



AEROSPACE STANDARD

AS6054™

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Drum, Metal-Shipping and Storage

RATIONALE

AS6054 has been reaffirmed to comply with the SAE Five-Year Review policy.

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This document has been taken directly from U.S. Military Specification MIL-D-6054F and contains only minor editorial and format changes required to bring it into conformance with the publishing requirements of SAE technical standards. The initial release of this document is intended to replace MIL-D-6054F. Any part numbers established by the original specification remain unchanged.

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Documents
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1. SCOPE:

1.1 Scope:

This specification covers new cylindrical drums to be used as exterior shipping containers (see 6.1).

1.2 Classification:

Drums shall be furnished in the dimensions and capacities as specified in the applicable MS standards.

2. APPLICABLE DOCUMENTS:

2.1 Government documents:

- 2.1.1 Specifications and standards: The following specifications and standards 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

QQ-S-781	Strapping, Steel, and Seals
PPP-C-1120	Cushioning Material, Uncompressed Bound Fiber for Packaging

Military

MIL-R-3065	Rubber, Fabricated Product
MIL-R-6855	Rubber, Synthetic Sheets, Strips, Molded or Extruded Shapes
MIL-I-26860	Indicator, Humidity, Plug, Color Change

STANDARDS

Federal

FED-STD-No. 595	Colors
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2.1.1 (Continued):

Military

MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129	Marking for Shipment and Storage
MIL-STD-147	Palletized Unit Loads
MIL-STD-831	Test Reports, Preparation of
MS 27683	Drums, Metal-Shipping and Storage (16 to 80 gallons)
MS 27684	Drums, Metal-Shipping and Storage (3 to 12 gallons)

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

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 the 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 (ASTM)

A-109	Steel, Strip, Carbon, Cold-Rolled (DOD adopted)
A-366	Steel, Sheet, Carbon, Cold-Rolled, Commercial Quality (DOD adopted)
B-117	Salt Spray (FOG) Testing, Standard Method of (DOD adopted)
D-610	Evaluating Degree of Rusting on Painted Steel Surfaces (DOD adopted)
D-3951	Standard Practice for Commercial Packaging

(Application for copies should be addressed to the 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 services.)

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:

Unless otherwise specified, the supplier shall furnish two samples for first article inspection and approval (see 4.4 and 6.3).

3.3 Materials:

Materials used in the manufacture of drums shall meet all requirements specified herein.

3.3.1 Steel: Cold rolled steel sheets for bodies, covers and bottoms shall conform to ASTM A366. Cold rolled steel strips for lugs and locking rings shall be quarter-hard temper, edge condition No. 4, free from burrs and sharp edges, conforming to ASTM A 109. The gage of steel (per United States standard gage) specified in the applicable MS standards for the drum body, covers, bottoms and closure is the minimum thickness acceptable. When thicker material than specified is used in the fabrication of drums, the increased thickness of material shall not be of such magnitude as to interfere with the interchangeability of drum parts (see 4.5.1).

3.3.2 Gaskets: Gaskets shall be formed from synthetic rubber conforming to MIL-R-6855, Class 2, Grade 60, or MIL-R-3065, Grade SC-610F (see 4.5.4.1).

3.4 Design and construction:

The design of the drum body and component parts shall be in accordance with applicable MS standards (see 4.5.4).

3.4.1 Cover: The container cover shall be style #1 (recessed). The 10.5, 13.81, 15.38, and 18.25 inch diameters drums may also be procured with style #2 domed covers (see 6.2). Convexity of covers shall not extend beyond level of chime (see 4.5.4.1).

3.4.2 Locking ring: The locking ring shall be either Style 1 or Style 2 as specified (see 4.5.4.1 and 6.2).

- 3.4.2.1 Style 1 locking ring: The locking ring shall be of the nut and bolt type. The bolt shall be a commercial standard 3/8-16 UNC-2A hex head with screw driver slot in hex head. The nut shall be a standard SAE hex nut or a commercial jam nut. Bolt heads and nuts shall be of a size that is compatible with standard hand and power tools. Nut and bolt shall be zinc or cadmium plated with tensile strength that meets the test requirements of this specification. The lugs shall not bend to attain a permanent set or crack when the required torque is applied. Provisions shall be provided for use of a lead and wire tamper-proof seal (see 4.5.4.1).
- 3.4.2.2 Style 2 locking ring: The locking ring shall be a lever actuated type locking ring. The construction shall be sturdy enough to develop sufficient tension to completely seal the closure and withstand all tests required by this specification. Provisions shall be provided for use of a lead and wire tamper-proof seal (see 4.5.4.1).
- 3.4.3 Humidity indicator: When specified (see 6.2), the drum body shall have provisions for accepting a humidity indicator conforming to MIL-I-26860, Type I, or Type II. The provision shall allow for a hermetic seal between the container body and the indicator. The humidity indicator shall be located in the body at a point opposite the side seam and an equal distance between the hoops of the drum. Other locations may be specified by the procuring agency (see 4.5.4.1, 4.6.1, and 6.2).
- 3.4.4 Handles: When specified (see 6.2), drums having an inside diameter of 22.5 inches or greater shall be equipped with two chest type drop handles located in the upper one third of the drum and equally spaced around the circumference. Each handle assembly shall be designed for the surface mounting with stops to hold the bail perpendicular to the mounting plate when in carrying position. The bail shall have a minimum inside length of four inches and a minimum clearance of two inches from the bail perpendicular to the mounting plate. When tested in accordance with paragraph 4.5.5, the handle assembly shall be capable of supporting loaded drums without permanent distortion at extremities in excess of 1/4 inches from the horizontal (see 4.6.4).
- 3.4.5 Dimensions: Dimensions shall be in accordance with the applicable MS standards (see 4.5.4.2).
- 3.5 Finish:
- 3.5.1 Conversion coatings: The interior and exterior surface of all drums, including the cover and locking rings, shall be clean and compatible with the conversion coating utilized (when required) for production of the end item (see 4.4.1).
- 3.5.2 Protective coating: Unless otherwise specified, (see 6.2), coat all interior and exterior surfaces of the drum and component parts, except the closing bolt and gasket, with a rust inhibiting coating that withstands salt spray test requirements (see 3.4.2.1 and 4.3.1). Unless otherwise specified color shall conform to No. 24087 of FED-STD-595 (see 4.4.1 and 6.2).

- 3.5.2.1 Salt spray resistance: Results of the Salt Spray Test 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 1mm, (3/64 inch), in diameter (see 4.4.1).

3.6 Performance:

The drums shall not leak when tested in accordance with 4.6.1, 4.6.2, and 4.6.3.

3.7 Container marking:

- 3.7.1 Bottom and top: The bottom and top of the drum shall be embossed in accordance with Figure 1 (see 4.5.4.1).
- 3.7.2 Body: Unless otherwise specified (see 6.2), the body of each container shall be marked on opposite sides with waterproof ink and letters at least one-half inch high. The marking shall appear three quarters of an inch below the lower edge of the locking ring. The color shall conform to color number 23538 of FED-STD-595. The wording of the marking shall be as follows (see 4.5.4.1):

REUSABLE CONTAINER DO NOT DESTROY

3.8 Workmanship:

The construction shall be of such quality that finished drums shall have no sharp burrs or rough surfaces. The metal shall be free of defects which may affect the durability, strength, or serviceability of the drum. The gasket shall be uniformly distributed about the circumference of the cover and shall lie naturally with the flat surface parallel to the horizontal plane of the cover to provide a seal which will not leak. The protective coatings shall be applied in a uniform manner (see 4.5.4.1).

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 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.