INCH-POUND

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1 April 1991
SUPERSEDING
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MILITARY SPECIFICATION

SPOUT, CAN, FLEXIBLE

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

1. SCOPE

1.1 Scope. This document covers one type of flexible can spout for 5-gallon metal and 5-gallon plastic fuel cans.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

PPP-B-601 - Boxes, Wood, Cleated-Plywood.
PPP-B-636 - Boxes, Shipping, Fiberboard.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: USA Belvoir Research, Development and Engineering Center, ATTN: STRBE-TSE, Fort Belvoir, VA 22060-5606 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 7240

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

MILITARY

MIL-P-116	-	Preservation, Methods of.
MIL-C-1283	-	Can, Gasoline, Military, 5-Gallon.

STANDARDS

MILITARY

MIL-STD-105	-	Sampling Procedures and Tables for Inspection by Attributes.
MIL-STD-129	-	Marking for Shipment and Storage.
MIL-STD-889	-	Dissimilar Metals.

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.1.2 Other Government drawings. The following other Government drawings form a part of this specification to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

ME

TA13219E2600	-	Spout, Can, Flexible.

(Copies of drawings required by contractors in connection with specific acquisition functions should be obtained from the USA Belvoir Research, Development and Engineering Center, ATTN: STRBE-FSH, Fort Belvoir, VA 22060-5606.)

2.2 Non-Government publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation. (see 6.2).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 3953	-	Strapping, Flat Steel and Seals.
D 4675	-	Selection and Use of Flat Strapping Materials.

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

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Association, Inc., ATTN: Traffic Order Section, 2200 Mill Rd, Alexandria, VA 22314.)

UNIFORM CLASSIFICATION COMMITTEE, AGENT

Uniform Freight Classification Rules

(Application for copies should be addressed to the Uniform Classification Committee, ATTN: Tariff Publishing Officer, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

(Non-Government standards and other publications are normally available from the organizations that prepare or 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 Description. The flexible can spout shall be in accordance with Drawing TA13219E2600 and as specified herein.

3.1.1 Drawings. The drawings forming a part of this specification are end product drawings. No deviation from the prescribed dimensions or tolerances is permissible without prior approval of the contracting officer. Any data (e.g., shop drawings, layouts, flowsheets, processing procedures, etc.) prepared by the contractor or obtained from a vendor to support fabrication and manufacture of the production item shall be made available upon request, for inspection by the contracting officer or the designated representative.

3.2 First article. Unless otherwise specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.3.

3.3 Material. Material shall be as specified herein and as shown on the applicable drawings. Materials not specified shall be selected by the contractor, and shall be subject to all provisions of this specification.

3.3.1 Material deterioration prevention and control. The spout shall be fabricated from compatible material inherently corrosion resistant or treated to provide protection against the various forms of corrosion and deterioration that may be encountered in any of the applicable operation and storage environments to which the spout may be exposed.

3.3.2 Dissimilar metals. Dissimilar metals shall not contact each other unless protected against galvanic corrosion by one or more of the appropriate procedures detailed in MIL-STD-889.

3.3.3 Identification of materials and finishes. The contractor shall identify the specific material, finish or treatment proposed for use with each component and subcomponent, and shall make such information available upon request to the contracting officer or other designated Government representative.

3.3.4 Recovered materials. For the purpose of this requirement, recovered materials are those materials which have been collected from solid waste and reprocessed to become a source of raw materials, as distinguished from virgin raw materials. The components, pieces and parts incorporated in the spout may be newly fabricated from recovered materials to the maximum extent practicable, provided the spouts produced meet all other requirements of this specification. Used, rebuilt or remanufactured components, pieces and parts shall not be incorporated in the spout.

3.4 Construction. The construction of all components and assemblies of the flexible spout covered by this specification shall conform to the requirements specified herein and the design, dimensions and material classification, shown on Drawing TA13219E2600.

3.5 Flexible tubing. The flexible tubing shall be 0.011-inch thick electro-galvanized steel interlocked, 43 to 48 convolutions per foot. The flexible tube shall be cemented to the sleeve specified and as shown in the drawing, and shall be tested for leaks as specified in 4.5.2.1.

3.6 Flexibility. The flexible spout assembly shall be capable of flexing a minimum of 60 degrees without binding or straining the convolutions when tested as specified in 4.5.2.2.

