MIL-D-6055D
29 December 1987
SUPERSEDING
MIL-D-6055C
31 Dec 1970

MILITARY SPECIFICATION

DRUM, METAL REUSABLE, SHIPPING AND STORAGE (CAP. FROM 88 TO 510 CUBIC INCHES)

This specification is approved for use by all Departments and Agencies of the Department of Defense

1. SCOPE

1.1 Scope. This specification covers the requirements for new reusable cylindrical drums consisting of body, cover, gasket, and closing device(s) to be used as interior and exterior shipping containers.

1.2 Classification. Drums, metal, shipping, and storage, shall be of the following types, classes, and sizes as specified (see MS24347 and 6.2).

Type I - Formed Drum
Type II - Drawn Drum
Class A - Aluminum Alloy Drum
Class S - Steel Drum
Style D - Dome Lid
Style R - Recessed Lid
Size No. 1 - 88 Cubic Inch Capacity
Size No. 2 - 167 Cubic Inch Capacity
Size No. 3 - 149 Cubic Inch Capacity
Size No. 4 - 224 Cubic Inch Capacity
Size No. 5 - 282 Cubic Inch Capacity
Size No. 6 - 340 Cubic Inch Capacity
Size No. 7 - 425 Cubic Inch Capacity
Size No. 8 - 510 Cubic Inch Capacity

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Air Force Packaging Evaluation Activity, HQ AFLC/DSTZT, Wright-Patterson Air Force Base, OH 45433 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 8110

2. REFERENCED DOCUMENTS

2.1 Government documents.

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

SPECIFICATIONS

Federal

TT-P-1757 - Primer Coating, Zinc Chromate, Low Moisture Sensitivity
TT-E-485 - Enamel; Semi-Gloss, Rust-Inhibiting
PPP-B-636 - Box, Fiberboard
PPP-C-1120 - Cushioning Material, Uncompressed Bound Fiber for Packaging
PPP-C-1752 - Cushioning Material, Packaging, (Unicellular Polyethylene Foam, Flexible)

Military

MIL-P-116 - Preservation, Methods of
MIL-R-6855 - Synthetic Rubber Sheet, Strips, Molded or Extruded Shapes
MIL-A-8625 - Anodic Coatings, For Aluminum and Aluminum Alloys
MIL-I-26860 - Indicator, Humidity, Plug, Color Change

STANDARDS

Federal

FED STD-101 - Test Procedures for Packaging Materials
FED-STD-595 - Colors

Military

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129 - Marking for Shipment and Storage
MIL-STD-130 - Identification Marking of US Military Property
MIL-STD-147 - Palletized Unit Loads
MS24347 - Drum, Metal, Reusable Shipping and Storage

(Copies of specifications, standards, handbooks, drawings, publications, and other Government documents required by contractors in

connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

2.2 Other publications. The following document(s) form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted shall be those listed in the issue of the DODISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS shall be the issue of the nongovernment documents which is current on the date of the solicitation.

American Society for Testing and Materials (DOD adopted)

ASTM A109	- Steel, Strip, Carbon, Cold Rolled, Spec. for
ASTM A366	- Steel, Sheet, Carbon, Cold Rolled, Commercial Quality, Spec. for
ASTM D3951	- Commercial Packaging, Practice for
ASTM B117	- Salt Spray (Fog) Testing, Standard for
ASTM D610	- Evaluating Degree of Rusting on Painted Steel Surfaces

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

(Nongovernment standards and other publications are normally available from the organizations which prepare or which distribute the documents. These documents also may be available in or through libraries or other informational service.)

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein (except for associated detail specifications, specification sheets or MS standards), the text of this specification shall take precedence. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 MS sheets. The individual item requirements shall be as specified herein and in accordance with the applicable MS sheet. In the event of any conflict between the requirements of this specification and the MS sheet, the latter shall govern.

3.2 First article. When specified in the contract or purchase order a sample shall be subjected to first article inspection (see 4.4, 6.2, and 6.3).

3.3 Material. The material shall be as specified herein. However, when a specific material is not designated, a material shall be used which will enable the drums to meet the performance requirements of this specification. Acceptance or approval of any constituent material shall not be construed as a guarantee of the acceptance of the finished product.

3.3.1 Class A drums. Drums and covers shall be constructed of an aluminum or aluminum alloy to satisfy the test, surface finish, and serviceability of this specification. The closing device shall be fabricated or coated with a metallic material compatible with respect to its position in the galvanic series, as the aluminum used in the drum and cover (see 4.5).

