

MIL-B-52508A(ME)

8 September 1972

SUPERSEDING

MIL-B-52508(MO)

31 March 1966

## MILITARY SPECIFICATION

BOX, METAL, SHIPPING: REUSABLE, TRANSPORTER, CONTROLLED HUMIDITY,  
STEEL, 270-CUBIC-FOOT CAPACITY, 9,000 POUND MAXIMUM LOAD

### 1. SCOPE

1.1 This specification covers a noncollapsible, reusable, steel shipping container of 9,000 pound maximum load capacity with provisions for humidity control.

### 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 the specification to the extent specified herein:

### SPECIFICATIONS

#### Federal

TT-E-485	- Enamel, Semigloss, Rust-Inhibiting.
TT-E-489	- Enamel, Alkyd, Gloss (For Exterior and Interior Surfaces).
TT-P-98	- Paint; Stencil, Flat.
TT-P-320	- Pigment, Aluminum; Powder and Paste, for Paint.
TT-T-801	- Turpentine; Gum Spirits, Steam Distilled, Sulfate Wood, and Destructively Distilled.
TT-V-109	- Varnish, Spar, Alkyd-Resin.
VV-G-671	- Grease, Graphite.

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Military

- |             |  |
|-------------|--|
| MIL-T-704   | - Treatment and Painting of Materiel.  |
| MIL-W-12332 | - Welding, Resistance, Spot, Seam, and Projection, for Fabricating Assemblies of Low-Carbon Steel. |
| MIL-C-21567 | - Compound, Silicone, Soft Film.   |
| MIL-P-46105 | - Primer Coating; Weld-Through, Zinc-Rich.   |

STANDARDS

Military

- |              |   |
|--------------|---|
| MIL-STD-129  | - Marking for Shipment and Storage.   |
| MIL-STD-1235 | - Single and Multilevel Continuous Sampling Procedures and Tables for Inspection by Attributes. |

DRAWING

ME

- |              |   |
|--------------|---|
| TA13215E0007 | - Box, Metal, Shipping, Reusable, Transporter-Controlled Humidity, Steel. |
|--------------|---|

(Copies of specifications, standards, and drawing 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 documents form 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.

AMERICAN WELDING SOCIETY

Welding Handbook  
Standard Qualification Procedure

(Application for copies should be addressed to the American Welding Society, 345 East 47th Street, New York, N. Y. 10017).

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## AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

## Welding Qualifications

(Application for copies should be addressed to the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, N. Y. 10017).

## 3. REQUIREMENTS

3.1 Description. The box shall be in accordance with Top Assembly ~~2A13215E0007~~ 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, flow sheets, processing procedures, etc.) prepared by the supplier 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 his designated representative.

3.2 First article (first-produced box). The supplier shall furnish one or more boxes for examination and testing within the time frame specified, to prove prior to starting production that his production methods will produce boxes that comply with the requirements of this specification. Examination and tests shall be as specified in section 4 and shall be subject to surveillance and approval by the Government (see 6.3).

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

3.4 Lifting attachments. Each lifting lug shall withstand a minimum pull of 20,000 pounds without rupture or damage to any welds, or deformation of any part when tested as specified in 4.5.2.2.

3.5 Air retention. The box with breather-port sealed shall maintain an internal pressure equivalent to a 4-inch differential in manometer water level without loss of more than 1/2 inch in 10 minutes or 1 inch in 30 minutes, prior to the application of paint, enamel, or primer to either the inner or outer accessible surfaces.

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3.6 Lubrication. The contact surfaces of the moving parts of the locking mechanism and door hinges shall be lubricated with graphite grease conforming to VV-G-671 to assure free operation and prevent the rusting or seizing of parts. After testing and painting, closure surfaces of gaskets shall be cleaned and lubricated with silicone lubricant conforming to MIL-C-21567.

3.7 Weight. The tare weight stamped on the box nameplate shall be the average weight of the first 30 production units. The tare weight of the production boxes shall be within plus or minus 35 pounds of the stamped weight.

3.8 Identification marking.

3.8.1 Information plate. Data on the information plate shall include the following and shall be legibly stamped, etched, engraved, embossed, or cast into the metal. Letters and numerals shall be a minimum of 1/8-inch high. Letters shall be Gothic capitals.

