

**MIL-G-20697**

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SUPERSEDING

SAPD-P-113

25 MARCH 1955

**MILITARY SPECIFICATION****GUN, MACHINE, CAL. 50, BROWNING, M2, HEAVY  
BARREL, ALL TYPES, PACKAGING OF**

*This specification has been approved by the Department of Defense and is mandatory for use by the Departments of the Army, the Navy, and the Air Force.*

**1. SCOPE**

1.1 This specification covers the packaging and packing of Gun, Machine, Cal .50, Browning, M2, Heavy Barrel, (Fixed, Flexible and Turret types) for each level of protection.

**2. APPLICABLE DOCUMENTS**

2.1 The following documents, of the issue in effect on date of invitation for bids, form a part of this specification:

**SPECIFICATIONS****MILITARY**

- JAN-P-100 — Packaging and Packing for Oversea Shipment — General Specification
- MIL-P-116 — Preservation, Methods of
- JAN-C-372 — Cleaner, Rifle Bore

MIL-P-3420 — Packaging Materials, Volatile Corrosion Inhibitor Treated

MIL-P-8574 — Preservation and Packaging Procedures Utilizing Volatile Corrosion Inhibitor Treated Materials

MIL-B-14341 — Barrel Assemblies for Guns, Machine, Cal. .30, Cal .50; and Guns, Automatic, 20mm and 30mm, Packaging of

**STANDARDS****MILITARY**

MIL-STD-105 — Sampling procedures and Tables for Inspection by Attributes

FSC 1005

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**MIL-STD-129 — Marking for Shipment and Storage**

**DRAWINGS****ORDNANCE CORPS**

**F-7267149 — Packaging and Packaging of Gun, Machine, Browning, Cal. .50, M2, Heavy Barrel, All Types**

(Copies of specifications, standards, drawings, and publications required by contractors 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. Unless otherwise indicated, the issue in effect on date of invitation for bids shall apply.

**CONSOLIDATED FREIGHT CLASSIFICATION RATINGS, RULES AND REGULATIONS**

(Application for copies shall be addressed to the Consolidated Freight Classification Committee, 202 Union Station, 526 West Jackson Blvd., Chicago 6, Ill.)

**3. REQUIREMENTS**

**3.1 Materials and methods.** The materials and methods used in preparing the Gun, Machine, Browning, Cal. .50, M2, Heavy Barrel, for shipment and storage shall be in accordance with this specification and other applicable documents. The time intervals between all processes of preparation shall be of the practicable minimum. Unless otherwise specified, the contractor shall provide the Government Inspector certification of adherence to the requirements of material specifications.

**3.2 Preservation and packaging.****3.2.1 Level A.**

**3.2.1.1 Cleaning.** All metallic surfaces of the gun, except the barrel assembly, shall be cleaned in accordance with process C-2 of

Specification MIL-P-116 and shall pass the cleanliness test specified in 4.5.1.2. Machine Guns shall be maintained in such condition through preservation and packaging. Disassembly shall be performed as necessary to accomplish complete and thorough cleaning.

**3.2.1.1.1 Barrel assembly.** The barrel assembly shall be cleaned in accordance with the requirements of Specification MIL-B-14341.

**3.2.1.2 Drying.** Unless otherwise specified, all cleaned parts shall be dried in accordance with drying procedure D-1 of Specification MIL-P-116.

**3.2.1.3 Preservative application**

**3.2.1.3.1 Oil application.** All metal surfaces shall be completely coated with a type P-9 oil, applied by procedure A-1, in accordance with Specification MIL-P-116. The oil temperature shall not exceed 120°F. Each gun shall be completely drained of excess oil, the draining position shall be changed, as necessary, to accomplish thorough drainage.

**3.2.1.3.1.1** The conversion parts, required to enable the gun to feed from either right or left hand side, shall be securely attached to the back plate with baling wire prior to the oil application.

**3.2.1.3.2 Volatile corrosion inhibitor (VCI) application.** Each gun, including the detached parts, shall be protected against corrosion by type I, volatile corrosion inhibitor treated material conforming to Specification MIL-P-3420, applied in accordance with this specification and Drawing F-7267149. Moldable VCI treated material, specified herein, shall consist of a treated neutral kraft paper laminated to a moldable self-adhering greaseproof material. (See 6.3.) Unless otherwise specified herein, the procedures for use and handling of VCI treated materials shall be in accordance with the requirements of Specification MIL-P-8574.

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**3.2.1.3.2.1 Barrel assembly.** The barrel assembly shall be preserved in accordance with the requirements of Specification MIL-B-14341.

