



Designation: B211/B211M – 19

# Standard Specification for Aluminum and Aluminum-Alloy Rolled or Cold Finished Bar, Rod, and Wire<sup>1</sup>

This standard is issued under the fixed designation B211/B211M; 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<sup>2</sup> covers rolled or cold-finished bar, rod, and wire in alloys (**Note 1**) and tempers as shown in **Table 2** [**Table 3**].

**NOTE 1**—Throughout this specification use of the term *alloy* in the general sense includes aluminum as well as aluminum alloy.

**NOTE 2**—The term *cold finished* is used to indicate the type of surface finish, sharpness of angles, and dimensional tolerances produced by drawing through a die.

**NOTE 3**—See Specification **B221** [**B221M**] for aluminum and aluminum-alloy extruded bars, rods, wire, shapes, and tubes; and Specification **B316/B316M** for aluminum and aluminum-alloy rivet and cold-heading wire and rods.

1.2 Alloy and temper designations are in accordance with ANSI H35.1/H35.1M. The equivalent UNS alloy designations are those of **Table 1** preceded by A9, for example, A91100 for aluminum 1100 in accordance with Practice **E527**.

1.3 For acceptance criteria for inclusion of new aluminum and aluminum alloys in this specification, see **Annex A2**.

1.4 *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 on date of material purchase form a part of this specification to the extent referenced herein:

### 2.2 ASTM Standards:<sup>3</sup>

- B221** Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
- B221M** Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric)
- B316/B316M** Specification for Aluminum and Aluminum-Alloy Rivet and Cold-Heading Wire and Rods
- B557** Test Methods for Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products
- B557M** Test Methods for Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products (Metric)
- B594** Practice for Ultrasonic Inspection of Aluminum-Alloy Wrought Products
- B660** Practices for Packaging/Packing of Aluminum and Magnesium Products
- B666/B666M** Practice for Identification Marking of Aluminum and Magnesium Products
- B881** Terminology Relating to Aluminum- and Magnesium-Alloy Products
- B918/B918M** Practice for Heat Treatment of Wrought Aluminum Alloys
- B985** Practice for Sampling Aluminum Ingots, Billets, Castings and Finished or Semi-Finished Wrought Aluminum Products for Compositional Analysis
- E29** Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
- E290** Test Methods for Bend Testing of Material for Ductility
- E527** Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)
- E607** Test Method for Atomic Emission Spectrometric Analysis Aluminum Alloys by the Point to Plane Technique Nitrogen Atmosphere (Withdrawn 2011)<sup>4</sup>
- E716** Practices for Sampling and Sample Preparation of Aluminum and Aluminum Alloys for Determination of

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee **B07** on Light Metals and Alloys and is the direct responsibility of Subcommittee **B07.03** on Aluminum Alloy Wrought Products.

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<sup>2</sup> For ASME Boiler and Pressure Vessel Code applications see related Specification SB-211 in Section II of that Code.

<sup>3</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>4</sup> The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).

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