B 372; 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 seamless copper and copper-alloy rectangular tube intended for use as transmission lines in electronic equipment. Four types of material are specified having the following nominal compositions:²

Copper or Copper Alloy UNS ² No.	Previously Used Designation	Nominal Composition, %		
		Copper	Zinc	Phos- phorus
C10200	Copper, Type OF ^A	100	...	...
C10300	...	99.99	...	0.003
C12000	Copper, Type DLP ^A	100	...	...
C22000	Commercial bronze, 90 %	90	10	...

^A Types OF and DLP are described in Classification B 224.

1.2 The values stated in inch-pound units are to be regarded as the standard. The 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:³

- B 170 Specification for Oxygen-Free Electrolytic Copper Refinery Shapes
- B 193 Test Method for Resistivity of Electrical Conductor Materials
- B 224 Classification of Coppers
- B 428 Test Method for Angle of Twist in Rectangular and Square Copper and Copper Alloy Tube

¹ This specification is under the jurisdiction of ASTM Committee B05 on Copper and Copper Alloys and is the direct responsibility of Subcommittee B05.04 on Pipe and Tube.

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² The UNS system for copper and copper alloys 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.

- B 577 Test Methods for Detection of Cuprous Oxide (Hydrogen Embrittlement Susceptibility) in Copper
- E 18 Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials
- E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
- E 53 Test Methods for Determination of Copper in Unalloyed Copper by Gravimetry
- E 62 Test Methods for Chemical Analysis of Copper and Copper Alloys (Photometric Methods)
- E 255 Practice for Sampling Copper and Copper Alloys for the Determination of Chemical Composition
- E 478 Test Methods for Chemical Analysis of Copper Alloys

2.3 Other Standard:

ANSI B46.1 Surface Roughness, Waviness, and Lay⁴

3. Terminology

3.1 Definitions:

3.1.1 *lengths*—straight pieces of the product.

3.1.1.1 *ends*—straight pieces, shorter than the nominal length, left over after cutting the product into mill lengths, stock lengths or specific lengths. They are subject to minimum length and maximum weight requirements.

3.1.1.2 *specific*—straight lengths that are uniform in length, as specified, and subject to established length tolerances.

3.1.1.3 *specific with ends*—specific lengths, including ends.

3.1.1.4 *stock*—straight lengths that are mill cut and stored in advance of orders. They are usually 12 ft (3.66 m) and subject to established length tolerances.

3.1.1.5 *stock with ends*—stock lengths, including ends.

3.1.2 *tube*—a hollow product of round or any other cross section having a continuous periphery.

3.1.2.1 *tube, waveguide*—a tube used as transmission line to electronic equipment.

4. Ordering Information

4.1 Orders for material under this specification shall include the following information:

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.