

MIL-P-500H
18 October 1988
SUPERSEDING
MIL-P-500G
30 August 1984

MILITARY SPECIFICATION

PLATES, TENT, PEAK AND RIDGE

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

1. SCOPE

1.1 Scope. This document covers six types of tent peak and ridge plates.

1.2 Classification. The tent peak and ridge plates shall be of the following types as specified (see 6.2).

- Type II - Plate, ridge, front, tent, command post, M-1945
- Type III - Plate, ridge, rear, tent, command post, M-1945
- Type XIII - Plate, ridge, middle, tent, general purpose, large
- Type XIV - Plate, ridge, end, tent, general purpose, medium and large
- Type XVI - Plate, ridge, tent, kitchen, flyproof, M-1948
- Type XVIII - Plate, peak, supporting, tent, arctic, 10-man, and general purpose, small

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014 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 8340

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MIL-P-500H

2. APPLICABLE 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

- QQ-A-200/8 - Aluminum Alloy 6061 Bar, Rod, Shapes, Tube and Wire, Extruded
- QQ-A-250/11 - Aluminum Alloy 6061, Plate and Sheet
- TT-E-485 - Enamel, Semigloss, Rust-Inhibiting
- PPP-B-576 - Boxes, Wood, Cleated, Veneer, Paper Overlaid
- PPP-B-601 - Boxes, Wood, Cleated-Plywood
- PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner
- PPP-B-636 - Boxes, Shipping, Fiberboard

STANDARDS

FEDERAL

- FED-STD-595 - Federal Standard Colors

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-731 - Quality of Wood Members for Containers and Pallets

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

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of the solicitation.

MIL-P-500H

DRAWING

US ARMY NATICK, RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER

5-4-707 - Plates, Tent Peak and Ridge

(Copies of 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 documents 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 issues of the nongovernment documents which are current on the date of the solicitation.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- A 153 - Zinc Coating (Hot Dip) on Iron and Steel Hardware
- A 366 - Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality
- A 569 - Specification for Steel, Carbon (0.15 Maximum Percent) Hot-Rolled Sheet and Strip, Commercial Quality
- B 633 - Electrodeposited Coatings of Zinc on Iron and Steel
- D 1005 - Measurement of Dry Film Thickness of Organic Coatings
- D 2092 - Preparation of Zinc-Coated Steel Surfaces for Painting
- D 3951 - Standard Practice for Commercial Packaging

(Copies should be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

(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, 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 First article. When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.3, 6.2, and 6.3).

MIL-P-500H

3.2 Materials. The materials used shall conform to the applicable referenced documents specified herein (see 6.4).

* 3.2.1 Steel, sheet and strip. Carbon steel, sheet and strip shall conform to any quality, temper and finish of ASTM A 366 or A 569.

3.2.2 Aluminum alloy 6061. Aluminum alloy 6061 shall conform to temper T6 of QQ-A-250/11 or QQ-A-200/8.

3.2.3 Enamel. Enamel shall conform to type II, composition G or L, as applicable. The color shall be olive drab No. 24087 of TT-E-485.

3.3 Construction. Construction of the plates shall conform to Drawing 5-4-707 and as specified herein.

3.3.1 Ridge plates. Ridge plates shall be fabricated of steel specified in 3.2.1.

3.3.2 Peak plate. Peak plates shall be fabricated of aluminum specified in 3.2.2.

3.4 Finish. All burrs, rough and sharp edges shall be ground smooth or removed from the plates prior to finishing.

3.4.1 Ridge plates. Ridge plates shall be given a phosphate treated zinc plate conforming to either type III, 5C-3 of ASTM B 633 or ASTM A 153 with preparation for painting in accordance with method A-crystalline zinc phosphate treatment of ASTM D 2092 prior to enameling. All zinc plated surfaces shall be thoroughly coated with enamel specified in 3.2.3. The finish coating shall be dry, uniform in appearance, and free of any area of no film, blister, peel, scratch or scuff exposing phosphate treated zinc plate or bare metal, abrasion, gouge, soft run, dirt or foreign matter embedded in finish, wet or tacky paint.

* 3.4.1.1 Epoxy powder coating. As an alternate to the zinc coating, and enameling specified in 3.4.1, the surfaces may be prepared and coated as follows:

1. The ridge plates shall be prepared for coating by mechanical means. The surfaces shall be thoroughly and uniformly textured by sand blasting with 60-grit aluminum oxide. Prepared surfaces shall be kept clean during subsequent handling. Handling to be by clean-gloved hands or by clean implements. The surfaces shall be retained in a clean environment. The surface shall be epoxy coated not more than 8 hours after sand blasting.

2. The finish coating shall be olive drab color No. 24087 of FED-STD-595, electrodeposited powder coating conforming to H. B. Fuller Company, Kativo Powder No. REP-43286-20 or equal.