3.3.2 Class S drums. Drums and covers shall be constructed of steel conforming to the requirements of ASTM A366. Strips for lugs and lofting rings shall conform to ASTM A109, and be constructed of cold rolled strip steel, quarter-hard No. 3 temper, edge condition No. 4 round edge rolled and free from burrs and sharp edges. The closing device shall be fabricated from material which will exclude any galvanic corrosion between components of the drum and shall be free from burrs and sharp edges (see 4.5).

3.3.3 Gaskets. Gaskets shall be formed from synthetic rubber conforming to MIL-R-6855, Class II, grade 60. After forming, the gaskets shall lie naturally with the flat surface parallel to the horizontal plane (see 4.6.3).

3.4 Design and construction. The drum and components shall be constructed in accordance with MS24347, except that metal thicknesses shown in the drawing shall be interpreted as specified minimal. The dimensions of each drum design and effective thicknesses of its components shall be such that the drum meets all the requirements of 4.5 and 4.6.2 of this specification.

3.4.1 Cover. The drum cover may be either recessed or dome style. Unless otherwise specified by the procuring activity, the recessed drum cover will be furnished in accordance with MS24347. Evaluate in accordance with 4.6.2 and 4.6.4.

3.4.2 Locking ring seal and closure device. The closure device shall consist of a locking ring, a bolt and nut conforming to MS24347, and a fixture to place a wire and lead tamperproof seal that cannot be removed without destroying the seal (see 4.6.1 and 4.6.4.1). The bolt and lugs shall not be distorted when the closure device is subjected to the required torque (see 4.5.1). Other types of closing devices may be used providing they are specified by the procuring agency and meet the other test requirements in this specification (see 4.6.3).

3.4.3 Relative humidity indicator plug. When specified by the procuring activity, the drum body shall be provided with a humidity indicator plug conforming to MIL-I-26860, type II (see 6.2). The provision shall allow for a hermetic seal between the drum body and the indicator plug (see 4.6.4.1).

3.5 Performance.

3.5.1 Drum leakage. Drums shall show no leaks when tested in accordance with first article and quality conformance testing as defined by paragraphs 4.5.2 and 4.6.

3.5.2 Rough handling. Drums must be able to withstand all tests in 4.5.3.

3.5.3 Cover fit. The drum shall show no sign of leakage after removing and replacing the cover on the loaded drum, which was subjected to the rough handling test (4.5.3) and the cover fit test (4.5.4).

3.6 Finish. See 4.5.8 and 4.6.4.1.

3.6.1 Class A drums. Aluminum alloy components of the class A drums shall be anodized on all surfaces in accordance with MIL-A-8625. All exterior aluminum surfaces of the drums shall be coated with not less than one dry film coat of zinc chromate primer conforming to TT-P-1757 of thickness between .0006 and .0009 inches, and .0005 inches thick of enamel conforming to TT-E-485, color number 24087, FED-STD-595. The closure device, if made from steel, shall be finished as specified in 3.6.2 for class S drums.

3.6.2 Class S drums (also steel closure device of class A drums). Unless otherwise specified, (see 6.2) all interior and exterior surface finishes of the drum and component parts, except the closing bolt and gasket, shall be not less than 1.0 mil thick and conform to TT-E-485 or be the standard corrosion inhibiting baking enamel used in the production of steel drums. The color and finish shall be in accordance with number 24087 of FED-STD-595.

3.6.3 Flexibility. The protective coatings of all class drums shall not crack when tested in accordance with 4.5.5 and 4.6.4.1.

3.6.4 Salt spray. See 4.5.8.

3.6.4.1 Class A drum. All specimens shall be examined after 192 hours of salt spray and shall show no wrinkling or blistering of enamel. The sample exhibiting the greatest degree of softening shall then be air dried for a period of 24 hours. The coating of this sample shall be indistinguishable with regard to hardness and adhesion of enamel, from samples prepared by the same process but not subjected to the salt spray test. For the remaining samples, the primer shall exhibit no blistering or lifting of the coating or substrate corrosion after completion of the 1000 hours of salt spray testing.

3.6.4.2 Class S drum. Results of the salt spray test examination after 192 hours shall show no rust creepage, blistering, undercutting, or loss of adhesion of the paint beyond 1/8 inch of the scribe mark. All other surfaces of the test specimens shall show no more than a trace of film failure, (Rust Grade 9 of ASTM D610), with none larger than 1 mm (3/64 inch) in diameter.

