

INCH-POUND

MIL-L-46225C (AR)  
 AMENDMENT 3  
11 May 90  
 SUPERSEDING  
 AMENDMENT 2  
 27 May 1987

## MILITARY SPECIFICATION

LEAD AZIDE RD-1333  
 (FOR USE IN AMMUNITION)

This Amendment forms a part of Military Specification MIL-L-46225C (MU) dated 26 August 1968 and is approved for use within the US Army Armament Munitions and Chemical Command and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 1

2.1 Specifications and standards.

Add the following:

"FEDERAL

PPP-D-705	- Drum shipping and storage, steel light weight (55 gallon)
PPP-D-729	- Drums, shipping and storage, steel, 55 gallon (208 liters)"

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\* Delete "Drawings ARMY 73-2-335 - Detonator M47 Loading Assembly and Details".

2.2 Other publications. Delete "49 CFR 71-90" in its entirety wherever it appears and substitute the following: "Title 49 Transportation Parts 100-199" "49 CFR 100-199 latest revision."

AMSC N/A

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FSC 1376

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PAGE 3

Paragraph 3.2.2 Aggregates. Delete in its entirety and substitute the following:

"3.2.2.1 Aggregates. The aggregates shall contain no well defined translucent crystals when examined microscopically (see 4.3.2). The aggregates shall be similar to Figure 6. A photomicrograph for each sample shall be made and held for future reference."

Paragraph 3.3.1 Purity. Delete "98.5" and substitute "97.5".

Paragraph 3.3.8 Bulk density. Add to first sentence "when tested as specified in 4.3.10". Delete last sentence "In addition... as specified in 4.3.10".

PAGE 4

\* Paragraph 3.4: Delete in its entirety.

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Paragraph 4.2.2.1: Delete in its entirety and substitute new paragraph 4.2.2.1 included herein.

Paragraph 4.2.2.2: Delete in its entirety and substitute new paragraph 4.2.2.2 included herein.

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Paragraph 4.2.2.3: Delete in its entirety and substitute new paragraph 4.2.2.3 included herein.

Paragraph 4.2.2.4: Delete in its entirety and substitute new paragraph 4.2.2.4 included herein.

Paragraph 4.2.2.5: Delete in its entirety and substitute new paragraph 4.2.2.5 included herein.

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Paragraph 4.2.2.6: Delete in its entirety and substitute new paragraph 4.2.2.6 and 4.2.2.7 (9a) included herein.

QUALITY CONFORMANCE INSPECTION  
**CLASSIFICATION OF CHARACTERISTICS**  
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PARAGRAPH	TITLE	SHEET 1 OF 1	DRAWING NUMBER	INSPECTION METHOD REFERENCE
4.2.2.1	Bag, cambric or cloth		NEXT HIGHER ASSEMBLY	
<b>CLASSIFICATION</b>	<b>EXAMINATION OR TEST</b>	<b>CONFORMANCE CRITERIA</b>	<b>REQUIREMENT PARAGRAPH</b>	
<u>Critical</u> 001	Lead azide improperly or insufficiently wet	100%	5.1.1	Visual
<u>Major</u> 101	Cloth cap missing, torn or improperly positioned	0.40%	5.1.1	Visual, prior to closing
102	Bag pierced or torn	0.40%	5.1.1	Visual
103	Bag improperly closed	0.40%	5.1.1	Visual
<u>Minor</u> 201	Presence of foreign material	0.65%	3.5	Visual
NOTES:				

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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER
		CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	
CLASSIFICATION	EXAMINATION OR TEST	INSPECTION METHOD REFERENCE		
4.2.2.2	Bag, velostat conductive			
<u>Critical</u>	None defined			
<u>Major</u> 101	Cloth cap missing, torn or improperly positioned	0.25%	5.1.1	Visual, prior to closing
102	Insufficient alcohol/water covering inner bag	0.25%	5.1.1	Visual, prior to closing
103	Bag improperly closed	0.25%	5.1.1	Visual
104	Bag pierced or torn	0.25%	5.1.1	Visual
<u>Minor</u>	None defined			
NOTES:				

Replaces 1570, 1 Feb 85, which may not be used.

AMSMC Form 1570b, 1 Jul 89

QUALITY CONFORMANCE INSPECTION  
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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER
		EXAMINATION OR TEST	CONFORMANCE CRITERIA	
4.2.2.3	Bag, cotton duck			NEXT HIGHER ASSEMBLY
<u>Critical</u>	None defined			
<u>Major</u>	Rubber cloth cap missing	0.25%	5.1.1	Visual, prior to closing
101	Bag pierced or torn	0.25%	5.1.1	Visual
102	Bag improperly closed	0.25%	5.1.1	Visual
103	Mark missing or incorrect	0.25%	5.1.1	Visual
104				
<u>Minor</u>	None defined			
NOTES:				

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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER				
		EXAMINATION OR TEST	CONFORMANCE CRITERIA		REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE		
4.2.2.4	Bag, rubber cloth							
<u>Critical</u>	None defined							
<u>Major</u> 101	Insufficient water/alcohol covering unit bags							
102	Bag improperly closed	0.25%	5.1.1					Visual, prior to closing
103	Bag pierced or torn	0.25%	5.1.1					Visual
<u>Minor</u>	None defined	0.25%	5.1.1					Visual
NOTES:								

Replaces 1570, 1 Feb 85, which may not be used.

