



Standard Specification for Seamless Copper-Nickel Pipe and Tube¹

This standard is issued under the fixed designation B466/B466M; 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 U.S. Department of Defense.

1. Scope*

1.1 This specification establishes the requirements for seamless copper-nickel pipe and tube in straight lengths, suitable for general engineering purposes. The alloys involved are copper alloys UNS Nos. C70400, C70600, C70620, C71000, C71500, C71520, and C72200.

1.1.1 Copper alloys UNS Nos. C70620 and C71520 are intended for product that will be subsequently welded.

1.2 *Units*—Values stated in either SI units or inch-pound 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 nonconformance with the specification.

1.3 The following safety hazard caveat pertains only to the test methods described in this specification:

1.3.1 *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:²

B153 Test Method for Expansion (Pin Test) of Copper and Copper-Alloy Pipe and Tubing

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)

B846 Terminology for Copper and Copper Alloys

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 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.

B950 Guide for Editorial Procedures and Form of Product Specifications for Copper and Copper Alloys

B968/B968M Test Method for Flattening of Copper and Copper-Alloy Pipe and Tube

E8/E8M Test Methods for Tension Testing of Metallic Materials

E18 Test Methods for Rockwell Hardness of Metallic Materials

E54 Test Methods for Chemical Analysis of Special Brasses and Bronzes (Withdrawn 2002)³

E62 Test Methods for Chemical Analysis of Copper and Copper Alloys (Photometric Methods) (Withdrawn 2010)³

E75 Test Methods for Chemical Analysis of Copper-Nickel and Copper-Nickel-Zinc Alloys (Withdrawn 2010)³

E76 Test Methods for Chemical Analysis of Nickel-Copper Alloys (Withdrawn 2003)³

E118 Test Methods for Chemical Analysis of Copper-Chromium Alloys (Withdrawn 2010)³

E243 Practice for Electromagnetic (Eddy Current) Examination of Copper and Copper-Alloy Tubes

E478 Test Methods for Chemical Analysis of Copper Alloys

3. General Requirements

3.1 The following sections of Specification **B251** or **B251M** constitute a part of this specification:

3.1.1 Terminology,

3.1.2 Materials and Manufacture,

3.1.3 Dimensions, Mass, and Permissible Variations,

3.1.4 Workmanship, Finish, and Appearance,

3.1.5 Sampling,

3.1.6 Number of Tests and Retests,

3.1.7 Test Specimens,

3.1.8 Test Methods,

3.1.9 Significance of Numerical Limits,

3.1.10 Inspection,

3.1.11 Rejection and Rehearing,

3.1.12 Certification,

3.1.13 Packing and Package Marking, and

3.1.14 Mill Test Report.

³ 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