

MIL-P-60942A(PA)
29 March 1976
SUPERSEDING
MIL-P-60942 (MU)
10 January 1968

MILITARY SPECIFICATION

PRIMER, PERCUSSION

FOR

40MM

LOADING, ASSEMBLING AND PACKING

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

1. SCOPE

1.1 This specification covers the loading, assembling and packing for one type of primer designated as Primer, Percussion for 40MM.

2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal form a part of this specification to the extent specified herein.

SPECIFICATIONS

MILITARY

MIL-A-48078 - Ammunition, Standard Quality Assurance Provisions, General Specification For

STANDARDS

MILITARY

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

FSC: 1390

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DRAWINGS

PICATINNY ARSENAL

PRODUCT AND PACKING DRAWINGS

8866712 - Primer, Percussion for 40MM

INSPECTION EQUIPMENT DRAWINGS

8802117 - Fixture
 9202427 - Primer Holder
 8815992 - Firing Pin
 8816003 - Holder
 8827934 - Adapter Ball
 9202530 - Press
 9202583 - Test Fixture

2.2 Other Publications - The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on the date of invitation for bids or request for proposal shall apply.

CODE OF FEDERAL REGULATIONS

TITLE 49 - Transportation, Parts 100-199

(The Code of Federal Regulations is available from the Superintendent of Documents, US Government Printing Office, Washington, D. C. 20402. Orders should specify, "49 CFR 100-199 (latest revisions)").

TECP-700-700 - Manual of Test Methods for Small
 Volume III Arms Ammunition

3. REQUIREMENTS

3.1 Material - Materials shall be in accordance with the applicable drawings and specifications.

3.2 Primer - The primer shall comply with all requirements specified on Drawing (Dwg.) 8866712, all associated drawings, and with all requirements specified in applicable specifications.

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3.3 Workmanship - All parts and assemblies shall be fabricated, loaded and assembled in a thorough, workmanlike manner. They shall be free of burrs, sharp edges, cracks, dirt, grease, rust and other foreign matter. The cleaning method used shall not be injurious to any parts, nor shall the parts be contaminated by the cleaning agents. Exterior surface coatings shall be continuous; however, a few light scratches not exposing base material may be permitted. All required marking and stamping shall be neat and sharply defined.

3.4 Sensitivity - The sum of the average critical height (H) plus 5 standard deviation (5S) shall not exceed 15 inches. The difference between the average critical height (H) and 2 standard deviations (2S) shall be not less than 2 1/2 inches.

3.5 Action Time - The action time of the primer shall not exceed .003 seconds at seventy (70) to seventy-five (75) degrees Fahrenheit (F).

3.6 First Article Inspection - This specification contains technical provisions for first article inspection. Requirements for the submission of first article samples by the contractor shall be as specified in the contract.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for Inspection and Standard Quality Assurance Provisions - Unless otherwise specified herein or in the contract, the provisions of MIL-A-48078 shall apply and are hereby made a part of this detail specification.

4.2 Classification of Inspections - The following types of inspection shall be conducted on this item:

- a. First Article Inspection
- b. Quality Conformance Inspection

4.3 First Article Inspection -

4.3.1 Submission - The contractor shall submit a first article as designated by the Contracting Officer for evaluation in accordance with the provisions of 4.3.2. The first article sample shall consist of the following items in sample quantities as indicated.

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<u>Part Description</u>	<u>Drawings</u>	<u>Quantity</u>
Primer, Percussion	8866712	2000

4.3.2 Inspections to be Performed - See MIL-A-48078 and Table 1 herein.

4.3.3 Rejection - See MIL-A-48078.

TABLE 1 - FIRST ARTICLE INSPECTION
CLASSIFICATION OF DEFECTS & TESTS

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PARAGRAPH	TITLE		SHEET 1 OF 1		DRAWING NUMBER
	Primer, Percussion				See Below
					NEXT HIGHER ASSEMBLY
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	PARAGRAPH REFERENCE / INSPECTION METHOD
	<u>Primer, Percussion</u> (Dwg. 8866712)				
	Examination for Defects	2000		3.2	4.4.2.1
	Sensitivity	2000		3.4	4.5.1
	Action Time	2000		3.5	4.5.2
	Inds	2000		3.2	4.5.1.1
NOTES					

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4.4 Quality Conformance Inspection -

4.4.1 Inspection Lot Formation - Inspection lots shall comply with the lot formation provisions of MIL-A-48078.

4.4.2 Examination - See MIL-A-48078.

a. Sampling Plans - Unless otherwise specified on the Classification of Defects and Test Tables, sampling plans for major and minor defects shall be in accordance with MIL-STD-105, Inspection Level II.