3.7 Marking. The drum bodies shall be marked in accordance with MIL-STD-130 and shall be marked, stamped, stenciled, or painted with waterproof ink or paint in .3750 inch letters as follows:

REUSABLE DRUM
DO NOT DESTROY

When the drum is assembled, the marking shall appear approximately three quarters of an inch below the lower edge of the locking ring. The color of the ink or paint shall conform to color No. 23538 of FED-STD-595. The cover and the bottom of the drum shall be embossed in accordance with figure 1 (see 4.6.4.1).

3.8 Workmanship. Workmanship shall be of such quality that the finished drum shall have no sharp burrs or rough surfaces. The metal and forming of metal shall be free of defects which may affect the durability, strength, or serviceability of the drum. The drum, including all components, shall be manufactured in such a manner that when tested in accordance with tests specified herein, there shall be no dents or deformation of the lower portion of the drum exceeding .50 inch in depth; no separation of the bottom or side seams of formed drums; or dents in the top, bottom, or sides of the drawn or formed drums. Paint shall be applied in a uniform manner and shall be of specified thickness. The locking ring and its required accessories shall also have no denting or deformation that hinders its performance (see 4.6.2 and 4.6.4).

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 inspection requirements 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 the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

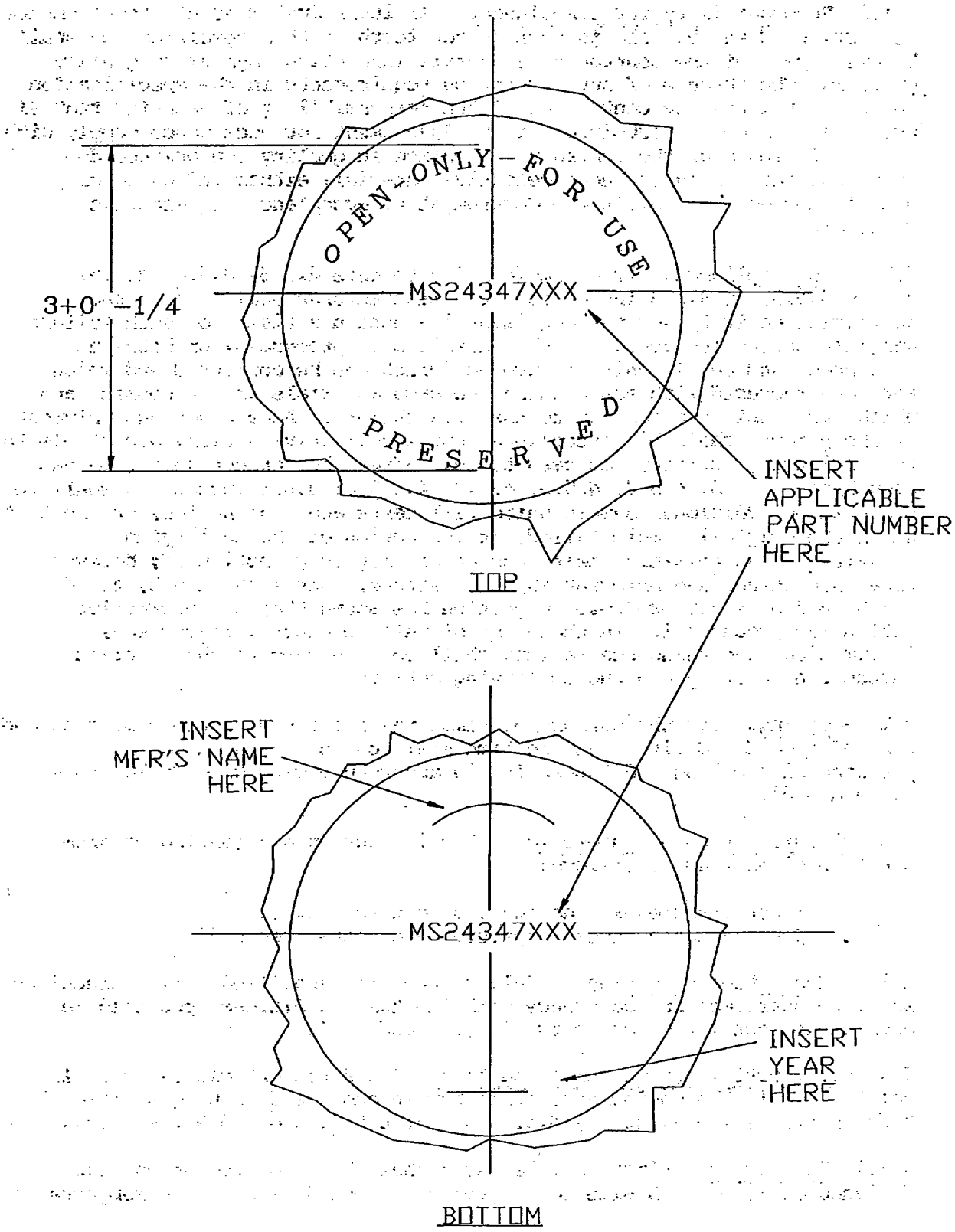

FIGURE 1. DRUM-COVER AND BOTTOM MARKINGS

4.1.1 Responsibility for compliance. All items must 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 assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4.1.2 Noncompliance. If a sample fails to pass 4.5.3, 4.5.4, 4.5.5, 4.5.8, 4.5.9, or 4.6.3 inspection, the manufacturer shall notify the qualifying activity and the cognizant inspection activity of such failure and take corrective action on the materials or processes, or both, as warranted, and on all units of product which can be corrected and which were manufactured with essentially the same materials and processes, and which are considered subject to the same failure. Acceptance and shipment of the product shall be discontinued until corrective action, acceptable to the qualifying activity has been taken. After the corrective action has been taken, 4.5.3, 4.5.4, 4.5.5, 4.5.8, 4.5.9 or 4.6.3 inspection shall be repeated on additional sample units (all tests and examination, or the test which the original sample failed, at the option of the qualifying activity). The remaining test inspections may be reinstituted; however, final acceptance and shipment shall be withheld until the 4.5.3, 4.5.4, 4.5.5, 4.5.8, 4.5.9 or 4.6.3 inspection has shown that the corrective action was successful. In the event of failure after reinspection, information concerning the failure shall be furnished to the cognizant inspection activity and the qualifying activity.

