



Standard Specification for Concentric-Lay-Stranded Aluminum-Alloy 6201-T81 Conductors¹

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1. Scope

1.1 This specification covers concentric-lay-stranded conductors, made from round aluminum-alloy 6201-T81 (hard: solution heat-treated, cold worked, and then artificially aged) wires, for use for electrical purposes. These conductors shall be constructed with a central core surrounded by one or more layers of helically laid wires (Explanatory [Notes 1 and 2](#)).

NOTE 1—The aluminum alloy and temper designations conform to ANSI H35.1/H35.1[M]. Aluminum-alloy 6201 corresponds to Unified Numbering System alloy A96201 in accordance with Practice [E527](#).

1.2 The values stated in inch-pound units or SI units are to be regarded separately as standard. The values in each system are not 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.

1.2.1 For density, resistivity and temperature, the values stated in SI units are to be regarded as standard.

2. Referenced Documents

2.1 The following documents of the issue in effect on date of material purchase form a part of this specification to the extent referenced herein:

2.2 ASTM Standards:²

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

[B263](#) Test Method for Determination of Cross-Sectional Area of Stranded Conductors

[B354](#) Terminology Relating to Uninsulated Metallic Electrical Conductors

[B398/B398M](#) Specification for Aluminum-Alloy 6201-T81 and 6201-T83 Wire for Electrical Purposes

[B682](#) Specification for Metric Sizes of Electrical Conductors

¹ This specification is under the jurisdiction of ASTM Committee B01 on Electrical Conductors and is the direct responsibility of Subcommittee B01.07 on Conductors of Light Metals.

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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.

[E29](#) Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

[E527](#) Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

2.3 ANSI Standards:³

[ANSI H35.1](#) American National Standard for Alloy and Temper Designation Systems for Aluminum

[ANSI H35.1\[M\]](#) American National Standard Alloy and Temper Designation Systems for Aluminum [Metric]

2.4 NIST Standards:⁴

[NBS Handbook 100](#) Copper Wire Tables of the National Bureau of Standards

2.5 Aluminum Association Publication:⁵

[Publication 50](#) Code Words for Overhead Aluminum Electrical Conductors

3. Classification

3.1 For the purpose of this specification, conductors are classified as follows (Explanatory [Notes 1 and 2](#)):

3.1.1 *Class AA*—For bare conductors usually used in overhead lines.

3.1.2 *Class A*—For conductors to be covered with weather-resistant materials.

4. Ordering Information

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

4.1.1 Quantity of each size, stranding, and class,

4.1.2 Conductor size, area, and aluminum 1350 equivalent size (if required) (Section 8 and [Table 1](#), [Table 2](#), or [Table 3](#)),

4.1.3 Number of wires ([Table 1](#), [Table 2](#) or [Table 3](#)),

4.1.4 Direction of lay of outer layer of aluminum wires if other than right-hand (see [7.4](#)),

4.1.5 Compressed stranding, if required (see [8.2](#)),

4.1.6 Special tension test, if required (see [9.2](#) and [14.2](#)),

4.1.7 Place of inspection (see [15.2](#)),

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

⁴ Available from National Institute of Standards and Technology (NIST), 100 Bureau Dr., Stop 1070, Gaithersburg, MD 20899-1070, <http://www.nist.gov>.

⁵ Available from Aluminum Association, Inc., 1525 Wilson Blvd., Suite 600, Arlington, VA 22209, <http://www.aluminum.org>.