Designation: B 860 – 07

Standard Specification for Zinc Master Alloys for Use in Hot Dip Galvanizing[1]

This standard is issued under the fixed designation B 860; 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 zinc master alloys which are used in hot dip galvanizing for the purpose of adjusting the concentration of certain alloying elements in the molten zinc bath. Table 1 covers the chemical composition of these materials which include six master alloys of zinc-aluminum (brightener) and one master alloy of zinc-antimony.

ASTM	Common		UNS
Type A-1	90/10 Zn/Al	High Purity	Z30750
Type A-2	90/10 Zn/Al	Low Purity	Z31710
Type A-3	95/5 Zn/Al	High Purity	Z30503
Type A-4	95/5 Zn/Al	Low Purity	Z31510
Type A-5	96/4 Zn/Al	High Purity	...
Type A-6	96/4 Zn/Al	Low Purity	...
Type S-1	90/10 Zn/Sb		Z55710

1.2 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

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 Safety Data Sheet (MSDS) 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:* [2]

B 897 Specification for the Configuration of Zinc and Zinc Alloy Jumbo and Block Ingot

B 899 Terminology Relating to Non-ferrous Metals and Alloys

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

E 47 Test Methods for Chemical Analysis of Zinc Die-Casting Alloys[3]

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

E 527 Practice for Numbering Metals and Alloys (UNS)

E 536 Test Methods for Chemical Analysis of Zinc and Zinc Alloys

3. Terminology

3.1 Terms defined in Terminology B 899 shall apply unless defined otherwise in this standard.

4. Ordering Information

4.1 Orders for ingots under this specification shall include the following information:

4.1.1 Quantity, lb,

4.1.2 Alloy type (see Table 1),

4.1.3 Size and type of ingot (jumbo, type 1 block, type 2 block, slab or other ingot shape), if not manufacturer's standard,

4.1.4 Specification number and year date,

4.1.5 Source inspection (see Section 8), and

4.1.6 Marking (see Section 10).

5. Materials and Manufacture

5.1 The material covered by this specification shall be of uniform quality and shall be free from harmful contamination. The ingot surface shall contain a minimum of dross and adhering foreign matter.

6. *Chemical Requirements* Chemical Requirements

6.1 *Limits*—The alloys shall conform to the requirements as to chemical composition prescribed in Table 1. Conformance shall be determined by the producer by analyzing samples taken at the time the ingots are made. If the producer has determined the chemical composition of the metal during the course of manufacture, he shall not be required to sample and analyze the finished product.

[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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[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] Withdrawn.

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