



Designation: B 6 – 00

American Association of State
Highway and Transportation
Officials Standard
AASHTO No: M120-77

Standard Specification for Zinc¹

This standard is issued under the fixed designation B 6; 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 zinc metal made from ore or other material by a process of distillation or by electrolysis in three grades as follows:

- 1.1.1 Special High Grade,
- 1.1.2 High Grade,
- 1.1.3 Prime Western.

NOTE 1—Certain continuous galvanizing grades are specified in B 852. Other continuous galvanizing and controlled lead grades are not included in this specification but are covered by specific user purchasing specifications.

1.2 This specification does not cover zinc produced by “sweating” or remelting of secondary zinc.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

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 the date of material purchase form a part of this specification to the extent referenced herein.

2.2 *ASTM Standards:*

- B 852 Specification for Zinc Alloys (CGG) for Continuous Hot-Dip Galvanizing of Sheet Steel²
- B 899 Terminology Relating to Non-ferrous Metals and Alloys²
- E 29 Practice for Using Significant Digits in Test Data to

Determine Conformance with Specifications³

E 47 Test Methods for Chemical Analysis of Zinc Die-Casting Alloys⁴

E 88 Practice for Sampling Nonferrous Metals and Alloys in Cast Form for Determination of Chemical Composition⁴

E 527 Practice for Numbering Metals and Alloys (UNS)⁵

E 536 Test Method for Chemical Analysis of Zinc and Zinc Alloys⁵

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 *Special High Grade, n*—a high purity grade of zinc containing a minimum of 99.990 % zinc, with controlled impurity levels, as specified in Table 1.

3.2.2 *High Grade, n*—a grade of zinc containing a minimum of 99.90 % zinc, with controlled impurity levels, as specified in Table 1.

3.2.3 *Prime Western, n*—a grade of zinc containing 0.5–1.4 % lead, a minimum of 98.0 % zinc, with controlled impurity levels, as specified in Table 1.

3.3 *Abbreviations:* Abbreviations:

3.3.1 *SHG*—Special High Grade Zinc

3.3.2 *HG*—High Grade Zinc

3.3.3 *PW*—Prime Western Zinc

4. Ordering Information

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

- 4.1.1 ASTM designation and year of issue,
- 4.1.2 Quantity (weight),
- 4.1.3 Name of material (zinc metal),
- 4.1.4 Size (see Section 7), and
- 4.1.5 Grade (see Table 1).

5. Materials and Manufacture

5.1 The manufacturer shall use care to have each lot of zinc metal of as uniform quality as possible.

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 *Annual Book of ASTM Standards*, Vol 02.04.

³ *Annual Book of ASTM Standards*, Vol 14.02.

⁴ *Annual Book of ASTM Standards*, Vol 03.05.

⁵ *Annual Book of ASTM Standards*, Vol 03.06.

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