**3.2.1.3.2.2 Detached parts.** The detached parts, such as Retracting Slide assembly, Barrel, Carrier assembly etc., except the Solenoid shall be individual wrapped with moldable VCI treated material. The Solenoid shall not be preserved with oil or VCI treated material.

**3.2.1.4 Unit packaging.** Each gun shall be unit packaged, method 1A-8, as specified herein and in accordance with Drawing F-7267149. The crating sleeve shall be inserted into the forward hole of the receiver and the gun placed into the VCI lined barrier bag. Crating pins shall be inserted through the mounting holes in the bag and the receiver. The spacers, washers and speed nuts shall be assembled on the crating pins in accordance with Drawing F-7267149. Excess air shall be removed from the bag by any method which will not puncture the bag. The bag shall be heat sealed and shall be capable of passing the heat seal test of 4.5.1. When packaging the Flexible type gun, the barrel carrier assembly and the spade grip back plate shall also be detached from the gun.

**3.2.1.4.1 Barrel assembly.** The wrapped barrel assembly shall be packaged, method 1C-4 in accordance with the requirements of Specification MIL-B-14341 and as indicated in Drawing F-7267149.

**3.2.1.4.2 Retracting slide assembly.** The wrapped retracting slide assembly shall be packaged in accordance with method 1A-8 of Specification MIL-P-116 and as indicated on Drawing F-7267149.

**3.2.1.4.3 Barrel carrier assembly.** The wrapped barrel carrier assembly shall be packaged in accordance with method 1A-8 of Specification MIL-P-116 and as indicated

on Drawing F-7267149. Cushioning shall be included to prevent bag puncture.

**3.2.1.4.4 Spade grip back plate, assembly.** The spade grip back plate shall be packaged in accordance with Drawing F-7267149.

**3.2.1.4.5 Solenoid (Turret).** The solenoid shall be packaged method IIe in accordance with Specification MIL-P-116.

### 3.2.2 Level B. (See section 6.)

**3.2.2.1 Cleaning, drying and preservative application.** Cleaning, drying and preservative application shall be in accordance with the requirements of 3.2.1.1; 3.2.1.2; and 3.2.1.3.

**3.2.2.2 Unit packaging.** Each gun shall be wrapped with moldable VCI treated material and packaged, method I in accordance with Drawing F-7267149. Prior to wrapping, all projections of the gun, capable of puncturing the wrapper, shall be cushioned with moldable VCI material.

**3.2.2.2.1 Barrel assembly.** The wrapped barrel assembly shall be packaged in accordance with paragraph 3.2.1.4.1. The VCI bore tube shall be omitted from the barrel assembly.

**3.2.2.2.2 Retracting slide assembly.** The wrapped retracting slide assembly shall be packaged in a paperboard box in accordance with Drawing F-7267149.

**3.2.2.2.3 Barrel carrier assembly.** The wrapped barrel carrier assembly shall be packaged method 1A-8 in accordance with Drawing F-7267149.

**3.2.2.2.4 Spade grip back plate assembly.** The spade, grip back plate assembly shall be packaged in accordance with Drawing F-7267149.

**3.2.2.2.5 Solenoid (Turret).** The solenoid

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shall be packaged in accordance with paragraph 3.2.1.4.5.

**3.3 Packing.**

**3.3.1 Level A.** Each gun shall be positioned into the cradle and packed in accordance with Drawing F-7267149. The cradle shall be inserted into the box in such a manner that the barrel support faces the open end of the box. The box shall be closed and strapped in accordance with the drawing.

**3.3.1.1 Detached parts.** The barrel assembly and the packaged detached parts shall be placed in the box as indicated on Drawing F-7267149. Cushioning and dunnage to prevent movement shall be included.

**3.3.2 Level B.** Each gun shall be packed in conformity with the requirements of paragraph 3.3.1 and Drawing F-7267149.

**3.4 Marking.**

**3.4.1 Normal markings.** The packages of the detached parts shall be marked with sufficient identification that the contents are known.

**3.4.2 Shipping container.** The shipping container shall be marked in accordance with Standard MIL-STD-129 and as specified on Drawing F-7267149. The shipping container for guns packaged for level B protection shall be marked "LTD-MIL-PKG".

**3.5 Pilot pack.** Prior to quantity production, a pilot pack shall be submitted to the Government Inspector to determine conformance with this specification.

**3.6 Workmanship.** Adequate controls shall be utilized to check for contamination of cleaning solvents and preservative oils. Wraps shall be neat, conforming and firmly secured. Heat seals shall be uniform in appearance and allow sufficient area for additional sealing. Void spaces in containers shall be of the practicable minimum. Tape shall be applied

to boxes uniformly and shall adhere to joints and seams. Strapping shall be applied properly.