3.7 Cam assembly. The cam assembly shall consist of components specified in the drawing and shall be assembled as shown on the drawing. The assembly shall be capable of locking the spout when inserted in place into the cam. The cam shoulder rivets shall pass through the cam and be securely fastened to the inside of the sleeve as shown on the drawing, and shall show no evidence of leaking when tested as specified in 4.5.2.1.

3.8 Finish. Each steel component part except the flexible tubing, neck, and cap, shall be zinc-plated prior to assembly, and as specified on the drawing.

3.9 Marking for identification. Each cam lever shall be permanently stamped with the letters "US" in characters 0.25 inch high and the supplier's identification of such known character as to be identifiable in the location shown on the drawing.

3.10 Workmanship. There shall be no evidence of scale, burrs, cracks, or warped surfaces. All sharp edges and corners shall be removed.

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.

4.1.1 Responsibility for compliance. All items must meet all requirements of section 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 inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements; however, this 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 Dimensional requirements. Unless otherwise specified in the contract or purchase order, the contractor is responsible for assuring that all specified dimensions have been met. When dimensions cannot be examined on the end item, inspection shall be made at any point, or at all points in the manufacturing process necessary, to assure compliance with all dimensional requirements.

4.2 Classification of inspections. The inspections specified herein are classified as follows:

a. First article inspection (see 4.3).
b. Quality conformance inspection (see 4.4).
c. Inspection of packaging (see 4.6).

4.3 First article inspection.

4.3.1 First article examination. The first article shall be examined as specified in 4.5.1. Presence of one or more defects shall be cause for rejection.

4.3.2 First article tests. The first article shall be tested as specified in 4.5.2.1 and 4.5.2.2. Failure of either test shall be cause for rejection.

4.4 Quality conformance inspection.

4.4.1 Sampling. Sampling for examination and tests shall be in accordance with MIL-STD-105. Sample size shall be determined by using MIL-STD-105, table I and table IIa. A lot shall be accepted when 0 defects are found and rejected when 1 or more defects are found.

4.4.2 Examination. Samples selected in accordance with 4.4.1 shall be examined for the major and minor defects specified in 4.5.1. The presence of one or more defects shall be cause for rejection.

4.4.3 Tests. Samples selected in accordance with 4.4.1 shall be tested as specified in 4.5.2.1 and 4.5.2.2. The presence of one or more defects shall be cause for rejection.

4.4.4 Component and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of referenced documents unless modified in this specification or applicable purchase document.

4.5 Inspection procedure.

4.5.1 Examination. The spout shall be examined as specified herein for the following defects:

Major		Requirement Paragraph
101.	Dimensions not as specified.	3.1.1
102.	Material not as specified.	3.3
103.	Materials not resistant to corrosion and deterioration, or treated to be resistant to corrosion and deterioration of the applicable storage and operating environments.	3.3.1
104.	Dissimilar metals as defined in MIL-STD-889 are not effectively insulated from each other.	3.3.2
105.	Contractor does not have documentation available for identification of materials, material finishes, or treatment.	3.3.3
106.	Used, rebuilt or remanufactured components, pieces, or parts incorporated in the spout.	3.3.4
107.	Construction not as specified.	3.4
108.	Flexible tubing not as specified.	3.5
109.	Cam assembly not as specified.	3.7
110.	Zinc-plating not as specified.	3.8
111.	Workmanship not as specified.	3.10

Minor		Requirement Paragraph
201.	Identification marking missing, incomplete, in wrong location, wrong size, illegible or not permanent.	3.9

4.5.2 Tests.

4.5.2.1 Functional leak. Two 5-gallon cans conforming to MIL-C-1283 shall be used. The spout shall be flexed 60 degrees and installed in the pouring position in can Number 1, containing 5 gallons of gasoline. The 5 gallons of gasoline shall be transferred through the spout to can Number 2. The spout shall be removed from can Number 1, rotated 90 degrees relative to its previous position and installed in can Number 2. The spout shall be flexed 60 degrees to the pouring position, and the fuel shall be transferred back to can Number 1. This test shall be repeated through the full 360 degrees a total of four times. Evidence of gasoline dripping from the convolutions at a rate in excess of one drop per 15 seconds shall constitute failure of the test. Evidence of gasoline dripping from between the spout assembly and the can shall also constitute failure of the test.

4.5.2.2 Flexibility. The flexible spout shall be placed in a holding device and shall be flexed 60 degrees four times at each 90-degree position around its center line. Evidence of binding or straining of the convolutions shall be cause for rejection.

