



Designation: B 240 – 03

Standard Specification for Zinc and Zinc-Aluminum (ZA) Alloys in Ingot Form for Foundry and Die Castings¹

This standard is issued under the fixed designation B 240; 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 commercial zinc and zinc-aluminum (ZA) alloys in ingot form for remelting for the manufacture of pressure die castings and foundry castings as designated and specified in Table 1. Seven alloy compositions are specified, designated as follows:

UNS ^A	ASTM ^A	Common	Traditional
Z33521	AG 40A	Alloy 3	Zamak 3
Z33522	AG 40B	Alloy 7	Zamak 7
Z35530	AC 41A	Alloy 5	Zamak 5
Z35540	AC 43A	Alloy 2	Zamak 2
Z35635			ZA-8
Z35630			ZA-12
Z35840			ZA-27

1.2 Zinc alloys Z33521, Z33522, Z35530, and Z35540 are used primarily for remelting in the manufacture of pressure die castings. Zinc-aluminum alloys Z35635, Z35630, and Z35840 are used for remelting in the manufacture of both foundry and pressure die castings. Castings made from these ingots are specified in Specification B 86, Standard Specification for Zinc and Zinc-Aluminum Alloys for Foundry and Die Castings.

1.3 The values stated in inch-pound units are to be regarded as standard.

1.4 *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 data of order acceptance form a part of this specification to the extent referenced herein:

2.2 *ASTM Standards:*

¹ 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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- B 86 Specification for Zinc and Zinc-Aluminum (ZA) Alloy Foundry and Die Castings²
 - B 275 Practice for Codification of Certain Nonferrous Metals and Alloys, Cast and Wrought³
 - B 899 Terminology Relating to Non-ferrous Metals and Alloys²
 - B 908 Practice for the Use of Color Codes for Zinc Casting Alloy Ingot²
 - 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 Methods for Chemical Analysis of Zinc and Zinc Alloys⁶
 - E 634 Practice for Sampling of Zinc and Zinc Alloys for Optical Emission Spectrometric Analysis⁶
- 2.3 *Other ASTM Document:*
Methods for Emission Spectrochemical Analysis⁸

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,

² Annual Book of ASTM Standards, Vol 02.04.

³ Annual Book of ASTM Standards, Vol 02.02.

⁴ Annual Book of ASTM Standards, Vol 14.02.

⁵ Withdrawn; see 1997 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.

⁸ Available from ASTM International Headquarters, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428, PCN 03-502071-39.

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