ANSMC Form 1570b, 1 Jul 89

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PARAGRAPH	TITLE	EXAMINATION OR TEST	CONFORMANCE CRITERIA	SHEET 1 OF 1	DRAWING NUMBER	
					INSPECTION METHOD REFERENCE	NEXT HIGHER ASSEMBLY
4.2.2.5	Bag, grain					
<u>Critical</u>	None defined					
<u>Major</u> 101	Bag improperly closed		0.25%	5.1.1	Visual	
<u>Minor</u>	None defined					
NOTES:						

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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER
		CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	
4.2.2.6	Bag, jute liner			NEXT HIGHER ASSEMBLY
<u>Critical</u>	None defined			
<u>Major</u> 101	Enclosed grain bag incompletely surrounded by sawdust	0.65%	5.1.1	Visual, measuring rule
102	Sawdust insufficiently saturated with water/alcohol solution	0.65%	5.1.1	Visual
103	Jute bag torn	0.65%	5.1.1	Visual
104	Jute bag improperly closed	0.65%	5.1.1.1	Visual
<u>Minor</u>	None defined			
NOTES:				



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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER
		CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	
4.2.2.7	Container, drum or barrel			NEXT HIGHER ASSEMBLY
<u>Classification</u>	<u>Examination or Test</u>			
<u>Critical</u> 001 002	Drum or barrel leaking Marking misleading or unidentifiable	100% 100%	5.1.1 5.2	Visual Visual
<u>Major</u> 101	Container improperly closed or sealed	0.25%	5.1.1	Visual
<u>Minor</u> 201 202	Markings blurred or of poor quality Bare spots, other than slight scratches, on exterior (applicable to metal container)	1.00% 1.00%	5.2 5.1.1	Visual Visual
NOTES:				

\*

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Paragraph 4.2.3.1, In the third sentence: Change "4.3.3 through 4.3.9" to "4.3.4 through 4.3.9".

Paragraph 4.2.3.1.1, In the first and next to the last sentence: Change "4.3.3 through 4.3.9 and 4.3.11" to "4.3.4 through 4.3.9 and 4.3.11".

Paragraph 4.2.3.1, Add at the end of the paragraph:

"The test depicted in 4.3.3 shall be performed on a representative specimen from each batch on the skip-batch basis."

Add the following new paragraphs:

"4.2.3.1.2 Skip-batch testing. When the contractor has demonstrated that the constituent materials, production processes and test procedures are uniform and within control and after three (3) consecutive batches have passed the test requirements, the contractor may institute skip-batch testing using the test frequency 1/3. The test frequency represents the ratio of batches tested to batches produced.

"4.2.3.1.2.1 Skip-batch sample selection. When a sufficient number of samples have been accumulated to permit selection at the prescribed test frequency, the contractor shall randomly select one sample for acceptance testing. Actual selection shall be accomplished by using the serial numbers of the candidate batches and applying the table of random numbers in MIL-HDBK-53 (Handbook 53) "Guide for Sampling Inspection", in ICC "Table of 105,000 Random Decimal Digits" or in other suitable sources in selecting serial number of the batch to be tested.

4.2.3.1.2.2 Skip-batch test provisions. The contractor shall test the batch sample in accordance with the methods and procedures in paragraph 4.3.3. If the sample meets the test requirements, the contractor shall continue testing at the same test frequency. If the sample fails to meet the test requirements:

- a. The batch shall be rejected.
- b. The two skipped batches from the group shall be tested (reject if failure occurs)
- c. Return to 100% testing of each batch.

The contractor may return to skip-batch testing when three (3) consecutive batches, produced after the rejected batch, have been tested and passed the requirements."

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\* Paragraph 4.2.3.2: Delete in its entirety.

\* Paragraph 4.3.11.1 to 4.3.11.2: Delete in their entirety.

PAGES 19 AND 20

Paragraphs 5 through 5.1: Delete in their entirety and substitute the following new paragraphs 5 through 5.1.3:

**"5. PACKAGING**

5.1 Packing. Lead azide RD-1333 shall be shipped in a wet condition as directed in 49 CFR 100-1999, para. 173.73. A mixture of water plus denatured ethyl alcohol in such proportions to prevent freezing shall always be used unless otherwise directed.