4.2 Sampling. For the purpose of sampling, all drums of the same size and type offered for delivery at one time shall be considered a lot for purposes of sampling and inspection in accordance with MIL-STD-105 (see 3.2 and 4.6).

4.3 Classification of inspection. The inspection and testing of drums shall be classified as follows:

a. First article examination and test (see 4.4).
b. Quality conformance inspection and tests (see 4.6).

4.3.1 Inspection conditions. Unless otherwise specified, all inspections shall be performed in accordance with the test conditions specified in applicable test method standard (see 3.5 and 4.5).

4.4 First article examination and test. The first article tests shall consist of all the conformance tests herein and the following additional test in 4.5.1, 4.5.2, 4.5.3, 4.5.4, 4.5.5, 4.5.8, and 4.5.9 (see 3.3).

4.4.1 Test drums. First article tests shall be conducted using five finished drums of each size to be produced. One drum shall be subjected to

the hydraulic pressure test described in 4.5.1. Each of the four remaining drums shall be subjected to the air leak test in 4.5.2, the rough handling test in 4.5.3, and the cover fit test in 4.5.4 (see 3.3).

4.4.2 Test specimens. Two specimen test panels shall be prepared and tested for flexibility as specified in 4.5.5.

4.4.3 Exceptions to first article. First article inspection may be waived on reprocurement contracts where the supplier has shown capability to manufacture the item(s) on previous contracts. The supplier must furnish a certified statement to the effect that he has not changed materials or manufacturing processes to the procuring activity. The first article test requirements may be invoked at any time by the procuring activity against the supplier when deficiency data reveals/indicates that items received are not requisite quality.

4.5 Test methods. See 3.5 for requirements.

4.5.1 Hydraulic pressure test. This test shall be performed in accordance with method 5009.2 of FED-STD-101, and using the Hydraulic Pressure Technique, except that for the specimen, the intended or simulated contents shall be omitted. The cover of ring closure drums shall be sealed on the drum by applying a torque of 4 plus or minus .50 foot pounds to the closure bolt, tapping the locking ring repeatedly during application of the abcve torque. Where use is made of a device which encircles the locking ring and applies pressure uniformly about the circumference of the ring, the closure shall be effected by tightening of the bolt and nut after uniform pressure is applied at all points about the ring. Evidence of noncompliance with 3.5.1 shall be cause for rejection.