Nomenclature	- BOX, METAL, SHIPPING: Reusable, Transporter, Controlled humidity, Steel, Type 2CH, 270-cu-ft capacity, 9,000-lb max. load.
Federal Stock No.	- 8115-856-8620
Serial No.	- (To be supplied by contracting officer.)
Manufacturer's Identification	- (Name and address of manufacturer)
Date of manufacture	- (Month and year)
Contract No.	- (As indicated by contract)
Inspector's stamp	- (To be stamped by Government inspector.)
Tare weight	- (To be stamped after weighing (see 3.7) Metric equivalent to the nearest kilogram using the conversion factor 2.204 pounds for 1 kilogram.)
Overall length	- 8 feet 6 inches                      2.59 meters
Overall width	- 6 feet 3 inches                      1.91 meters
Overall height	- 6 feet 10-1/2 inches                2.10 meters
Inside length, nominal	- 7 feet 7 inches                      2.31 meters
Inside height, nominal	- 6 feet 1/4 inch                      1.84 meters
Inside width, nominal	- 5 feet 11-1/8 inches                1.81 meters
Shipping cubage	- 365 cubic feet                      10.34 cubic meters
Interior cubage	- 270 cubic feet                      7.65 cubic meter

3.8.2 Service identification and serial number. "U. S. Army and U. S. Air Force CONEX" and the serial number as specified (see 6.2) shall be applied in 2-inch high letters with black enamel conforming to TT-E-489

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proportionally spaced and centered as indicated on the drawings. In addition the serial number shall be applied inside the box in 2-inch high numerals, with white flat stencil paint conforming to type I of TT-P-98 two inches from the top and 4 inches from the front on the right side of the box.

### 3.9 Treatment and painting.

3.9.1 Accessible surfaces. All accessible surfaces shall be cleaned and treated in accordance with MIL-T-704. After cleaning and treating all accessible surfaces shall be painted with one or more coats of enamel conforming to TT-E-485, type II or IV. The minimum thickness of the dry paint film shall be 2 to 3 mils. In addition, all exterior surfaces shall be top coated with one or more coats (1 mil dry film thickness, minimum) of aluminum paint formulated by mixing 16 ounces of aluminum pigment conforming to TT-P-320, type II, class A with one pint of turpentine conforming to TT-T-801 and one gallon of varnish conforming to TT-V-109.

3.9.2 Inaccessible surfaces. Surfaces to be welded which are inaccessible for cleaning and treatment after welding shall be cleaned in accordance with MIL-T-704 and coated with a primer coating conforming to MIL-P-46105 to a minimum thickness of 1.5 mils prior to welding. Other surfaces which are inaccessible after assembly shall be cleaned and treated in accordance with MIL-T-704, and painted with one or more coats (2 to 3 mils dry film thickness) of enamel conforming to TT-E-485, type II or IV, prior to assembly.

### 3.10 Workmanship

3.10.1 Castings and forgings. All parts, components, and assemblies of the box which include castings and forgings shall be clean of harmful extraneous material such as sand, dirt, pits, sprues, scale, and flux. Rework shall be limited to procedures which do not reduce strength or affect function.

3.10.2 Metal fabrication. Metal used in fabrication shall be free from kinks and sharp bends. The straightening of material shall be done by methods that will not cause injury to the material. Corners shall be square and true. Flame cutting, using tips suitable for the thickness of the steel may be employed instead of shearing and sawing. All bends shall be made with controlled means to insure uniformity of size and shape. Precaution shall be taken to avoid overheating. Heated steel shall be allowed to cool slowly. External surfaces shall be free of burrs, sharp edges and corners, except when sharp edges or corners are required or where they are not detrimental to safety.

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### 3.10.3 Welding

3.10.3.1 Butt or fillet welds. The preparation and procedure for butt and fillet welding shall conform to the practices recommended in the American Welding Society's Handbook. Butt welds shall have 100 percent penetration. Minimum size of fillet welds shall be the thickness of the thinner section being welded. Maximum gap between sections being welded (space to be bridged by weld) shall be 0.06 inch or the thickness of the thinner section, whichever is less. All butt and fillet welds shall be free of entrapped slag, burn through, undercut, overlap, and excessive porosity. Welds attaching lifting lugs to corner posts, corner posts to sleds, and corner posts to front and rear sills shall withstand a minimum pull of 20,000 pounds.

