

INCH-POUND

MIL-L-13283C(MR)

9 March 1990

SUPERSEDING

MIL-L-13283B(MR)

19 August 1970

## MILITARY SPECIFICATION

LEAD-ANTIMONY  
(For Use in Ammunition)

This specification is approved for use by the Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

## 1. SCOPE

1.1 Scope. This specification covers three grades of lead-antimony.

## 2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

## STANDARDS

## FEDERAL

FED-STD-151 - Metals; Test Methods

## MILITARY

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes

MIL-STD-129 - Marking for Shipment and Storage

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

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Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Director, U.S. Army Laboratory Command, Materials Technology Laboratory, ATTN: SLCMT-MEE, Watertown, MA 02172-0001 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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AMSC N/A

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2.2 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

## 3. REQUIREMENTS

3.1 Chemical composition. The material shall conform to the chemical requirements specified in table I (see 6.2).

TABLE I. Chemical composition.

Element	Grade 1	Grade 2	Grade 3
Lead plus antimony, percent, minimum	99.2	99.2	99.2
Antimony, percent	1.0-2.5	9.0-10.5	9.0-9.1
Copper, percent, maximum	0.10	0.10	0.10

3.2 Form and dimensions. Unless otherwise specified in the contract or order, the material shall be furnished in commercial cylindrical ingots of the dimensions specified (see 6.2).

3.3 Workmanship. The material shall be clean and of uniform composition and shall be free from segregations, dross, oxides, blow holes, hard spots, foreign material and other injurious defects.

## 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.2 Lot. Each delivery or shipment shall constitute a lot.

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#### 4.3 Sampling.

4.3.1 Sampling for chemical analysis. Two ingots shall be selected to represent a shipment of 20,000 pounds or less, 1 ingot for each 20,000 pounds or fraction thereof of lots greater than 20,000 pounds. Samples shall be obtained by sawing through at the center and near each end of each cylindrical ingot. Equal amounts of sawings shall be taken from each ingot representing a lot and shall be thoroughly mixed. The sawings shall be treated with a magnet to remove particles of steel.

4.3.2 Sampling for examination. Unless otherwise specified in the contract or order, sampling for dimensional and workmanship examination shall be done in accordance with MIL-STD-105, inspection level II, acceptable quality level (AQL) of 1.5 percent. Samples for dimensional and workmanship examination shall be evaluated separately (see 6.2).

4.4 Examination. Each sample unit selected in accordance with 4.3.2 shall be visually and dimensionally examined to determine compliance with the requirements for dimensions (see 3.2), and workmanship (visual) (see 3.3).

4.5 Preparation for shipment. Examination for the packing and marking for shipment shall be made for conformance to the requirements of section 5.

4.6 Chemical analysis. The samples selected in accordance with 4.3.1 shall be used for analysis in accordance with method 111 or 112 of FED-STD-151. In case of dispute, referee analysis shall be method 111.

#### 4.7 Rejection.

4.7.1 Examination defects. Any sample unit having one or more defects shall be rejected. If the number of nonconforming sample units in the sample exceeds the acceptance number specified in MIL-STD-105 for that sample size, the entire lot shall be rejected subject to the acceptance and rejection procedures of MIL-STD-105.

4.7.2 Test failures. A lot shall be rejected for failure to meet any of the test requirements when tested in accordance with 4.6, subject to the retest provisions of FED-STD-151.

### 5. PACKAGING

5.1 Preservation and packaging. Preservation and packaging shall be level C as specified (see 6.2).

5.1.1 Level C. Cleaning, drying, preservation and packaging shall be in accordance with the manufacturer's commercial practice.

5.2 Packing. Packing shall be level C as specified (see 6.2)

5.2.1 Level C. Material shall be packed in a manner to ensure carrier acceptance and safe delivery at destination. Containers shall be in accordance with Uniform Freight Classification Rules or National Motor Freight Classification Rules applicable to the mode of transportation.

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5.3 Marking. In addition to any special marking required by the contract or order, shipment shall be marked in accordance with the requirements of MIL-STD-129.

## 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. Material covered by this specification is intended for manufacture of bullet cores, base fillers and point fillers.

6.2 Acquisition requirements. The following will be as specified or approved in the contract or in the applicable drawings:

- (a) Title, number and date of this specification.
- (b) Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1).
- (c) Grade required (see 3.1).
- (d) Dimensions required (see 3.2).
- (e) If 100 percent examination is required (see 4.3.2).
- (f) Maximum gross weight of containers with contents.
- (g) Selection of applicable levels of preservation, packaging, and packing (see section 5).
- (h) When special marking for shipment requirements are necessary (see 5.3).

## 6.3 Subject Term (key word) listing.

Ammunition	Copper, percent
Antimony, percent	Lead plus antimony, percent
Chemical composition	

Custodian:  
Army - MR

Preparing activity:  
Army - MR

Review activities:  
Army - MR, AR,

Project 9650-A048

User activities:  
Army - AR

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