

MIL-H-9850C  
10 June 1977  
 SUPERSEDING  
 MIL-H-9850B  
 11 January 1974

## MILITARY SPECIFICATION

### HINGE, BUTT CONTINUOUS (PIANO)

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

#### 1. SCOPE

1.1 Scope. This specification covers one type of continuous butt, hinge, (piano) as specified in the supplement.

#### 2. APPLICABLE DOCUMENTS

2.1 Issues of documents. The following documents, of the issue in effect on date of invitation for bids or requests for proposal, form a part of this specification to the extent specified herein.

#### SPECIFICATIONS

##### Federal

PPP-B-601	-	Boxes, Wood, Cleated-Plywood
PPP-B-621	-	Boxes, Wood, Nailed and Lock-Corner
PPP-B-636	-	Boxes, Shipping, Fiberboard
PPP-B-640	-	Boxes, Fiberboard, Corrugated, Triple-Wall

##### Military

MIL-P-116	-	Preservation-Packaging, Methods of
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Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, US Army Armament Research and Development Command, ATTN: DRDAR-TST, Rock Island, IL 61201 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

FSC 5340

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## STANDARDS

<u>Federal</u>	
Fed. Std. No. 356	- Commercial Packaging of Supplies and Equipment
<u>Military</u>	
MIL-STD-105	- Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129	- Marking for Shipment and Storage
MIL-STD-147	- Palletized and Containerized Unit Loads 40" x 48" Pallets, Skids, Runners, or Pallet-Type Base

(See Supplement 1 for list of associated MS sheet form standards.)

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

## 3. REQUIREMENTS

3.1 Military standards for individual sizes of hinges. The individual item requirements shall be as specified herein and in accordance with the applicable Military standards. In the event of any conflict between requirements of this specification and the Military standard or applicable drawing or specifications the latter shall govern.

3.2 Materials. The materials for the hinges described herein shall be in accordance with the applicable MS standard or applicable drawings or specification.

3.3 Design and construction. The hinges shall be of the design, construction, and physical dimensions specified herein and on the applicable MS standards.

3.3.1 Pins. Pins of assembled hinges shall securely fasten together the leaves of the hinge.

3.3.2 Leaves. Separate leaves, as applicable, shall be in accordance with the pertinent dimensional requirements of the applicable MS standards. The leaves of the assembled hinge shall match to permit freedom of movement without excessive looseness.

3.4 Workmanship. Workmanship shall conform to the best commercial practice to produce high quality hinges. Hinges shall be free from burrs, blisters, peeling, chips, looseness, lubricants and all other defects which might affect their serviceability.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, 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.

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

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

#### 4.3 Quality conformance inspection.

4.3.1 Inspection of product for delivery. Inspection of product for delivery shall consist of visual and mechanical examination.

4.3.1.1 Inspection lot. An inspection lot shall consist of all hinges made of the same material, metal thickness, and pin diameter produced under the same manufacturing conditions and offered for inspection at one time. Hinges of different lengths may be combined to form one lot for sampling purposes.

4.3.1.2 Sampling plan. Sampling for examination shall be in accordance with MIL-STD-105, Inspection Level I.

#### 4.3.1.3 Examination.

4.3.1.3.1 Samples. Samples selected in accordance with 4.3.1.2 shall be examined for the defects specified in Table I. The Acceptable Quality Level (AQL) shall be 1.0 percent defective.

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TABLE I - Classification of Defects

Categories	Defects	Inspection Method
Critical	None defined	
Major:		
101	Hinge is incomplete; component parts missing (3.3).	Visual
102	Type of finish not as specified or blistered, peeled, chipped, or of no film or thin film affecting serviceability (3.4).	Visual
103	Hinge not fabricated of specified material (3.2).	SIE*
104	Hinge does not comply with specified dimensions (3.3).	SIE*
105	Assembly; anchor of hinge pin and straightness of (3.4).	Visual
Minor:	None defined.	