3.10.3.2 Spot and seam welding. Spot and seam welding shall be as specified herein and in accordance with MIL-W-12332 except that the reporting procedure shall not be required.

3.10.3.3 Seam welds. All seam welds shall be continuous, extending the entire length of the sections being joined. Where it is not practical to provide a specified seam weld, a continuous single fillet weld lap joint may be substituted.

3.10.3.4 Multisection spot weld. Where more than two sections are being joined by spot welds, the weld between two adjacent sections shall conform to the requirements specified for a two section weld.

3.10.3.5 Welders. Before assigning any welder to manual welding work covered by this specification, the supplier shall provide the contracting officer with certification that the welder has passed qualification tests as prescribed by either of the following listed codes for the type of welding operations to be performed and that such qualification is effective as defined by the particular code:

Standard Qualification Procedure of the American Welding Society.  
Welding Qualifications of the ASME.

Suppliers who only make horizontal welds need not qualify welders for "all position welding." Subject to approval by the Government, supplier's standard welder qualification may be substituted in lieu of the above codes provided that the supplier's procedure is equivalent to the above codes. The supplier shall be responsible for determining that automatic welder equipment operators are capable of producing quality welds.

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

4.1.1 Acceptability criteria. Boxes which conform to all requirements in sections 3 and 5 of this specification and pass all applicable examinations and tests in section 4 of this specification will be considered acceptable by the Government.

4.1.2 Component and material inspection. The supplier is responsible for insuring that components and materials used are manufactured, examined, and tested in accordance with referenced specifications and standards.

4.2 Classification of inspection. Inspection shall be classified as follows:

- (a) First-produced inspection (see 4.3).
- (b) Quality conformance inspection (see 4.4).
- (c) Inspection of preparation for delivery (see 4.6).

#### 4.3 First-produced inspection.

4.3.1 Examination. The first-produced box shall be examined as specified in 4.5.1. Presence of one or more defects shall be cause for rejection.

4.3.2 Tests. The first-produced box shall be tested as specified in 4.5.2. Failure of any test shall be cause for rejection.

#### 4.4 Quality conformance inspection.

4.4.1 Sampling. Sampling for examination shall be in accordance with sampling plan CSP-1, Inspection Level II, MIL-STD-1235.

#### 4.4.2 Examination.

4.4.2.1 Individual. Each box shall be examined for correct identification by serial number on the information plate and as specified on the drawings. Presence of an incorrect serial number shall be cause for rejection.

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4.4.2.2 Samples. Samples selected in accordance with 4.4.1 shall be examined as specified in 4.5.1. AQL shall be 2.5 percent defective for major defects and 10 percent defective for minor defects.

4.4.3 Tests. Each box shall be tested as specified in 4.5.2. Failure of any test shall be cause for rejection.

4.5 Inspection procedure.

4.5.1 Examination. The boxes shall be examined for the following defects:

Major

101. Dimensions not as specified. Each incorrect dimension shall be a defect.
102. Components missing or not as specified. Each missing or incorrect component shall be a defect.
103. Assembly incomplete or not as shown on the drawings.
104. Materials not as specified.
105. Gasket not securely fastened as specified.
106. Butt and fillet welds not as specified.
107. Spot and seam welds not as specified.
108. Identification marking missing, illegible, or not as specified.
109. Cleaning, treatment or painting not as specified.
110. Workmanship not as specified.

Minor

201. Lubrication not as specified.
202. Weight of box not within specified limits.
203. Service identification missing or not as specified.

4.5.2 Tests.

4.5.2.1 Test conditions. The box shall be tested prior to the application of paint or primer (including wash primer) to the inner and outer surfaces.

4.5.2.2 Corner posts. With the box restrained at the top of the sled adjacent to each corner post, apply a minimum pull of 20,000 pounds to each of the four lifting lugs independently. Rupture or damage to welds or rupture or permanent deformation of any section shall constitute failure of this test.