MIL-P-500H

3. The electrodeposited epoxy powder coating shall be baked in accordance with commercial practice.

4. The thickness of the baked coating shall be a minimum of 0.003+/-0.001 inch when tested as specified in 4.4.4.1.

5. The final coating shall be smooth and uniform in appearance, free from wrinkles and streaks.

3.4.2 Peak plate. The finish of the aluminum alloy peak plate shall be natural and free from pits.

3.4.3 Replacement of defective components. During the manufacturing process, components having material defects or damages that are classified as defects in 4.4.3 and 4.4.4 shall be removed from production and replaced with non-defective and properly matched components.

3.5 Marking. Prior to finishing, all plates shall be permanently indented with the characters and in the size and location shown on Drawing 5-4-707. The markings shall be legible after finishing.

3.6 Workmanship. The finished plates shall be free from crack, split, surface indentation and sharp crease caused by forming tools or dies, and shall not be bent out of shape. The surfaces opposite the indented marks shall not show any evidence of penetration or distortion due to marking.

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 this document 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 sections 3 and 5. The inspection set forth in this document shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirement in the document 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.

MIL-P-500H

* 4.1.2 Responsibility for 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 inspection. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.3).
- b. Quality conformance inspection (see 4.4).

4.3 First article inspection. When a first article is required (see 6.2), it shall be examined for the defects specified in 4.4.3 and 4.4.4. The presence of any defect shall be cause for rejection of the first article.

4.4 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with MIL-STD-105.

4.4.1 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 otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.4.2 In-process inspection. Examination shall be made of the following operations to establish conformance to the specified requirements. Whenever a nonconformance is noted, correction shall be made to items affected, the lot in process, and to the operation. Parts which cannot be corrected shall be removed from production.

<u>Requirement operation</u>	<u>Requirement paragraph</u>
Marking prior to finishing	3.5
Burrs, rough and sharp edges are ground smooth or removed from the plates prior to finishing	3.4
Ridge plates are given a phosphate treated zinc plate prior to enameling, or are properly prepared for epoxy powder coating	3.4.1 or 3.4.1.1

4.4.3 End item visual examination. The end item shall be examined for the defects listed in table I. The lot size shall be expressed in units of plates. The sample unit shall be one plate. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5 for major defects and 6.5 for total (major and minor combined) defects.

MIL-P-500H

TABLE I. End item visual defects

Examine	Defect	Classification		
		Major	Minor	
Finish				
Ridge plate	Not finished	X		
	Color of finish not as specified		X	
	Coating is not uniform in appearance		X	
	Area of no film		X	
	Blister, peel, abrasion, gouge, soft run, dirt, or foreign matter embedded in finish		X	
	Scratch or scuff exposing bare metal	X		
	Scratch or scuff exposing phosphate treated zinc plate		X	
	Wet or tacky paint		X	
	Peak plate	Not natural finish		X
		Metal pitted		X
Construction	Plate not fabricated of applicable reinforced material	X		
	Any hole or slot missing	X		
	Any burr or rough or sharp edge		X	
Workmanship	Crack or split	X		
	Surface indentation or sharp crease caused by forming tools or dies		X	
	Bent out of shape:			
	(a) Affecting serviceability	X		
	(b) Not affecting serviceability		X	
	Evidence of penetration or distortion due to marking		X	
Marking	Missing, illegible, incorrect, incomplete, or wrong location or size		X	

MIL-P-500H

* 4.4.4 End item dimensional examination. Examination shall be made of the end item to determine compliance with those dimensions annotated with an asterisk on Drawing 5-4-707. The inspection level shall be S-2. Any nonconformance with other than specified dimensions shall be classified as a defect, and the AQL, expressed in terms of defects per hundred units, shall be 4.0.

* 4.4.5 End item testing. The end item shall be tested (when applicable) for thickness of the epoxy coating in accordance with ASTM D 1005. Three observations shall be made per sample unit. Any epoxy coating thickness less than specified in 3.4.1.1 shall be classified as a defect. The lot size shall be expressed in units of ridge plates of one type. The sample unit shall be one ridge plate. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 4.0.

4.4.6 Packaging examination. The fully packaged end items shall be examined for the defects listed below. The lot size shall be expressed in units of shipping containers. The sample unit shall be one shipping container fully packaged. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 2.5.

<u>Examine</u>	<u>Defect</u>
Marking (exterior and interior)	Omitted; incorrect; illegible; of improper size location, sequence, or method of application.
Materials	Any component missing, damaged, or not as specified.
Workmanship	Inadquate application of components, such as incomplete closure of container flaps, improper taping, loose strapping, or inadequate stapling. Bulged or distorted container. More than one type plate packed in any container.
Contents	Number of plates per unit pack or container, as applicable, is more or less than required.