4.5.2 Air leak test. Each of the four drums to be tested shall have an air connection installed, and for the testing described in paragraph 4.5.3, shall be loaded with a dummy load, braced and cushioned in such a manner as to prevent damage to the drum by shifting of the dummy load. The net weight of the load, including bracing and cushioning material, shall be as listed in Table I. The dummy test load shall be constructed in accordance with 4.5.6. After loading, the drum shall be closed as specified in 4.5.1. Air shall then be forced into the drum until the gate pressure is 4 psi. Without reducing the pressure, the drum shall be tested in water in such a manner that the area being tested is covered by one inch or more of water. The drum shall then be observed for leaks as evidenced by the presence of air bubbles. Evidence of air bubbles caused by leaking air will be cause for rejection (see 3.5.1).

TABLE I - Load

Size No.	Net load-bracing and cushioning included (lbs)
1	5
2	8
3	8
4	8
5	8
6	8
7	8
8	8

4.5.3 Rough handling test. The drums which were subjected to the loaded drum air leak test shall be vertically quartered by marking with a chalk or crayon. Each drum shall then be dropped 8 times in a free fall manner from 30 inches so that it strikes a concrete or steel floor where the quartering lines coincide with the circumference of the top and bottom so that, upon impact, the center of gravity of the container is directly above the point of impact. After each of the 8 drops, the drum shall be allowed to come to rest of its own volition. After the final drop, the drum shall be checked for leaks in accordance with 4.5.2 (see 3.5).

4.5.3.1 Test load. The test load shall consist of wooden disks; metal disks, or a combination of each, having the net weight as specified in Table I including bracing and cushioning material. The load shall be rigidly assembled and evenly positioned in the test container using cushioning material conforming to either PPP-C-1120, type IV, or PPP-C-1752, two pound density. The dimensions of the test load for the load weight specified shall be such that the cushioning material used will not experience excessive compression set after repeated impacting. Use of other cushioning materials must be approved by the procuring activity.

4.5.4 Cover fit. After the tests specified in 4.5.3 have been completed, the drums shall be opened, reclosed, and retested in accordance with 4.5.2 to determine compliance with 3.5.3.

4.5.5 Flexibility of coating. Two test specimens shall be prepared from the same material as used for the production drum bodies. The test panels shall be 3 plus or minus .25 inch in width by 5 plus or minus .25 inch in length. The panels shall be cleaned and dried and the protective coating applied as specified in 3.6.1, 3.6.2 and cured. If curing is accomplished by heat, the panels shall be cooled to the test temperature of 80 plus or minus 10 degrees Fahrenheit (F). The cured panels shall be placed over a .250 inch mandrel, held firmly by suitable supports at a point equally distant from the top and bottom edges of the panel, and rapidly (about 1 second) bent double. The panels shall be maintained at 80 plus or minus 10 degrees F during the bending operation. A 7-power lens

shall be used to examine the outer surface of the bent panels for evidence of cracking of the protective coating. If any cracks are detected, three additional panels shall be tested as above. If these panels also show cracks in the coating, the enamel shall be discarded and a new batch selected for testing.

4.5.6 Test drums. Drums used in the performance of the first article tests shall not be offered to the Government unless reworked to bring to a new condition and inspected in accordance with 4.6.2 (see 3.2.2, 3.4, and 4.6.4.1).

4.5.7 Rejection and retest. Drums which have been rejected may be reworked and submitted or replaced for acceptance. Before resubmitting, full particulars concerning previous rejection and the action taken to correct the defects found in the originals shall be furnished the inspector in writing. Leaks and other defects to be repaired shall be by methods used in construction of containers, not by soldering (see 3.2.2, 3.4, and 4.6.4.1).

4.5.8 Salt spray test.

4.5.8.1 Class A drums. Three specimens measuring 4 X 6 inches shall be finished front and back using the identical finishing process used in finishing the end production drums. This test shall be performed in accordance with ASTM B117. Carefully score the samples through to the anodized layer with two intersecting lines near the middle of the sample. Place all samples in the salt spray for 192 hours, then examine for blistering. The most severe example of blistering shall be let to air dry, the remaining samples then returned to continue the salt spray until 1000 hours have been achieved and examined in accordance with 3.6.4.1.

