Designation: B 80 – 01$^{\epsilon 1}$

Standard Specification for Magnesium-Alloy Sand Castings[1]

This standard is issued under the fixed designation B 80; 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.

ϵ[1] NOTE—Changes were made to Table 1 editorially November 2002.

1. Scope

1.1 This specification covers magnesium-alloy sand castings designated as shown in Table 1.

1.2 The values stated in inch-pound units are to be regarded as the standard. The SI values in parentheses are provided for information only.

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 93/B93M Specification for Magnesium Alloys in Ingot Form for Sand Castings, Permanent Mold Castings, and Die Castings[2]

B 275 Practice for Codification of Certain Nonferrous Metals and Alloys, Cast and Wrought[2]

B 296 Practice for Temper Designations of Magnesium Alloys, Cast and Wrought[2]

B 557 Test Methods of Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products[2]

B 660 Practices for Packaging/Packing of Aluminum and Magnesium Products[2]

B 661 Practice for Heat Treatment of Magnesium Alloys[2]

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications[3]

E 35 Test Methods for Chemical Analysis of Magnesium and Magnesium Alloys[4]

E 88 Practice for Sampling Nonferrous Metals and Alloys in Cast Form for Determination of Chemical Composition[4]

E 94 Guide for Radiographic Testing[5]

E 155 Reference Radiographs for Inspection of Aluminum and Magnesium Castings[5]

E 165 Test Method for Liquid Penetrant Examination Method[5]

E 527 Practice for Numbering Metals and Alloys (UNS)[6]

E 716 Practices for Sampling Aluminum and Aluminum Alloys for Spectrochemical Analysis[7]

2.3 *Federal Standards:*

Fed. Std. No. 123 Marking for Shipment (Civil Agencies)[8]

Fed. Std. No. 184 Identification Marking of Aluminum, Magnesium and Titanium[8]

2.4 *Military Standards:*

MIL-STD-129 Marking for Shipment and Storage (Military Agencies)[8]

MIL-STD-276 Impregnation of Porous Non-ferrous Metal Castings[8]

MIL-I-13857 Impregnation of Metal Castings[8]

MIL-M-46062 Magnesium Alloy Castings, High Strength[8]

MIL-M-6857 Heat Treatment of Magnesium Alloy Castings[8]

2.5 *ANSI Standard:*[9]

ANSI Z1.4 Sampling Procedures and Tables for Inspection by Attributes

3. Terminology

3.1 *Definitions:*

3.1.1 *casting lot*—unless otherwise agreed, shall consist of not more than 1000 pounds of cleaned castings from the same melt or heat, except where this weight limit may be exceeded by a single casting. In such cases, each casting shall be considered a lot.

3.1.2 *heat treat lot*—for the purpose of mechanical property testing, a lot shall consist of all castings heat treated in the same furnace charge to the same temper.

3.1.3 *sand casting*—metal object produced by pouring molten metal into a sand mold and allowing it to solidify.

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

Current edition approved Apr. 10, 2001. Published May 2001. Originally published as B 80 – 30 T. Last previous edition B 80 – 97.

[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 03.03.

[6] *Annual Book of ASTM Standards*, Vol 01.01.

[7] *Annual Book of ASTM Standards*, Vol 03.06.

[8] Available from Standardization Documents, Order Desk, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, ATTN: NPODS.

[9] Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.

This document is now PUBLIC

Copyright © ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States.