



Standard Specification for Seamless Copper Alloy (UNS No. C69100) Pipe and Tube¹

This standard is issued under the fixed designation B706; 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 establishes the requirements for copper alloy UNS No. C69100 seamless pipe in standard pipe sizes, both regular and extra strong, and seamless tube in straight lengths for general engineering purposes.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 The following safety hazard caveat pertains only to the test method portion, Section described in 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:²

- B193** Test Method for Resistivity of Electrical Conductor Materials
- B846** Terminology for Copper and Copper Alloys
- E8** Test Methods for Tension Testing of Metallic Materials
- E20** Practice for Particle Size Analysis of Particulate Substances in the Range of 0.2 to 75 Micrometres by Optical Microscopy (Withdrawn 1994)³
- E54** Test Methods for Chemical Analysis of Special Brasses and Bronzes (Withdrawn 2002)³
- 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

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.

³ The last approved version of this historical standard is referenced on www.astm.org.

E478 Test Methods for Chemical Analysis of Copper Alloys

3. Terminology

3.1 Definitions:

3.1.1 For definitions of terms related to copper and copper alloys, refer to Terminology **B846**, unless otherwise stated.

3.1.2 *stock, n*—straight lengths that are mill cut and stored in advance of orders. They usually are 10, 12, or 20 ft (3.05, 3.66, or 6.10 m) in length and subject to established length tolerances.

4. Ordering Information

4.1 Orders for products shall include the following information:

- 4.1.1 ASTM designation and year of issue, that is, B706–XX.
- 4.1.2 UNS designation, that is, C69100.
- 4.1.3 Temper (see Section 7).
- 4.1.4 Dimensions, diameter, and wall thickness.
- 4.1.5 How furnished: straight lengths or coils.
- 4.1.6 Finish.
- 4.1.7 Total length, or number of pieces, of each size.
- 4.1.8 Total weight, each size.
- 4.1.9 When product is purchased for agencies of the U.S. government.

4.2 The following options are available and shall be included in the contract or purchase order when required.

- 4.2.1 Heat identification or traceability details.
- 4.2.2 Electromagnetic (eddy-current) examination.
- 4.2.3 Expansion test.
- 4.2.4 Flattening test.
- 4.2.5 Certification.
- 4.2.6 Mill test report.

5. Materials and Manufacture

5.1 Material:

5.1.1 The material of manufacture shall be cast or extruded shells of Copper Alloy UNS No. C69100 of such purity and soundness as to be suitable for processing into the products prescribed herein.

5.1.2 In the event heat identification or traceability is required, the purchaser shall specify the details desired.

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