4.5.8.2 Class S drums. Three specimens measuring 4 x 6 inches shall be finished front and back using the identical finishing process used in finishing the end item drums. These samples shall be air dried a minimum of 96 hours then scored front and back using a sharp instrument which will bevel the finish coat 30 degrees each side of the score lines, through to bare metal. The scoreline shall be continuous for a total of 4 inches. These specimens shall be subjected to salt spray tests in accordance with ASTM B117 utilizing a 5 percent salt solution at 120 degrees F for a minimum exposure time of 192 hours. Results of the test shall be evaluated for conformity with the requirements of paragraph 3.6.4.2.

4.5.9 For Class S Drums. For the steel conforming to ASTM A366, test the mechanical properties listed in section 7 of the standard and have the chemical composition specified. For the steel conforming to ASTM A109 test according to section 7 of its applicable standard (see 3.3.2).

4.6 Quality conformance inspection.

4.6.1 Sampling for inspection. A random sample of drums shall be selected from each lot offered to the Government in accordance with

MIL-STD-105 at inspection level S-4. When MIL-STD-105 specifies an action by the Government, it shall at the option of the Government be performed either by the Government or by the contractor under supervision of the Government inspectors. Samples selected shall be subjected to the visual and dimensional inspection described in 4.6.2 (see 3.2).

4.6.2 Visual and dimensional examination. Each of the sample drums selected in accordance with 4.6.1 shall be visually and dimensionally inspected to verify compliance with the requirements of this specification and MS24347. Any drum in the sample containing one or more dimensional and requirements defect, shall be considered a defective unit (see 3.4 and 4.6.4.1).

4.6.3 Leakage test. Each of the sample drums selected in accordance with 4.6.1 shall be tested by the manufacturer at 4 psi air pressure with seams under water and shall be found free of leakage in compliance with 3.5.1.

4.6.4 Inspection. Inspection may be made throughout the entire process of manufacture. The passing as satisfactory for any detail of drum, cover, or gasket construction, shall not relieve the contractor of responsibility for faulty workmanship or faulty materials which may be discovered at any time prior to acceptance (see 3.3 and 3.4).

4.6.4.1 Visual inspection. For each class of drums.

TABLE I - Classification of Defects

Examine	Defects	Required Paragraph	Method Paragraph	Major	Minor
Finish	Not Specified Paint or Primer	3.6	4.6.4	X	
	Paint Cracks or Flake	3.6	4.6.2	X	
	Color Not as Specified	3.6	4.6.2		X
	Enamel Tacky, Blistered or Peeling	3.6	4.6.2		X
	Dirty, Rust, Grit or Foreign Matter Bedded in Enamel	3.6	4.6.2		X
	Area of Thin or No Primer, Film	3.6	4.6.2	X	
Construction & Workmanship	Sharp Edges and Metal Splinters	3.8	4.6.2	X	
	Component Fractured, Split, Bowed, or Malformed Affecting Serviceability	3.8	4.6.2	X	

Examine	Defects	Required Paragraph	Method Paragraph	Major	Minor
	Sealing Surface Smooth	3.8	4.5.4	X	
	Seaming Compound (of formed drums) on Interior, Exterior Surfaces	3.8	4.6.2		X
	Sharp Burr, Sliver, or Splinter That Can Cause Injury	3.8	4.6.2	X	
	Missing, Incomplete, Burn Holes, Cracked	3.8	4.6.2, 4.6.3	X	
Locking Ring	Incomplete	3.4.2	4.6.2	X	
	Wrong Size	3.4.2	4.6.2	X	
	Bolts or Nuts Wrong Size or Striped	3.4.2	4.6.2	X	
	Ring Dented or Lugs Bent	3.4.2	4.6.2	X	
	Tamper-Proof Locking Ring Missing or Damaged	3.4.2	4.6.2	X	
Assembly	Any Component Which Does Not Fit Properly or Assembled as Specified	3.3, 3.4, 3.5, 3.7, 3.8	4.6 & 4.7	X	
	Humidity Indicator, if Specified	3.4.3	4.6.2	X	
Marking	Missing, Incomplete, Not Legible, or Not Any Specific Type or Size	3.7	4.6.2	X	
Materials	Not as Specified	3.3, 3.4	4.6.2		X

4.6.4.1.1 Dimensional examination. Examination shall be made of the end item to determine compliance with dimensional requirements. Any dimension not within specified tolerance shall be classified as a defect.