4.6 Inspection of packaging.

4.6.1 Quality conformance inspection of pack.

4.6.1.1 Unit of product. For the purpose of inspection, a completed pack prepared for shipment shall be considered a unit of product.

4.6.1.2 Sampling. Sampling for examination shall be in accordance with MIL-STD-105. Sample size shall be determined by using MIL-STD-105, table I and table IIa. A lot shall be accepted when 0 defects are found and rejected when 1 or more defects are found.

4.6.1.3 Examination. Samples selected in accordance with 4.6.1.2 shall be examined for the following defects. The presence of one or more defects shall be cause for rejection.

112. Method, or containers not as specified.
113. Consolidation not as specified.
114. Strapping not zinc-coated for level A.
115. Marking illegible, incorrect, incomplete, or missing.

5. PACKAGING

5.1 First article pack. The contractor shall furnish a first article pack for examination within the time frame specified (see 6.2), to prove, prior to starting production packaging, that the applied preservation, packing and marking comply with the requirements of this specification. Examination shall be as specified in section 4 and shall be subject to surveillance and approval by the Government (see 6.5). The first article model may be accomplished utilizing either the first article model or production model. If the first article model is utilized, and the Government requests a comparison between the first article model and production model, any preservation and packing shall be removed by the contractor at no expense to the Government.

5.2 Preservation. Preservation shall be level A or C as specified (see 6.2).

5.2.1 Level A.

5.2.1.1 Unit package. Each spout shall be preserved in accordance with MIL-P-116, method IC-1 or IC-3.

5.2.1.2 Consolidation. Spouts preserved as specified in 5.2.1.1 shall be consolidated in quantities of 10, in close-fitting boxes conforming to PPP-B-636, W6c, style optional. Closure of the boxes shall be in accordance with the appendix to the box specification, method V. Strapping shall not be required.

5.2.2 Level C.

5.2.2.1 Unit package. Each spout shall be preserved as specified for level A.

5.2.2.2 Consolidation. Each spout shall be preserved as specified for level A except the boxes shall be class domestic.

5.3 Packing. Packing shall be level A, B, or C as specified (see 6.2).

5.3.1 Level A. Spouts, preserved as specified in 5.2, shall be packed in close-fitting boxes conforming to PPP-B-601, overseas type, style optional, grade B. Strapping shall conform to ASTM D 3953, type 1 or 2, zinc-coated size as applicable and ASTM D 4675.

5.3.2 Level B. Packing shall be as specified for level A, except that boxes shall be domestic type and strapping may be finish A. As an alternate for small quantities, close-fitting boxes conforming to PPP-B-636, V3c, V11c, V13c, or V15c, style optional, shall be used when the quantities required do not exceed the weight limitation of the boxes.

5.3.3 Level C. Spouts, preserved and packaged as specified in 5.2 shall be packed to insure carrier acceptance and safe delivery to destination at the lowest rating in compliance with Uniform Freight Classification rules or National Motor Freight Classification rules.

5.4 Marking. In addition to any special marking specified in the contract or purchase order (see 6.2) marking shall be in accordance with MIL-STD-129.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The flexible spout covered by this specification is intended for pouring liquid petroleum fuel from 5-gallon metal and 5-gallon plastic fuel cans.

6.2 Ordering data. Acquisition documents should specify the following:

a. Title, number and date of this specification.
b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
c. Time frame required for submission of first article flexible spout, and number of spouts required (see 3.2).
d. When the Government will conduct any or all of the first article examination and tests. When the Government will conduct some but not all of the first article examination and tests, the contracting officer should specify which examination and tests will be conducted by the contractor (see 3.2).
e. Time frame for submission of first article pack (see 5.1).
f. Level of preservation and packing required (see 5.2 and 5.3).
g. Any special marking (see 5.4).

6.3 First article. When a first article inspection is required, the item(s) should be a preproduction model. The first article should consist of one or more units. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, approval of the first article test results and disposition of the first articles. Invitation 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. Bidders should not submit alternate bids unless specifically requested to do so in the solicitation.

6.4 Subject term (key word) listing.

Assembly, fuel pouring
Tubing, container

6.5 First article pack. Any changes or deviations of production packs from the approved first article pack will be subject to the approval of the contracting officer. Approval of the first article pack will not relieve the contractor of his obligation to preserve, pack and mark the spouts in accordance with this specification

6.6 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodian:
Army - ME
Navy - YD
Air Force - 84

Review activity:
Army - MD

User activity:
Army - GL
Navy - SH

Preparing activity:
Army - ME

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