4.4.7 Palletization examination. The fully packaged and palletized end items shall be examined for the defects listed below. The lot size shall be expressed in units of palletized unit loads. The sample unit shall be one palletized unit load, fully packaged. The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

MIL-P-500H

<u>Examine</u>	<u>Defect</u>
Finished dimensions	Length, width, or height exceeds specified maximum requirements.
Palletization	Not as specified. Pallet pattern not as specified. Interlocking of loads not as specified. Load not bonded as specified.
Weight	Exceeds maximum load limit.
Marking	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application.

5. PACKAGING

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

5.1.1 Level A. Forty type II or III, fifty type XIII, twenty-four type XIV, fifteen type XVI, or seventy-five type XVIII plates shall be unit packed in the most compact manner in a snug-fitting fiberboard box conforming to style RSC, grade W5c or W5s of PPP-B-636. Each container shall be closed in accordance with method II as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.5.

5.1.2 Commercial. Tent plates shall be preserved in accordance with ASTM D 3951.

5.2 Packing. Packing shall be level A, B, or Commercial as specified (see 6.2).

5.2.1 Level A packing. Two hundred and forty type II or III, three hundred type XIII, one hundred and forty-four type XIV, ninety type XVI, or four hundred and fifty type XVIII plates, preserved as specified in 5.1, shall be packed in a snug-fitting shipping container conforming to overseas type, styles A, B, or I, grade B of PPP-B-601; or class 2, style 2 or 4, grade B, of PPP-B-621. Closure and strapping shall be in accordance with the appendix of the applicable container specification.

5.2.2 Level B packing. Two hundred and forty type II or III, three hundred type XIII, one hundred and forty-four type XIV, ninety type XVI or four hundred and fifty type XVIII plates, preserved as specified in 5.1, shall be packed in a snug-fitting shipping container conforming to domestic type, style A or B, grade B of PPP-B-601; style A or B, class 1, type 2 load of PPP-B-576; class 1, style 2 or 4, grade B, type 2 load of PPP-B-621; or style FTC,

MIL-P-500H

type CF, variety SW, or type SF, class domestic, grade 350 of PPP-B-636. Closure and strapping shall be in accordance with the appendix of the applicable container specification.

5.2.3 Commercial packing. Tent plates preserved as specified in 5.1, shall be packed in accordance with ASTM D 3951.

5.3 Palletization. When specified (see 6.2), tent plates, packed as specified in 5.2 shall be palletized on a 4-way entry pallet in accordance with load type I or Ia as applicable of MIL-STD-147. Pallet type shall be type I (4-way entry), type IV or type V in accordance with MIL-STD-147. Pallets shall be fabricated from wood groups I, II, III, or IV of MIL-STD-731. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means K and L or film bonding means O or P. Pallet pattern shall be in accordance with the appendix of MIL-STD-147. Interlocking of loads shall be effected by reversing the pattern of each course.

5.4 Marking. In addition to any special marking required by the contract or purchase order, unit packs, shipping containers and palletized unit loads shall be marked in accordance with MIL-STD-129 or ASTM D 3951, as applicable.

6. NOTES

6.1 Intended use. The ridge and peak plates are intended for use at the ridge and peak of various tents.

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this document.
- b. Type of plate required (see 1.2).
- c. When a first article is required (see 3.1, 4.3, and 6.3).
- d. Selection of the applicable levels of preservation and packing (see 5.1 and 5.2).
- e. When palletization is required (see 5.3).

6.3 First article. When a first article is required, it shall be inspected and approved under the appropriate provisions of FAR 52.209. The first article should be a preproduction sample. The contracting officer should specify the appropriate type of first article and the number of units to be furnished. The contracting officer should include specific instructions in all acquisition instruments regarding arrangements for selection, inspection, and approval of the first article.

6.4 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of the document (see 3.2).

MIL-P-500H

* 6.5 Subject term (key word) listing.

Plates, tent peak
Plates, tent ridge

6.6 Changes from previous issue. The margins of this document are marked with an asterisk (*) 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, as written, irrespective of the marginal notations and relationship to the last previous issue.

Custodians:

Army - GL
Navy - NU
Air Force - 99

Preparing activity:

Army - GL
Project No. 8340-0518

Review activities:

Army - MD
Air Force - 82
DLA - CT

User activities:

Navy - MC, YD

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER MIL-P-500H		2. DOCUMENT TITLE Plates, Tent Peak and Ridge	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION (Mark one)	
b. ADDRESS (Street, City, State, ZIP Code)		<input type="checkbox"/> VENDOR <input type="checkbox"/> USER <input type="checkbox"/> MANUFACTURER <input type="checkbox"/> OTHER (Specify): _____	
5. PROBLEM AREAS			
a. Paragraph Number and Wording:			
b. Recommended Wording:			
c. Reason/Rationale for Recommendation			
6. REMARKS			
7a. NAME OF SUBMITTER (Last, First, MI) - Optional		b. WORK TELEPHONE NUMBER (Include Area Code) - Optional	
c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional		8. DATE OF SUBMISSION (YYMMDD)	

instructions. In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (DO NOT STAPLE), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. 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.

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