INSPECTION PROCEDURE

4.7 Inspection of packaging. An inspection shall be made to determine that packing and marking as required in section 5 of this specification are complied with. Defects shall be scored in accordance with the list below. The sample unit shall be one shipping container fully prepared for

delivery except that interior attributes may be examined on the container before closure. The lost size shall be the number of containers in the inspection lot. The inspection level shall be S-2 and the acceptable quality level shall be 4.0 defects per hundred units (see 3.4).

Attributes	Defects
Markings	Incorrect, illegible; of improper size, location, sequence, or method of application.
Materials	Any nonconforming component, component missing, damaged, or otherwise defective, affecting serviceability.
Workmanship	Inadequate application of components such as incomplete closure of container flaps, loose strapping, bulging or distortion of containers, etc.
Weight or content	Number per container is less than specified, gross weight exceeds specifications.

5. PACKAGING

5.1 Preservation. Preservation shall be level A or industrial as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Cleaning and drying. Items shall be cleaned and dried using any suitable process specified in MIL-P-116.

5.1.1.2 Assembly. The drums shall be assembled with all component parts in place with the locking rings securely applied.

5.1.2 Industrial. The industrial preservation shall be in accordance with the requirements of ASTM D-3951.

5.2 Packing. Packing shall be Level A, B, or industrial as specified (see 6.2).

5.2.1 Level A. (Note: This level is not generally specified for this type item. Procuring activity should determine requirements on individual logistics basis.)

5.2.2 Level B. Drums of the same size shall be packed in fiberboard shipping containers conforming to style RSC, type CF or SF, class Domestic of PPP-B-636. The grade of fiberboard used in the boxes shall conform to the dimensional and gross weight requirements of PPP-B-636 but shall not be lower than grade 275 in any event. When specified (see 6.2), the shipping containers shall be V3C, V3S, or V4S fabricated in accordance with PPP-B-636.

5.2.3 Industrial. Items shall be packed in accordance with ASTM-D3951.

5.3 Palletization. When specified (see 6.2), boxes packed as specified shall be palletized in accordance with MIL-STD-147.

5.4 Marking.

5.4.1 Level A and B. In addition to any special marking required by the contract or order, interior packages (when applicable) and shipping containers shall be marked in accordance with MIL-STD-129.

5.4.2 Industrial. Marking shall be in accordance with Supplementary Requirements of ASTM D3951.

6. NOTES

6.1 Intended use. The metal drums covered by this specification are intended to be used for storage and shipment of military material.

6.2 Ordering data. Procurement document should specify the following:

a. Title, number, and date of this specification.
b. Quantity.
c. Part number (see MS24347 and 1.2).
d. First article requirements waiver (see 3.2, 4.4).
e. Provision for indicator plug type (see 3.4.3).
f. Specified coating if different from 3.6.2.
g. Level of preservation (see 5.1).
h. Level of packing (see 5.2).
i. When palletization is required (see 5.3).
j. Marking (see 5.3).

6.3 First article. When a first article inspection is required, the item(s) should be a first production item. The first article should consist of five unit(s). The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, approval of first article test results and disposition of first articles. Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract.

6.4 Disposability. One or more of the following methods shall be used to accomplish disposal of metal drum or components: reuse, recycling, baling, sanitary landfill, composting, incineration, pyrolysis, or sea disposal.

6.5 Metric. MS24347 Table III shows metric equivalents for measurements used in this specification. Rounding of values to the minimum number of significant digits that will maintain the required accuracy is permitted. See ASTM E380 Standard for Metric Practice, for conversion information.

6.6 Changes from previous issue. Asterisks (or vertical lines) are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

6.7 Subject term (key word) listing.

a. Drum
b. Drum, Aluminum
c. Drum, Steel
d. Drum, 88 Cubic Inches
e. Drum, 149 Cubic Inches
f. Drum, 167 Cubic Inches
g. Drum, 224 Cubic Inches
h. Drum, 282 Cubic Inches
i. Drum, 340 Cubic Inches
j. Drum, 420 Cubic Inches
k. Drum, 510 Cubic Inches
l. Packaging

Custodians:

Army - GL
Navy - SA
Air Force - 69

Preparing Activity:

Air Force - 69

PROJECT: 8110-0281

Review Activities:

Army - SM, EA, AR
DLA - GS
Air Force - 84

User Activities:

Navy - OS, SH, YD
Air Force - 80