QUALITY CONFORMANCE INSPECTION
CLASSIFICATION OF DEFECTS & TESTS

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PARAGRAPH	TITLE	SHEET 1 OF 1			DRAWING NUMBER
4.4.2.1	Primer, Percussion				8866712
					NEXT HIGHER ASSEMBLY
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	PARAGRAPH REFERENCE INSPECTION METHOD
<u>Critical</u>	None defined				
<u>Major A</u> 101	Sensitivity	600	0-1	3.4	4.5.1 8802117 9202427 8815992 8816003 8827934 9202530
102	Duds	300	0-1	3.2	4.5.1.1
103	Action Time	50	0.25%	3.5	4.5.2 (9202583)
<u>Minor</u> 201	Diameter, max.		0.65%	3.2	Gage
202	Height		0.65%	3.2	Gage
203	Evidence of poor workmanship		0.65%	3.6	Visual
NOTES:					

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4.4.3 Testing - Testing is described in the First Article and Quality Conformance Tables.

4.4.4 Inspection Equipment - The inspection equipment required to perform the examinations and tests prescribed herein is described in the Paragraph Reference/Inspection Method column in the tables starting with Paragraph 4.4.2.1. The contractor shall submit for approval inspection equipment designs in accordance with the terms of the contract. See Section 6 of MIL-A-48078 and 6.3 herein.

4.5 Test Methods and Procedures -

4.5.1 Sensitivity - The primer shall be pressed into the adapter using a fifty (50) pound static load. A $3.95 \pm .02$ ounce steel ball shall be dropped on the firing pin. The test shall be performed in accordance with the complete rundown method described in TECF-700-700, Volume III. Observation shall be made for compliance with the applicable requirement.

4.5.1.1 Duds - The primer shall be pressed into the adapter using a fifty (50) pound static load. The primer shall be tested by dropping a steel ball weighing $3.05 \pm .02$ ounces on the firing pin of the test fixture from a height of 15 inches. Observation shall be made for functioning.

4.5.2 Action Time - The primer shall be inserted into an approved adapter or the adapter specified on Dwg. 9202583 and fired for action time using the approved adapter or the specified adapter. Action time shall be recorded and in compliance with the applicable requirement.

4.5.3 Check Test for Deterioration - If the total elapsed time between the original acceptance of any primer lot and the assembly of that lot into the ammunition component for which it is to be issued exceeds two (2) years, or if the primers have been subjected to adverse conditions for any length of time since previous tests, the primer lot shall be subjected to and shall satisfactorily pass the sensitivity test specified in 4.4.2.1. The test shall be conducted at Government expense without cost to the contractor loading the primer or the contractor assembling the primer into the item with which it is issued, and shall not constitute a basis for rejection against either contractor except where deterioration has occurred as a direct result of carelessness in handling or storage permitted by either contractor while the lot is under such contractor's jurisdiction.

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5. PREPARATION FOR DELIVERY5.1 Preservation and Packaging -5.1.1 Level C - See 5.2.1.5.2 Packing -

5.2.1 Level C - The primers shall be packed in standard commercial containers so as to insure acceptance with Code of Federal Regulations, Title 49, Parts 100-199. The primers shall be packed and spaced in such a manner that barrier of some material is present between the crown of one primer and the base of another primer in order to resist mass detonation and shield the primers from contact with stray electrical current, flame and shock.

5.3 Marking - Marking shall be in accordance with Code of Federal Regulations, Title 49, Parts 100-199.

5.4 Shipping - When components from more than one lot are shipped as a carload, each lot shall be kept separate and the division between lots clearly indicated to prevent mixing of the lots in transit.

6. NOTES

6.1 Intended Use - The component covered by this specification is intended for use in 40MM ammunition.

6.2 Ordering Data - See MIL-A-48078.

6.3 Submission of Inspection Equipment Designs for Approval - See MIL-A-48078. Submit equipment designs as required to Commander, Attn: SARPA-QA-T, Picatinny Arsenal, Dover, N.J. 07801.

6.4 Submission of Results of Contractor-conducted Examinations and Tests - Data shall be submitted in accordance with data item DI-R-1721 on the DD Form 1423 for the contract.

6.5 Submission of Test Data - In addition to the normal distribution of records, when the primer is procured by the US Army Armament Command, one (1) copy of all ballistic data and ammunition data cards shall be forwarded to Commander, Picatinny Arsenal, Attn: SARPA-QA-A-S.

Custodian:
Army-PA

Preparing Activity:
Army-PA

Project Number: 1390-A116

