

MIL-B-18876A(OS)

7 June 1976
 Superseding
 MIL-B-18876 (NORD)
 30 June 1955

MILITARY SPECIFICATION

BOX, AMMUNITION, 40 MM MARK 1 MOD 0

This specification is for use by the Naval Sea Systems Command (OS), Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification establishes the requirements for the 40 MM Ammunition Box MK 1 Mod 0.

1.2 Classification. Only one general type of ammunition box is covered by this specification.

2. APPLICABLE DOCUMENTS

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

SPECIFICATIONS

FEDERAL

MM-A-121 Adhesive, Bonding Vulcanized Synthetic Rubber to Steel

QQ-Z-325 Zinc Coating, Electrodeposited, Requirements for

MILITARY

MIL-P-16594 Projectiles, Bombs, Rockets and Guided Missile Warheads, Inert Parts, Manufacture of

MIL-C-17057 Felt Sheet, Wool, Compound Impregnated, Chock Padding

STANDARDS

MILITARY

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

FSC 8140

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MIL-STD-129 Marking for Shipping and Storage

MIL-STD-130 Identification Marking of U.S. Military Property

DRAWINGS

Naval Sea Systems Command (Code Ident 10001)

LD 165000 40 MM Ammunition Box MK 1, Mod 0
423999 40 MM Ammunition Box MK 1, Mod 0

(Copies of specifications, standards, drawings and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

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

ASTM A-386 Zinc Coating (Hot Dip) on Assembled Steel Products
Specification for

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103).

3. REQUIREMENTS

* 3.1 First article. Unless otherwise specified in the contract or order, first article ammunition boxes shall be manufactured using the methods and procedures proposed for the production. The first article(s) will be inspected as specified in section 4 herein and is for the purpose of determining that, prior to starting production, the contractor's production methods are capable of yielding items that comply with the technical requirements of the contract.

3.2 Material. All materials, used in manufacture of ammunition boxes, shall conform to the specifications listed herein and specifications referred to on applicable drawings, unless specific approval in writing, covering departure therefrom, has been obtained from the Naval Sea Systems Command prior to manufacture or use. When alternate materials or methods of manufacture are specified, the bidder's selections shall be stated clearly in the proposal.

3.3 Conformance to drawings. All dimensions shall be accurate within the tolerances specified on drawing LD 165000 or in the applicable specifications unless otherwise stated in the contract, order or requisition.

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3.4 Surface. All parts shall be finished as prescribed on applicable drawings and specifications, unless otherwise stated in the contract, order, or requisition.

3.5 Interchangeability. All parts shall be capable of interchangeable assembly without interferences, binding, or misalignment. All parts comprising a permanently joined unit (as by welding) and the unit thus formed shall be capable of interchangeable joining in the assembled unit and assembly.

3.6 Welding. All surfaces to be welded shall be thoroughly cleaned and shall be free from grease, paint, or other foreign substances. All welding and welding machines shall qualify (4.4.1) and conform to the requirements and tests of this specification, applicable drawings and in accordance with MIL-P-16594.

3.7 Stacking. The ammunition boxes shall be constructed to stack either vertically or horizontally. When stacked vertically, the box bottom shall engage inside upper reinforcing band of the adjacent box. When stacked horizontally, the stacking projection in the middle of the ammunition box shall be on top and shall engage the stacking pocket on the bottom side of the adjacent box. The boxes shall stack readily without forcing or binding. (see 4.5.1.4)

3.8 Gasket and gasket bearing surface. The gasket shall be cemented in the cover with an adhesive cement in accordance with MMM-A-121 and the exposed bearing surface shall be coated with talc or graphite to prevent sticking to the bearing surface of the box. The gasket bearing surface of the box shall be formed, turned, or otherwise machined to produce a smooth continuous surface which will not injure the gasket during closing or opening of the ammunition box and which is perpendicular to the axis of the box within tolerances specified on applicable drawings. The rim shall not vary more than 0.03 inches from a plane surface, as determined by a feeler gage with a surface plate resting on gasket bearing surface, to ensure proper seating of the gasket. Gasket shall provide proper sealing at closure of cover, 3.11.

