



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

This standard is issued under the fixed designation B 892; 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, a commercial zinc-copper-aluminum alloy (Z46540*), in ingot form for remelting for use in the production of castings.

1.2 *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 acceptance form a part of this specification to the extent referenced herein:

2.2 ASTM Standards:

B 899 Terminology Relating to Nonferrous Metals and Alloys³

B 908 Practice for the Use of Color Codes for Zinc Casting Alloy Ingot³

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁴

E 47 Test Methods for Chemical Analysis of Zinc Die Casting Alloys⁵

E 88 Practice for Sampling Nonferrous Metals and Alloys in Cast Form for Determination of Chemical Composition⁶

E 527 Practice for Numbering Metals and Alloys (UNS)⁷

E 536 Test Method for Chemical Analysis of Zinc and Zinc Alloys⁶

E 634 Practice for Sampling of Zinc and Zinc Alloys for Optical Emission Spectrometric Analysis⁶

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 ingot under this specification shall include the following information:

- 4.1.1 Quantity in pounds,
- 4.1.2 Chemical composition,
- 4.1.3 Size, if not manufacturer's standard,
- 4.1.4 Source inspection (Section 9), and
- 4.1.5 Marking (Section 11).

5. Materials and Manufacture

5.1 The alloys may be made by any approved process.

5.2 The material covered by this specification shall be of uniform quality and shall be free of harmful contamination.

6. Chemical Composition

6.1 The ingots shall conform to the requirements as to chemical composition prescribed in Table 1. Conformance shall be determined by the manufacturer by analyzing samples taken at the time the ingots are poured or samples taken from the ingots. Unless otherwise agreed in the contract or purchase order, sampling procedure will be the manufacturer's choice.

7. Sampling for Determination of Chemical Composition

7.1 In the event of a dispute, if the ingots are shipped in carload lots of the same alloy, not less than five ingots shall be taken at random from the carload for sampling. If the shipment is less than a carload lot, one sample ingot shall be taken for

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.

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*See Table 1, footnote A

³ Annual Book of ASTM Standards, Vol 02.04.

⁴ Annual Book of ASTM Standards, Vol 14.02.

⁵ Withdrawn; see 1998 Annual Book of ASTM Standards, Vol 03.05.

⁶ Annual Book of ASTM Standards, Vol 03.05.

⁷ Annual Book of ASTM Standards, Vol 01.01.