Designation: B99/B99M – 11

StandardSpecification for Copper-Silicon Alloy Wire for General Applications[1]

This standard is issued under the fixed designation B99/B99M; 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 establishes the requirements for round, rectangular, and square wire for general applications other than for electrical transmission cable. The alloys involved are UNS Nos. C65100 and C65500.

1.2 *Units*—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 nonconformance with the standard.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

B250/B250M Specification for General Requirements for Wrought Copper Alloy Wire

E8/E8M Test Methods for Tension Testing of Metallic Materials

E62 Test Methods for Chemical Analysis of Copper and Copper Alloys (Photometric Methods) (Withdrawn 2010)[3]

E112 Test Methods for Determining Average Grain Size

E478 Test Methods for Chemical Analysis of Copper Alloys

3. General Requirements

3.1 The following sections of Specification B250/B250M constitute a part of this specification.

3.1.1 Terminology,
3.1.2 Materials and Manufacture,
3.1.3 Workmanship, Finish, and Appearance,
3.1.4 Sampling,
3.1.5 Number of Tests and Retests,
3.1.6 Specimen Preparation,
3.1.7 Test Methods,
3.1.8 Significance of Numerical Limits,
3.1.9 Inspection,
3.1.10 Rejection and Rehearing,
3.1.11 Certification,
3.1.12 Mill Test Report,
3.1.13 Packaging and Package Marking, and
3.1.14 Supplementary Requirements.

3.2 In addition, when a section with a title identical to that referenced in 3.1, above, appears in this specification, it contains additional requirements which supplement those appearing in Specification B250/B250M.

4. Ordering Information

4.1 Include the following information when placing orders for product under this specification, as applicable:

4.1.1 ASTM designation and year of issue,
4.1.2 Copper Alloy UNS No.,
4.1.3 Temper,
4.1.4 Dimensions (diameter, distance between parallel surfaces, width, and thickness),
4.1.5 How furnished (coil, reel, and so forth),
4.1.6 Total weight of each size, and
4.1.7 If product is purchased for agencies of the U.S. government (see the Supplementary Requirements section of Specification B250/B250M).

4.2 The following options are available and should be specified at the time of placing of the order when required:

4.2.1 Heat identification or traceability details,
4.2.2 Certification,
4.2.3 Mill test reports, and
4.2.4 Special packaging and package markings.

5. Chemical Composition

5.1 The product shall conform to the chemical composition requirements in Table 1 for the Copper Alloy UNS No. designation specified in the ordering information.

5.1.1 These composition limits do not preclude the presence of other elements. By agreement between the manufacturer and

[1] This specification is under the jurisdiction of ASTM Committee B05 on Copper and Copper Alloys and is the direct responsibility of Subcommittee B05.02 on Rod, Bar, Wire, Shapes and Forgings.

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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.

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