



Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube¹

This standard is issued under the fixed designation B429/B429M; 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.

^{ε1} NOTE—Table 1 was corrected editorially in February 2012.

1. Scope*

1.1 This specification covers aluminum-alloy extruded structural pipe and tube in those selected alloys shown in **Table 1** and tempers shown in **Table 2**, and in those standard sizes shown in **Tables 3-5**, as well as in other nonstandard sizes as agreed upon between the purchaser and supplier. Such pipe and tube is intended for use in structural applications such as highway and bridge rails, chain-link fence posts, handrails, sign structures, awning supports, lighting brackets, etc. Structural pipe and tube is not intended for fluid-carrying applications involving pressure.

NOTE 1—For drawn seamless tube used in pressure applications see Specifications **B210** and **B210M**, for seamless pipe and seamless extruded tube used in pressure applications see Specifications **B241/B241M**, and for drawn tube and pipe for general purpose applications see Specification **B483/B483M**.

1.2 Alloy and temper designations are in accordance with ANSI H35.1/H35.1(M). The equivalent Unified Numbering System alloy designations are those of **Table 1** preceded by A9, for example, A96061 for alloy 6061 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 *Units*—The values stated in either inch-pound units or SI units are to be regarded separately as standard. 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 non-conformance with the specification.

1.4.1 While this standard is a combined SI and inch-pound standard, standard pipe sizes are not applicable to SI units, therefore non-rationalized SI units (soft conversions) are shown for reader convenience. Rationalized [hard converted]

SI units are shown in brackets while non-rationalized (soft converted) SI units are shown in parentheses.

1.5 *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

- B210** Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes
- B210M** Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes (Metric)
- B241/B241M** Specification for Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube
- B483/B483M** Specification for Aluminum and Aluminum-Alloy Drawn Tube and Drawn Pipe for General Purpose Applications
- 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)
- B660** Practices for Packaging/Packing of Aluminum and Magnesium Products
- B666/B666M** Practice for Identification Marking of Aluminum and Magnesium Products
- B807/B807M** Practice for Extrusion Press Solution Heat Treatment for Aluminum Alloys
- B881** Terminology Relating to Aluminum- and Magnesium-Alloy Products
- B918** Practice for Heat Treatment of Wrought Aluminum Alloys
- B945** Practice for Aluminum Alloy Extrusions Press Cooled from an Elevated Temperature Shaping Process for Production of T1, T2, T5 and T10-Type Tempers

¹ 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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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.

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