3.9 Cover pads. Cover pads shall be made of felt sheet, wool, compound impregnated in accordance with MIL-C-17057. Cement, for securing pads to cover strips, shall be in accordance with MMM-A-121.

3.10 Plating. Completed ammunition boxes and covers shall be galvanized all over, inside and outside, as specified on applicable drawings. Galvanizing shall be accomplished by the hot-dip process in accordance with ASTM A-386. All parts of cover not permanently joined may be zinc electro-deposited in accordance with QQ-Z-325, Type II, Class 2.

3.11 Airtightness. Boxes shall be capable of withstanding internal air pressure test of 4.5.1.2 without evidence of any structural weakness or permanent deformation.

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3.12 Identification marking. Identification marking shall be in accordance with MIL-STD-130 and the applicable drawings. Stamped or embossed lettering on the cover and body of the box shall be legible after box has been completely finished.

- * 3.13 Workmanship. Workmanship shall be that required by best commercial practices consistent with quantity production of analogous parts, maintaining the dimensions, finishes, and tolerances specified herein and on the applicable drawings and specifications. All components shall be sound and free from defects which would deleteriously affect the strength and performance of the box, and all joints and seams shall be tight and sound. The standards or workmanship exhibited in the first article(s), subject to any qualification stated in the government's notice of approval, shall be determinative of the requirements of the contract relative to workmanship insofar as not specifically covered by applicable specifications.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the supplier 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 assure supplies and services conform to prescribed requirements.

- * 4.2 Classification of inspection. The examination and testing of the box shall be classified as follows:

- a. First article inspection. First article inspection consists of examinations and tests performed on samples which are representative of the production item after the award of a contract to determine that the production item conforms to the requirements of this specification. (See 3.1, 4.3 and 4.3.1).

- b. Quality conformance inspection. Quality conformance inspection consists of production control tests and examinations performed on individual products or lots to determine conformance of the products or lots with the requirements set forth in this specification (see 4.4 through 4.4.3).

- * 4.3 First article inspection. The first article inspection of the boxes shall consist of examinations and tests for all of the requirements of this specification. First article tests shall be accomplished on samples selected as specified in 4.3.1 which are representative of the production of the item after the award of the contract to determine that the production meets the requirements of this specification. These tests are detailed in 4.5.1. Acceptance shall be based on no defects in the samples. Failure of the sample to comply with these requirements will result in the rejection of the boxes.

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- * 4.3.1 First article samples. Unless otherwise specified, as soon as practicable after the award of the contract or order, the first two boxes manufactured by the methods and equipment proposed for the production of the boxes shall be submitted for first article tests to determine compliance with the requirements of the contract, specifications and drawings. Further production of the boxes by the supplier prior to approval by the procuring activity or the completion of the tests on the first article samples shall be at the supplier's risk. First article samples accepted will be applied as part of the quantity specified by the contract or order, but shall not be used on any equipment manufactured for the Government. The first article samples shall be forwarded to the Commanding Officer, US Naval Weapons Station, Earle, Colts Neck, NJ 07722, Attention: Director, Naval Weapons Handling Laboratory. The first article sample shall be plainly identified by securely attached tags marked with the following information:

Samples submitted by (name) (date) for first article inspection in accordance with the requirements of MIL-B-18876(OS).

- * 4.3.2 Upon completion of the first article inspection, all the applicable inspection reports and, when applicable, recommendations and comments pertinent for use in monitoring production will be forwarded to the Government quality control representative.
- * 4.4 Quality conformance inspection. The quality conformance inspection shall consist of the following:
 - a. Qualification of weld process or machine (4.4.1)
 - b. Production control tests (4.4.3)
 - c. Visual and dimensional examination (4.4.4, 4.4.4.1)
 - d. Examination for preparation for delivery (4.4.4, 4.4.4.2)
- * 4.4.1 Qualification of weld process or machine. The weld process or machine shall be qualified as outlined in 3.6.
- * 4.4.2 Sampling for production control tests.
 - 4.4.2.1 Lot size. Each lot shall consist of units or product manufactured under essentially the same conditions.
 - * 4.4.2.2 Production control samples. Sampling for production control shall be five butt welds taken at the beginning and end of each shift and whenever the electrodes are changed or dressed, or when any changes are made in the control of the machine. Additional samples may be taken by the supplier during the shift to insure against rejection of production boxes.
- * 4.4.3 Production control tests. Production control tests shall be accomplished on samples selected as specified in 4.4.2.2 which are representative of the production to determine that the production meets the requirements of this specification. These tests are detailed in 4.5.1. Acceptance shall be based on no defects in the sample. Failure of the sample to comply with these requirements will result in the rejection of the lot.