**4. QUALITY ASSURANCE PROVISIONS**

**4.1 Procedure.** The inspection procedures specified in this section are those that shall be conducted by the Government. The tests shall be accomplished by the contractor or his agent under the surveillance of the Government Inspector. Inspection and test procedures shall be conducted in process.

**4.2 Lot.** The lot size submitted for acceptance purposes shall be determined by the procuring activity or Government inspection agency and shall be as large as is practicable, consistent with available facilities, and delivery schedules.

**4.3 Sampling.**

**4.3.1 For inspection.** Sampling for inspection shall be conducted in accordance with inspection level I of Standard MIL-STD-105.

**4.3.2 For tests.** Sampling for tests shall be conducted in accordance with table I.

TABLE I. Sampling for tests

Lot size packages	Sample size	Acceptance No.	Rejection No.
3 to 50	3	0	1
51 to 500	5	0	1
501 to 1000	10	1	2
1001 and over	15	2	3

**4.4 Inspection.**

**4.4.1 Classification of defects.** Visual inspection for defects established in table II shall apply to each item of the applicable sample of machine guns, interior packages, or exterior containers as applicable.

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TABLE II. *Classification of defects*

<i>Major</i>	<i>AQL%</i>
1. Missing detached parts .....	1.0
2. Illegible marking .....	1.0
3. Incorrect marking .....	1.0
<i>Minor</i>	
51. Improper preservative application .....	2.5
52. Improper cushioning and wrapping .....	2.5
53. Improper closure of interior packages .....	2.5
54. Improper packing .....	2.5
55. Non-adherence to prescribed shipping container specification requirements e.g. closure, strapping, etc.	2.5
<i>Incidental</i>	
101. Workmanship .....	6.5

#### 4.5 Tests

4.5.1 *Packaging tests.* Each machine gun or package in the applicable sample of table I shall be subjected to the pertinent packaging tests of Specification MIL-P-116 as determined by the methods of unit protection as shown in table III. (See 6.4.)

TABLE III. *Packaging tests*

<i>Tests</i>	<i>Applicable level</i>	<i>Method of unit protection</i>
Heat seal .....	A .....	1A-8
Quick leak (For detached parts).	A .....	1A-8

4.5.1.1 *Interpretation of results on quick leak tests.* Bubbles which appear on the surface of the barrier bag but are not released are not to be considered cause for rejection. A steady stream of a recurring succession of bubbles from any surface or seam shall be considered defective.

4.5.1.2 *Determination of cleanliness test.* From each test lot, the Government inspector shall subject the applicable surfaces (except for barrel bores and chambers) of one or more units to the determination of cleanliness test in accordance with Specification

MIL-P-116. Barrel bores and chambers of these units shall be tested for cleanliness by passing a clean, dry, chloride-free patch through the bore and chambers. Chemical analysis of these patches shall show no corrosion promoting residues such as chlorides. Failure of any unit to pass the above tests shall cause rejection of the lot represented for recleaning.

4.6 *Pilot pack.* The pilot pack shall be subjected to such inspection and test as deemed necessary to determine compliance with the preservation, packaging and packing requirements of this specification for levels A and B, as applicable. The level A pilot pack shall be subjected to the rough handling test specified in Specification JAN-P-100. The drop height shall be 30 inches. Acceptance of the initial lot shall be deferred pending approval of the pilot pack.

#### 5. PREPARATION FOR DELIVERY

(There are no applicable requirements.)

#### 6. NOTES

6.1 *Ordering data.* Procurement documents should specify the following:

- (a) Title, number and date of this specification.
- (b) Selection of applicable levels of preservation and packaging and packing.
  - (1) Level B preservation and packaging is intended to provide adequate and economical protection during multiple domestic shipments, handling, and indoor storage periods up to 12 months from date of initial packaging.

6.2 *Storage surveillance.* Machine guns preserved and packaged in accordance with Level B requirements must be inspected to determine condition when not used within a one-year period. Machine guns not used within this period should be represerved or repackaged in accordance with this specification.

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tion as determined necessary by storage conditions and anticipated storage time.

6.3 Moldable VCI materials described in 3.2.1.3.2 are presently listed in Qualified Products List QPL-3420-3 dated 2 March 1955, as 204 VPI, Seal-tite Grade C, 150 CA, and 2800 GM

6.4 The contractor shall provide equipment and personnel to perform the heat seal test and quick leak test. (See 4.5.1.)

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### Custodians:

Army—Ordnance Corps

Navy—BuOrd

### Other Interest:

Navy—MC

### Preparing Activity:

Army—Ordnance Corps