



Standard Specification for Seamless Copper Tube¹

This standard is issued under the fixed designation B75/B75M; 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 specification² establishes the requirements for seamless round, rectangular, and square copper tube suitable for general engineering applications.

1.1.1 Tubes made from any of the following Copper UNS No. designations shall be supplied unless otherwise specified in the contract or purchase order:

Copper UNS No.	Type of Copper
C10100	Oxygen-free electronic
C10200	Oxygen-free without residual deoxidants
C10300	Oxygen-free, extra low phosphorus
C10800	Oxygen-free, low phosphorus
C12000	Phosphorus deoxidized, low residual phosphorus
C12200	Phosphorus deoxidized, high residual phosphorus

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

1.3 The following hazard statement pertains only to the test methods described in Sections 20.5.2.1, 21.2.9, and 21.2.10 of this specification: *This standard does not purport to address all of 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 ASTM Standards:³

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 For ASME Boiler and Pressure Vessel Code applications refer to related Specification SB-75 in Section II of that Code.

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.

- B153 Test Method for Expansion (Pin Test) of Copper and Copper-Alloy Pipe and Tubing
- B170 Specification for Oxygen-Free Electrolytic Copper—Refinery Shapes
- B193 Test Method for Resistivity of Electrical Conductor Materials
- B251 Specification for General Requirements for Wrought Seamless Copper and Copper-Alloy Tube
- B251M Specification for General Requirements for Wrought Seamless Copper and Copper-Alloy Tube (Metric)
- B577 Test Methods for Detection of Cuprous Oxide (Hydrogen Embrittlement Susceptibility) in Copper
- B601 Classification for Temper Designations for Copper and Copper Alloys—Wrought and Cast
- B846 Terminology for Copper and Copper Alloys
- E3 Guide for Preparation of Metallographic Specimens
- E8/E8M Test Methods for Tension Testing of Metallic Materials
- E18 Test Methods for Rockwell Hardness of Metallic Materials
- E53 Test Method for Determination of Copper in Unalloyed Copper by Gravimetry
- E62 Test Methods for Chemical Analysis of Copper and Copper Alloys (Photometric Methods) (Withdrawn 2010)⁴
- E112 Test Methods for Determining Average Grain Size
- E243 Practice for Electromagnetic (Eddy-Current) Examination of Copper and Copper-Alloy Tubes
- 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)

3. General Requirements

3.1 The following sections of Specification B251 or B251M are a part of this specification.

- 3.1.1 Terminology, General,
- 3.1.2 Material and Manufacture,
- 3.1.3 Workmanship, Finish, and Appearance,
- 3.1.4 Significance of Numerical Limits,

⁴ The last approved version of this historical standard is referenced on www.astm.org.

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