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4.5.2.3 Air retention. Prior to being tested, the bulkhead shall be closed and locked in place and the opening in the desiccant receptacle shall be sealed. The humidity indicator in the rear panel shall be removed and air shall be introduced through the opening until the internal pressure of the box as measured by a U-tube manometer is from 4 to 4-1/2 inches of water above atmospheric. The pressure inside the box shall be maintained for a minimum of 10 minutes within the limits indicated by adding or bleeding air as required. The pressure shall then be adjusted to a differential of 4 inches of water as indicated on the manometer and allowed to stand for 30 minutes protected from sunlight, direct or reflected, drafts and air currents, and changes in ambient temperature which could cause a change in the temperature of the air inside the box. Manometer readings shall be taken at the elapse of 10 minutes and at the end of test. A manometer reading of less than 3-1/2 inches after 10 minutes or 3 inches after 30 minutes shall constitute failure of this test.

#### 4.6 Inspection of preparation for delivery.

##### 4.6.1 Quality conformance inspection of pack.

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

4.6.1.2 Examination. Each container shall be examined for the following defects. Presence of one or more defects shall be cause for rejection.

- 111. Markings not as specified.
- 112. Markings missing, illegible or incorrect.
- 113. Stencil ink or paint not as specified.

#### 5. PREPARATION FOR DELIVERY

5.1 Preservation, packaging, and packing. Not applicable.

5.2 Marking for shipment. Marking for shipment shall be in accordance with MIL-STD-129 and as specified (see 6.2). Unless otherwise specified (see 6.2), markings for shipment shall be stenciled on "Door" and "Rear" address plates only, with water-resistant black stencil ink or stencil paint.

#### 6. NOTES

6.1 Intended use. The reusable metal shipping box is intended for use in transporting high-density military and quasimilitary cargo with a minimum amount of preservation and packaging when the nature of the cargo requires that the surrounding air be maintained at 40 percent or less relative humidity to prevent corrosion due to excessive moisture. In addition,

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security and protection from pilferage are paramount considerations. The box is capable of being handled by overhead hoist from front, back, or sides by forklift truck, and by skidding or shunting.

6.2 Ordering data. Procurement documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Time frame required for submission of first-produced box (see 3.2).
- (c) Serial number for each box (see 3.8.2).
- (d) Marking required for shipment (see 5.2).
- (e) Number and location of address plates to be stenciled with "marking for shipment" if other than as specified in 5.2.

6.3 First-produced box. Any changes or deviations of production boxes from the approved first-produced box during production will be subject to the approval of the contracting officer. Approval of the first-produced box will not relieve the supplier of his obligation to furnish boxes conforming to this specification.

Custodian:

Army - ME

Preparing activity:

Army - ME

Review activity:

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Project No. 8115-A296

<b>SPECIFICATION ANALYSIS SHEET</b>		Form Approved Budget Bureau No. 22-R255
<p><b>INSTRUCTIONS:</b> This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.</p>		
<p><b>SPECIFICATION</b> MIL-B-52508A(ME) - Box, Metal, Shipping: Reusable, Transporter Controlled Humidity, Steel, 270-Cubic-Foot Capacity, 9,000 Pound Maximum</p>		
<p><b>ORGANIZATION</b> Load</p>		
<b>CITY AND STATE</b>		<b>CONTRACT NUMBER</b>
<p><b>MATERIAL PROCURED UNDER A</b>  <input type="checkbox"/> DIRECT GOVERNMENT CONTRACT      <input type="checkbox"/> SUBCONTRACT</p>		
<p><b>1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?</b>  <b>A. GIVE PARAGRAPH NUMBER AND WORDING.</b></p>		
<p><b>B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES</b></p>		
<p><b>2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID</b></p>		
<p><b>3. IS THE SPECIFICATION RESTRICTIVE?</b>  <input type="checkbox"/> YES      <input type="checkbox"/> NO (If "yes", in what way?)</p>		
<p><b>4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity.)</b></p>		
<b>SUBMITTED BY (Printed or typed name and activity - Optional)</b>		<b>DATE</b>

DD FORM 1426  
1 JAN 66

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED

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