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- * 4.4.4 Examinations. The examinations specified in 4.4.4.1 and 4.4.4.2 shall be accomplished on each box to ensure that the box meets the requirements of 3.2, 3.3 and 3.13.
- * 4.4.4.1 Visual and dimensional examination. Each box shall be visually inspected for completeness of manufacture, freedom from defects, proper identification, workmanship, and dimension. Any nonconformance shall be cause for rejection.
- * 4.4.4.2 Preparation for delivery. Each fully prepared bundle of boxes shall be examined to determine conformance to Section 5 of this specification. Any nonconformance shall be cause for rejection.
- * 4.4.4.3 Sampling. Sampling plans and procedures when applicable in the determination of the acceptability of the lots or products procured by the Government, unless otherwise specified shall conform to MIL-STD-105. The term "lot" shall mean "inspection lot." Unless otherwise specified, the number of units or product in the inspection lot may vary and differ from the quantity designated in the contract or order as a lot for production, shipment, or other purpose.

4.5 Test methods.4.5.1 First article tests.

- * 4.5.1.1 Preparation for testing. Each cover with its gasket shall be assembled with a master box or its equivalent and each box shall be assembled with a master cover and gasket or their equivalent. The master box and master cover shall be provided with means for applying air under pressure to the cover or box being tested.
- * 4.5.1.2 Airtightness. All ammunition boxes in each lot shall be airtight under two pounds per square inch internal air pressure. While under this pressure, the test boxes shall be submerged so that the surface is 1 to 2 inches beneath the surface of the water containing one of the following wetting agents; Tween 20, Tween 40, Renex, Duponal, alkylsulfonate, used at a concentration of one or two percent. The box shall be thoroughly examined for leaks. Formation of air bubbles shall be sufficient evidence of leaks serious enough to reject the box or the cover.
- * 4.5.1.3 Drop test. Five of the boxes which have complied with the requirements of 4.5.1.2 shall then be assembled with their own covers and loaded with dummy ammunition or the equivalent to simulate the service load. Each of these inert loaded boxes shall be dropped a distance of three feet, four times, to a concrete or rigid steel surface. The boxes shall be oriented to land on their top, bottom, corner and side edges. Upon completion of the above drop tests, airtightness and serviceability shall be assured by repeating the tests outlined in 4.5.1.2. Failure of any sample unit shall be cause for rejection of the lot represented.

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4.5.1.4 Stacking. Test for determining the fulfillment of the stacking requirements of 3.7 shall be made with the ammunition boxes loaded with dummy ammunition or equivalent.

5. PACKAGING

* 5.1 Packaging and packing.

5.1.1 Level C. The boxes shall be packed to afford protection against damage during direct shipment from the supply source to the first receiving activity. The packs shall comply with the Uniform Freight Classification Rules or other common carrier regulations applicable to the mode of transportation. The box shall have the cover attached, as not to excessively compress the Gasket. The box requires no overpack.

5.2 Marking.

5.2.1 Normal marking. In addition to any special marking required by the contract or order, marking for shipment shall be in accordance with MIL-STD-129.

5.3 Shipping information. The boxes shall be properly loaded aboard carriers to assure adequate protection from damage and should comply to common carriers regulations applicable to the mode of transportation.

6. NOTES AND CONCLUDING MATERIAL

6.1 Intended use. The ammunition box covered by this specification is designed to protect the contents during handling, shipping, and storage.

* 6.2 Ordering data. DD Form 1423 and other related procurement documents should specify the following:

* 6.2.1 Procurement requirements.

