



Designation: B298 – 12 (Reapproved 2017)

Standard Specification for Silver-Coated Soft or Annealed Copper Wire¹

This standard is issued under the fixed designation B298; 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 covers silver-coated, soft or annealed, round copper wire, intended for use in electrical equipment, as follows:

1.1.1 *Class A*—Wire whose silver coating is at least 1.25 % of the total weight of the coated wire.

1.1.2 *Class B*—Wire whose silver coating is at least 2.50 % of the total weight of the coated wire.

1.1.3 *Class C*—Wire whose silver coating is at least 4.00 % of the total weight of the coated wire.

1.1.4 *Class D*—Wire whose silver coating is at least 6.10 % of the total weight of the coated wire.

1.1.5 *Class E*—Wire whose silver coating is at least 10.00 % of the total weight of the coated wire.

1.2 Silver-coated wire having different minimum percentages of silver by weight may be obtained by mutual agreement between the manufacturer and the purchaser. For information purposes the thickness of coating in microinches provided by the percentages listed above is shown in [Table 1](#) (Explanatory [Note 1](#)).

1.3 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.

1.3.1 *Exceptions*—The SI values for density, resistivity, and volume are to be regarded as standard.

1.4 The following precautionary caveat pertains only to the test method section 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.* For specific precautionary statements see [8.4.1.2](#) and Explanatory [Note 2](#).

¹ This specification is under the jurisdiction of ASTM Committee [B01](#) on Electrical Conductors and is the direct responsibility of Subcommittee [B01.04](#) on Conductors of Copper and Copper Alloys.

Current edition approved April 1, 2017. Published April 2017. Originally approved in 1955. Last previous edition approved in 2012 as B298 – 12. DOI: 10.1520/B0298-12R17.

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 The following documents of the issue in effect at the time of reference form a part of this specification to the extent referenced herein:

2.2 *ASTM Standards*:²

[B49](#) Specification for Copper Rod for Electrical Purposes

[B193](#) Test Method for Resistivity of Electrical Conductor Materials

[B258](#) Specification for Nominal Diameters and Cross-Sectional Areas of AWG Sizes of Solid Round Wires Used as Electrical Conductors

[E50](#) Practices for Apparatus, Reagents, and Safety Considerations for Chemical Analysis of Metals, Ores, and Related Materials

3. Ordering Information

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

3.1.1 Quantity of each size,

3.1.2 Wire size, diameter in inches (see [5.3](#) and [Table 1](#)),

3.1.3 Class of coating (Section [1](#) and [Table 1](#)),

3.1.4 Type of copper, if special (see [4.2](#)),

3.1.5 Place of inspection (see [9.1](#)), and

3.1.6 Packaging and Package Marking (Section [10](#)).

3.1.7 In addition supplementary requirements shall apply only when specified by the purchaser in the inquiry, contract, or purchase order for direct procurement by agencies of the U.S. Government (see [S1](#), [S2](#), and [S3](#)).

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.