Designation: B92/B92M – 11

Standard Specification for Unalloyed Magnesium Ingot and Stick For Remelting[1]

This standard is issued under the fixed designation B92/B92M; 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.

1. Scope*

1.1 This specification covers magnesium in the form of ingot and stick for remelting: 9980A is available in ingot and stick form, and 9980B, 9990A, 9995A, and 9998A are generally available only in ingot form.

1.2 The values stated in SI units are to be regarded as a separate standard. The values stated in each system are not exact equivalents, therefore each system must be used independently of the other.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

B951 Practice for Codification of Unalloyed Magnesium and Magnesium-Alloys, Cast and Wrought

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E35 Test Methods for Chemical Analysis of Magnesium and Magnesium Alloys (Withdrawn 2008)[3]

E88 Practice for Sampling Nonferrous Metals and Alloys in Cast Form for Determination of Chemical Composition

3. Terminology

3.1 *Definitions:*

3.1.1 *ingot*—a cast form suitable for remelting.

3.1.2 *stick*—an extruded form substantially uniform in cross section cut to desired length or weight.

4. Ordering Information

4.1 Orders for ingot and stick under this specification shall include the following information:

4.1.1 Grade (Section 6 and Table 1),

4.1.2 Quantity, in pieces or pounds [kilograms], and

4.1.3 Form; by agreement between the purchaser and the manufacturer the approximate form and weight of each piece or ingot may be specified.

4.1.4 For inch-pound orders specify B92, for metric orders specify B92M. Do not mix units.

5. Materials and Manufacture

5.1 No scrap shall be used in the production of magnesium ingot and stick, except such as shall accumulate at the manufacturer's plants from material of similar composition and of his own manufacture.

6. Chemical Composition

6.1 *Limits*—The material shall conform to the requirements as to chemical composition prescribed in Table 1.

6.2 *Sampling:*

6.2.1 Sufficient samples shall be taken by the manufacturer to assure conformance to the chemical composition requirements of the alloy. Samples may be taken from the molten metal when the ingot is poured or from the ingot. Samples shall be representative of the material.

6.2.2 In case of dispute, the sampling for chemical analysis shall be according to the requirements of Practice E88. If the ingots are shipped in carload lots of the same alloy, not less than four ingots shall be taken at random from the carload for sampling. If the shipment is in less than carload lots, one ingot shall be taken for sampling for each 10 000 lb [4500 kg] or fraction thereof.

6.3 *Methods of Analysis*—Any suitable method of chemical analysis may be used. In case of dispute, the analysis shall be made by methods given in Test Methods E35, or any other standard methods of analysis approved by ASTM unless some other method is agreed upon by the purchaser and vendor.

7. General Quality

7.1 Magnesium ingot and stick shall have a clean surface and shall be commercially free from dirt, slag, or other foreign material.

[1] This specification is under the jurisdiction of the 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 May 1, 2011. Published June 2011. Originally approved in 1933. Last previous edition approved in 2007 as B92/B92M–07. DOI: 10.1520/B0092_B0092M-11.

[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.

[3] The last approved version of this historical standard is referenced on www.astm.org.

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