



Designation: B29 – 03(Reapproved 2009)

Standard Specification for Refined Lead¹

This standard is issued under the fixed designation B29; 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 refined lead in pig, block, or hog form.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered 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 the date of material purchase form a part of this specification to the extent referenced herein.

2.2 *ASTM Standards:*²

[E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications](#)

[E37 Test Methods for Chemical Analysis of Pig Lead](#)

[E88 Practice for Sampling Nonferrous Metals and Alloys in Cast Form for Determination of Chemical Composition](#)

3. Ordering Information

3.1 Orders for refined lead under this specification shall include the following information:

3.1.1 ASTM designation and year of issue,

3.1.2 Quantity (weight),

3.1.3 Name of material (for example, pure lead),

3.1.4 Size and shape (see Section 6),

3.1.5 Grade (see [Table 1](#) and accompanying notes), and

3.1.6 Certification or test report if specified (Section 13).

4. Materials and Manufacture

4.1 Lead shall be supplied in commercial standard forms or shapes requested by the purchaser in the following grades:

4.1.1 Low bismuth low silver pure lead,

4.1.2 Refined pure lead,

4.1.3 Pure lead, and

4.1.4 Chemical copper lead.

4.2 The grades of lead listed in 4.1.1-4.1.4 shall be produced by any smelting and refining process from ore or recycled materials to meet the chemical requirements of this specification.

5. Composition

5.1 The lead shall conform to the requirements prescribed in [Table 1](#) and accompanying notes.

6. Sizes and Shapes

6.1 Pigs shall weigh up to a nominal 110 lb (50 kg).

6.2 Blocks or hogs shall be square or oblong and weigh up to 2530 lb (1150 kg).

7. Appearance

7.1 The lead shall be reasonably free from surface corrosion and adhering foreign material.

8. Lot

8.1 All lead of the same type produced and cast at one time shall constitute a lot for chemical analysis. Each pig or block of the lot shall bear a single identifying number that can be related to the manufacturing lot.

9. Sampling for Chemical Analysis

9.1 The sample for chemical analysis shall be selected by one of the following methods:

9.1.1 Test samples taken from the lot during casting, or

9.1.2 Test samples taken from the final solidified cast product.

¹ This specification is under the jurisdiction of ASTM Committee B02 on Nonferrous Metals and Alloys and is the direct responsibility of Subcommittee B02.02 on Refined Lead, Tin, Antimony, and Their Alloys.

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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.