



Designation: B 107/B 107M – 94

Standard Specification for Magnesium-Alloy Extruded Bars, Rods, Shapes, Tubes, and Wire¹

This standard is issued under the fixed designation B 107/B 107M; 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.

1. Scope *

1.1 This specification covers magnesium-alloy extruded bars, rods, shapes, tubes, and wire of the composition given in Table 1.

1.2 The values stated in either inch-pound or SI units are to be regarded separately as standards. The SI units are shown in brackets or in separate tables or columns. The values stated in each system are not exact equivalents; therefore, each system must be used independent of the other. Combining values from the two systems may result in nonconformance with the specification.

1.3 Unless the order specifies the “M” specification designation, the material shall be furnished to the inch-pound units.

2. Referenced Documents

2.1 The following documents of the issue in effect on date of order acceptance form a part of this specification to the extent referenced herein.

2.2 ASTM Standards:

B 275 Practice For Codification of Certain Nonferrous Metals and Alloys, Cast and Wrought²

B 296 Practice for Temper Designations of Magnesium Alloys, Cast and Wrought²

B 557 Test Methods of Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products²

B 557M Test Methods of Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products (Metric)²

B 660 Practices for Packaging/Packing of Aluminum and Magnesium Products²

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications³

E 35 Test Methods for Chemical Analysis of Magnesium and Magnesium Alloys⁴

E 55 Practice for Sampling Wrought Nonferrous Metals and Alloys For Determination of Chemical Composition⁴

E 527 Practice for Numbering Metals and Alloys (UNS)⁵

2.3 *Federal Standards:*⁶

Fed. Std. No. 123 Marking for Shipment (Civil Agencies)

Fed. Std. No. 184 Identification Marking of Aluminum, Magnesium and Titanium

2.4 *Military Standard:*⁶

MIL-STD-129 Marking for Shipment and Storage (Military Agencies)

3. Terminology

3.1 Definitions:

3.1.1 *extruded bar*—an extruded solid section, long in relation to its cross-sectional dimensions, having a symmetrical cross section that is square or rectangular with sharp or rounded corners or edges, or is a regular hexagon or octagon, and whose width or greatest distance between faces is 0.375 in. [10 mm] or greater.

3.1.2 *extruded rod*—a solid extruded product 0.375 in. [10 mm] or greater in diameter that is long in relation to cross section.

3.1.3 *extruded shape*—a hollow or solid extruded section, long in relation to its cross-sectional dimensions, whose cross section is other than that of wire, rod, bar, or tube.

3.1.4 *extruded tube*—an extruded hollow section, long in relation to its cross-sectional dimensions, which is symmetrical and is round, square, rectangular, hexagonal, octagonal or elliptical with sharp or rounded corners, and has a uniform wall thickness except as affected by corner radii.

3.1.5 *extruded wire*—an extruded solid sectional long in relation to its cross-sectional dimensions, having a symmetrical cross section that is square or rectangular with sharp or rounded corners or edges, or is round, hexagonal or octagonal, and whose diameter, width or greatest distance between parallel faces is less than 0.375 in. [through 10 mm].

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *producer*—the primary manufacturer of the material.

3.2.2 *supplier*—includes only the category of jobbers and distributors as distinct from producers.

4. Ordering Information

4.1 Orders for material to this specification shall include the

¹ This specification is under the jurisdiction of ASTM Committee B-7 on Light Metals and Alloys and is the direct responsibility of Subcommittee B07.04 on Magnesium Alloy Cast and Wrought Products.

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² *Annual Book of ASTM Standards*, Vol 02.02.

³ *Annual Book of ASTM Standards*, Vol 14.02.

⁴ *Annual Book of ASTM Standards*, Vol 03.05.

⁵ *Annual Book of ASTM Standards*, Vol 01.01.

⁶ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094. Attn: NPODS.

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