5.1.1 Level A. Up to 25 lbs (dry weight) of lead azide RD-1333 shall be packed wet (per para 5.1) directly into a cambric diaper or similar cloth bag. A cap of the same diameter and fabric as the bag shall be placed inside the bag and over the lead azide RD-1333. The bag shall then be tied closed and placed inside a bag made of conductive velostat. This velostat bag shall then be filled with water/alcohol mixture which meets the requirements of para 5.1. This water/alcohol mixture must completely cover the bag contents. The velostat bag is then tied closed and placed inside a 4 oz or heavier duck bag. A cap of the same materials and of the same diameter as the duck bag shall be placed over the velostat bag. The duck bag is then securely tied closed. This bag is now the unit bag which shall be marked in accordance with para. 5.2. An appropriate number of bags whose combined total dry weight of lead azide RD-1333 shall not exceed 150 lbs is placed into a rubber cloth bag. Inside this bag and over the unit of bags of lead azide RD-1333 shall be placed a cap of the same fabric and same diameter as this bag. This rubber cloth bag shall then be filled with a water/alcohol mixture meeting requirements of para. 5.1 so that the unit bags inside are completely covered. The bag is then securely tied closed. This rubber bag is placed inside a strong grain bag which must be securely tied closed. The grain bag and its contents must be packed in the center of a barrel or drum (Specification PPP-P-704, Type I, Class 8 or 12; PPP-D-729, Type I, PPP-D-705, Type I, Class 8 or 12) DOT specification 5 or DOT specification 5B which has been lined with a heavy, close fitting jute bag. The grain bag shall be entirely surrounded by not less than 3 inches of well-packed sawdust

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saturated by the previously mentioned water/alcohol mixture. The jute bag shall then be closed by secure sewing to prevent the escape of the sawdust. After closure of the barrel or drum, the package shall be inspected carefully and all leaks stopped. The dry weight of lead azide RD-1333 in one outside container shall not exceed 150 pounds. (NOTE: The maximum range of bulk densities between all batches in the drum or barrel (High value minus low value) shall not exceed 0.2 gram per milliliter).

5.1.2 Level B. Level B shall be the same as Level A.

5.1.3 Level C. Level C shall be the same as Level A except DOT specification 17H (single trip), PPP-D-729, Type IV; PPP-D-705, Type V; PPP-D-704, Type II Class 8 shall be used."

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Paragraph 5.2, Add to the end of paragraph: "(Note: The maximum range of bulk densities between all batches in the drum or barrel (high value minus low value) shall not exceed 0.2 gram per milliliter)".

Paragraph 5.3, Add to the end of paragraph: "In addition, each drum or barrel shall be marked to show bulk density of material contained therein."

Delete paragraphs 5.2 and 5.3 in their entirety and add new paragraph 5.2.

"5.2 Marking. Marking shall be in accordance with MIL-STD-129.

5.2.1 Unit packaging. Each unit bag as defined in 5.1.1 shall be marked in contrasting color to the bag with letters not less than 1/4 inch or more than 1/2 inch high with water/alcohol-proof ink as follows:

- a. NSN
- b. Lead Azide RD-1333
- c. Quantity (dry weight) in pounds
- d. Lot number

5.2.1.1 Alternative. As an alternative, each unit bag may be identified by means of a waterproof tag imprinted with a water/alcohol-proof ink with the above information and attached with a non-metallic tie.

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5.2.2 Exterior container. The side and top of each drum or barrel shall be marked: "INITIATING EXPLOSIVE - DANGEROUS - DO NOT STORE OR LOAD WITH ANY HIGH EXPLOSIVE" in 1/2 inch high letters. The following additional information will be marked on the side of each drum or barrel in letters not less than 1/4 inch or more than 1/2 inch high:

- a. NSN
- b. Lead Azide RD-1333
- c. Quantity (net weight in pounds)
- d. Lot number
- e. Gross weight
- f. MIL-L-46225C (AR)
- g. Bulk density of lead azide RD-1333 content

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\* Paragraphs 6 through 6.5: Delete in their entirety and substitute new paragraphs 6 through 6.7:

"6. NOTES

6.1 Intended use. The lead azide RD-1333 described in this specification is intended as a component in percussion caps, detonators, blasting caps, fuzes and priming compositions.

6.2 Necessary Precaution. Lead azide RD-1333 is classified as a high explosive. All necessary precaution in the manufacture, handling, and storage of such material shall be observed.

6.3 Ordering data. See MIL-A-48078.

6.4 Submission of inspection equipment designs for approval (see MIL-A-48078). Submit equipment designs, as required to Commander, AMCCOM, ATTN: AMSMC-QAR-R(D), Picatinny Arsenal, NJ 07806-5000.

6.5 Equivalent test methods. The contractor may utilize any alternative inspection and testing procedure which is equivalent in accuracy and precision to those procedures cited in this specification. Prior written approval of the Contracting Officer is required for use of alternative methods. A written proposal with supporting data, where applicable, shall be submitted through the contracting officer to: Commander, AMCCOM, ATTN: AMSMC-QAR-R(D), Picatinny Arsenal, NJ 07806-5000. The proposal shall include procedures, test data, descriptions and drawings of special equipment (see MIL-I-45208, para. 3.10).

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6.6 Water/alcohol. Due to danger of freezing conditions during shipment and storage, this material shall be kept "wet" with a solution of water/denatured ethanol in such proportion that freezing shall not occur.

6.7 Description of apparatus and method. The description of apparatus and method submitted by Olin Industries, East Alton, Illinois on 7 October 1965, is an approved equivalent."

PAGES 24, 25, 26

\* Delete Figures 3, 4, and 5.

The margins of this amendment are marked with an asterisk or vertical lines to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

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