



Standard Specification for ACuZinc5¹ (Zinc-Copper-Aluminum) Alloy Die Castings²

This standard is issued under the fixed designation B 894; 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 ACuZinc5, zinc-copper-aluminum alloy die castings. (UNS Z46541).³

1.2 The values stated in inch-pound units are standard. The SI values in parentheses are for information only.

1.3 *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 become familiar with all hazards including those identified in the appropriate Material Data Sheet for this product/material as provided by the manufacturer, to establish appropriate safety and health practices, and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

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

2.2 ASTM Standards:

B 892 Specification for Zinc-Copper-Aluminum Alloys in Ingot Form for Die Castings⁴

B 899 Terminology Relating to Non-ferrous Metals and Alloys⁴

E 10 Test Method for Brinell Hardness of Metallic Materials⁵

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁶

E 47 Test Methods for Chemical Analysis of Zinc Die Casting Alloys⁷

E 88 Practice for Sampling Nonferrous Metals and Alloys

in Cast Form for Determination of Chemical Composition⁷

E 527 Practice for Numbering Metals and Alloys (UNS)⁸

E 536 Test Method for Chemical Analysis of Zinc and Zinc Alloys⁷

E 634 Practice for Sampling of Zinc and Zinc Alloys for Optical Emission Spectrochemical Analysis⁷

2.3 Federal Standards:

Fed. Std. No. 123 Marking for Shipment (Civil Agencies)⁹

2.4 Military Standard:

MIL-P-116 Methods of Preservation¹⁰

MIL-STD-129 Marking for Shipment and Storage¹⁰

2.5 NADCA Standard:

NADCA Product Specification Standards for Die Castings¹¹

3. Terminology

3.1 Terms shall be defined in accordance with Terminology B 899.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *die casting, n*—a casting process in which molten metal is injected under high velocity and pressure into a metal die and solidified, also a product produced by such a process. Alternately known as pressure die casting.

4. Ordering Information

4.1 Orders for die castings shall include the following basic information:

4.1.1 This specification number and date,

4.1.2 Quantity and delivery schedule, as required,

4.1.3 Part name and number,

4.1.4 Alloy (Table 1), and

4.1.5 Drawing of die casting, when required, giving all necessary dimensions and showing latest revisions and allowances for machining, if any. Location of ejector pin marks or

¹ ACuZinc and ACuZinc5 are registered trade names of the General Motors Corporation.

² This specification is under the jurisdiction of ASTM Committee B02 on Nonferrous Metals and Alloys and is the direct responsibility of Subcommittee B02.04 on Zinc and Cadmium.

Current edition approved June 10, 2003. Published August 2003. Originally approved in 1999. Last previous edition approved in 1999 as B 894 - 99^{ε1}.

³ See Footnote B in Table 1.

⁴ *Annual Book of ASTM Standards*, Vol 02.04.

⁵ *Annual Book of ASTM Standards*, Vol 03.01.

⁶ *Annual Book of ASTM Standards*, Vol 14.02.

⁷ *Annual Book of ASTM Standards*, Vol 03.05.

⁸ *Annual Book of ASTM Standards*, Vol 01.01.

⁹ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401.

¹⁰ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098

¹¹ Available from North American Die Casting Association, 9701 West Higgins Road, Suite 880, Rosemont, IL 60018-4721, USA.