- a. Title, number and date of this specification
- b. Quantity
- c. MARK and MOD designation of box being purchased
- d. Whether first article inspection is waived (see 4.3.1)
- e. Exceptions to this specification
- f. Applicable drawings and other documents
- g. Selection of applicable level of packing (see 5.1)

* 6.2.2 Contract data requirements. The item of deliverable data required by this specification is cited in the following paragraph:

<u>Paragraph</u>	<u>Data requirement</u>	<u>Applicable DID</u>
4.4	Report, Test	DI-T-2072

The DID (Data Item Description/DD Form 1664) for the above data requirement is in the DOD Authorized data list (TD-3). Such data will be delivered as identified on the above cited DID when specified on DD Form 1423 (Contract Data Requirement Lists) and incorporated into applicable contracts.

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6.3 Information with bids. The contractor shall include a statement that there are no exceptions proposed to any specification requirement or a statement in detail, with illustrative drawings if necessary, of all proposed exceptions to the specification requirements.

6.4 The margins of this specification are marked with an asterick to indicate where changes (additions, modifications, corrections, deletions) from the previous issue 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 issue.

NOTE: Information or changes related to this document should be directed to the technical field activity, Naval Weapons Station Earle, Naval Weapons Handling Laboratory, Code 8021, Colts Neck, NJ 07722, with a copy to Naval Ordnance Station, Code 611, Indian Head, MD 20640.

CUSTODIAN:

NAVY - OS

PREPARING ACTIVITY:

NAVY - OS

Project No. 8140-N146

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL		OMB Approval No 22-R255
<p>INSTRUCTIONS The purpose of this form is to solicit beneficial comments which will help achieve procurement of suitable products at reasonable cost and minimum delay, or will otherwise enhance use of the document. DoD contractors, government activities, or manufacturers/vendors who are prospective suppliers of the product are invited to submit comments to the government. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements. Attach any pertinent data which may be of use in improving this document. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity.</p>		
DOCUMENT IDENTIFIER AND TITLE MIL-B-18876A(OS), Box, Ammunition, 40 MM MK 1 Mod 0		
NAME OF ORGANIZATION AND ADDRESS	CONTRACT NUMBER	
	MATERIAL PROCURED UNDER A <input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT	
<p>1 HAS ANY PART OF THE DOCUMENT CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? A GIVE PARAGRAPH NUMBER AND WORDING</p> <p>B RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES</p>		
2 COMMENTS ON ANY DOCUMENT REQUIREMENT CONSIDERED TOO RIGID		
<p>3 IS THE DOCUMENT RESTRICTIVE? <input type="checkbox"/> YES <input type="checkbox"/> NO (If "Yes", in what way?)</p>		
4 REMARKS		
SUBMITTED BY (Printed or typed name and address - Optional)		TELEPHONE NO.
		DATE

DD FORM 1426
1 JAN 72

REPLACES EDITION OF 1 JAN 66 WHICH MAY BE USED

S/N 0102-014-1802

NOTICE OF
VALIDATION

INCH-POUND

MIL-B-18876A(OS)
NOTICE 1
30 SEPTEMBER 1988

MILITARY SPECIFICATION

BOX, AMMUNITION, 40 MM MK 1 MOD 0

MIL-B-18876A(OS) dated 07 JUN.1976, all and contractual references one tier below have been reviewed and determined valid for use in new acquisitions providing the following changes are made:

Page 1, Paragraph 2.1, delete " QQ-Z-325 " and its title and substitute "ASTM B633 Zinc on Iron and Steel, Electrodeposited Coating of".

Page 3, Paragraph 3.10, line 5, delete " QQ-Z-325 Type II,Class 2." and substitute "ASTM B633".

Page 1, Paragraph 2.1, delete " MIL-C-17057 " and its title and substitute " MIL-F-17057 Felt Sheet, Wool, Compound Impregnated, Chock Padding "

Page 3, Paragraph 3.9, line 2, delete " MIL-C-17057 " and substitute " MIL-F-17057".

Preparing Activity:
Navy - OS

AMSC N/A

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