\* Standard inspection equipment.

4.3.1.4 Rejected lots. If an inspection lot is rejected, the supplier may screen out the defective units, and resubmit for reinspection. Resubmitted lots shall be inspected using tightened inspection. Such lots shall be separate from new lots and shall be clearly identified as reinspected loss.

4.4 Packaging inspection. Packaging inspection for preservation, packing and marking shall be in accordance with section 5 of this specification and the documents specified herein.

#### 5. PACKAGING.

5.1 Preservation. Preservation shall be level A or B, or commercial, in unit and intermediate quantities as specified, (see 6.2).

##### 5.1.1 Level A.

5.1.1.1 Cleaning. Hinges shall be cleaned in accordance with process C-1 of MIL-P-116.

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5.1.1.2 Drying. Hinges shall be dried in accordance with any applicable procedure of MIL-P-116.

5.1.1.3 Preservative application. None required.

5.1.1.4 Unit pack. The unit pack for each individual hinge shall conform to method 1C-3 of MIL-P-116. Physical protection shall be applied as applicable.

5.1.1.5 Intermediate pack. Hinges of one size, unit pack as above (see 5.1.1.4), shall be placed in intermediate containers conforming to PPP-B-636, Type CF, Class Weather Persistent, Variety SW, Grade optional, Style RSC. The containers shall be the minimum size to adequately hold a uniform quantity of hinges. Intermediate containers shall contain multiples of 5 unit packs not to exceed 50 unit packs. No intermediate pack is required when the total quantity shipped to a single destination is less than 50 unit packs.

5.1.2 Level B.

5.1.2.1 Cleaning. Shall be the same as Level A (see 5.1.1.1).

5.1.2.2 Drying. Shall be the same as Level A (see 5.1.1.2).

5.1.2.3 Preservative application. Shall be the same as Level A (see 5.1.1.3).

5.1.2.4 Unit pack. The unit pack for each hinge shall conform to method III of MIL-P-116.

5.1.2.5 Intermediate pack. The intermediate pack shall be the same as Level A (see 5.1.1.5) except that class domestic fiberboard shall be used in lieu of class weather resistant.

5.1.3 Commercial. Preservation shall be in accordance with Fed. Std. No. 356.

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

5.2.1 Level A. Hinges shall be packed in a minimum size shipping container conforming to PPP-B-621, Class 2, Style optional, or PPP-B-601, Overseas type, Style optional, Grade B. Closures and reinforcement shall be in accordance with the applicable container specification.

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5.2.2 Level B. Hinges shall be packed in a minimum size shipping container conforming to PPP-B-636, Type CF, Class weather resistant, Varie Grade and Style optional or PPP-B-640, Class 2, Style optional. Closure and reinforcement shall be in accordance with the applicable container specification.

5.2.2.1 Palletized load. A uniform quantity of hinges shall be palletized in accordance with MIL-STD-147.

5.2.3 Commercial. Packing shall be in accordance with Fed. Std. No. 356.

5.3 Marking.

5.3.1 Levels A and B. Marking shall be in accordance with MIL-STD-129.

5.3.2 Commercial. Marking shall be in accordance with Fed. Std. No. 356.

## 6. NOTES

6.1 Intended use. The continuous butt piano hinge covered by this specification is intended for use on cases, chests and any other adaptable surface.

6.2 Ordering data. Procurement documents should specify the following:

- a. Title, number and date of this specification.
- b. Part number.
- c. Selection of applicable level of protection (A or B), or commercial packaging (see 5.1, 5.2, and 5.3).

6.3 Changes from previous issue. Asterisks are not used in this revision to identify changes with respect to the previous issue, due to the extensiveness of the changes.

### Custodians:

Army - WC  
Air Force - 99

### Preparing activity:

Army - WC

### Project Number:

5340-1195

### Review activities:

Army - AV, EA, EL, GL, MI  
DSA - IS

### User activities:

Army - AR, ME, MU  
Navy - AS, MC

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