

MIL-P-6063B
22 March 1978
SUPERSEDING
MIL-P-6063A
4 August 1964

MILITARY SPECIFICATION

PACKAGING OF BATTERIES, STORAGE, CHARGED AND DRY UNCHARGED AND MOIST, GENERAL SPECIFICATION FOR

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

1. SCOPE

1.1 Scope. This specification covers the requirements for the preservation packaging, packing, and marking of aircraft batteries and cells, charged and dry or uncharged and moist.

1.2 Classification. The batteries shall be in the following types as specified in 6.2:

- Type I - Shielded - battery assembly completely enclosed in metal container.
- Type II - Unshielded - battery assembly enclosed in hard rubber, nylon or other non-metallic material.
- Type III - Individual cell.

2. APPLICABLE DOCUMENTS

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

SPECIFICATIONS

FEDERAL

- PPP-T-60 - Tape, Packaging, Waterproof
- PPP-T-76 - Tape, Packaging, Paper (For Carton Sealing)
- PPP-F-320 - Fiberboard, Corrugated and Solid, Sheet Stock (Container Grade) and Cut Shapes.
- PPP-B-576 - Box, Wood, Cleated Veneer, Paper Overlaid.
- PPP-B-601 - Box, Wood, Cleated Plywood.
- PPP-B-621 - Box, Wood, Nailed and Locked Corner.
- PPP-B-636 - Box, Shipping, Fiberboard.
- PPP-B-640 - Box, Fiberboard, Corrugated, Triple-wall.
- L-P-378 - Plastic Film.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: HQ AFLC CASO/LODS, Code 99, Federal Center, Battle Creek, MI 49016, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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MILITARY

- MIL-S-207 - Sulphuric Acid, Electrolyte, Packaging, Packing and Marking for Shipment.
- MIL-B-26701 - Bottle, Screw Cap and Carboys, Polyethylene, Plastic.

STANDARDS

- MIL-STD-105 - Sampling Procedure and Table for Inspection by Attributes.
- MIL-STD-129 - Marking for Shipment and Storage.

(Copies of specifications, standards, and drawings 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.

CODE OF FEDERAL REGULATIONS

Title 49, Parts 100-199

(Application for copies should be addressed to Superintendent of Documents, US Government Printing Office, Washington, DC 20402)

UNIFORM CLASSIFICATION COMMITTEE, AGENT

Uniform Freight Classification Rules

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

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification

(Application for copies should be addressed to the National Motor Freight Traffic, Tariff Order Section, 1616 P Street, NW Washington, DC 20036.)

3. REQUIREMENTS

3.1 Materials. Materials used shall be as specified herein. Pads and inserts used for protective and support purposes shall be constructed of weather-resistant fiberboard conforming to PPP-F-320, Triple Wall (TW) variety. The bursting strength of sheets combined to a thickness of one inch shall be from 1800 to 2000 pounds per square inch. Other materials may be used if the same protection is afforded the battery without increase in weight, cubage or cost. Tape for sealing shall conform to PPP-T-76 or PPP-T-60.

3.1.1 Reclaimed material shall be required to the maximum extent possible without jeopardizing the intended use of the item.

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3.2 Preservation/Packaging. Batteries and individual cells shall be preserved and packaged Level A or C as specified in the contract or order (see 6.2). Batteries and individual cells will be shipped in the following condition unless otherwise specified in the contract or order.

Lead-Acid	- Charged and dry
Nickel-Cadmium	- Discharged and moist
Silver Zinc (secondary)	- Discharged and dry

3.2.1 Level A. All vent caps and covers shall be tightened and vent holes closed by any suitable means. Vent caps employing rubber diaphragm valve or other plastic non-spillable device shall be protected in such a manner that strain shall not be imposed on the valve. Appropriate shorting devices will be installed on all batteries and cells required to be shipped in discharged condition.

3.2.1.1 Type I batteries will have inserts designed and installed per Figure 1 and 2 to protect battery top assembly inside the metal container. A minimum of one inch of cushioning material shall be placed between the battery (metal container) and the unit container. Pads and inserts consistent with battery design shall be placed on the top, bottom, and all four sides (per Figure 1 and 2).

3.2.1.2 Type II batteries shall have cushioned design similar to that required for Type I except that inserts, reference Figure 3 and 4, will be designed to prevent contact between posts and carrying handles, vent caps, and the unit container or inserts.

3.2.1.3 Type III cells will be individually wrapped in plastic bags conforming to L-P-378 if shipped moist to preclude leakage of electrolyte in case of cell rupture or inversion. Film thickness shall be 4 mil minimum. Cells will be individually enclosed in a double-faced corrugated fiberboard liner or sleeve which shall extend 1/2 inch above vent caps. Exterior of liner or sleeve shall be marked with arrows.

3.2.2 Level C. Batteries and cell containers shall be preserved and packaged in accordance with contractors best commercial practice if they will provide adequate protection against corrosion, deterioration, and physical damage during shipment from the supply source to the first receiving activity for immediate use.

3.3 Packing. Batteries and cells preserved and packaged at Level A or C shall be packed Level A, B, or C as specified in the contract or order. Exterior containers shall be of minimum tare and cube, consistent with protection required and should contain identical quantities to the extent practical.

3.3.1 Level A. Batteries and cells preserved and packaged as specified in paragraph 3.2.1 shall be packed in overseas type shipping containers conforming to PPP-B-576, PPP-B-601, PPP-B-621, PPP-B-636, and PPP-B-640. Containers shall be closed and strapped in accordance with applicable specification. As far as practical, containers shall be of uniform shape

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and size. Shipments of wet batteries will have a minimum of one inch fiberboard on all sides, top and bottom, and the required amount of vermiculite to absorb battery liquid in case of spillage. Shipments over 200 pounds will be packed on a skidded base.

3.3.1.2 Physical protection. Suitable physical protection shall be provided to prevent damage or defacing of the unit during shipment or storage by the use of fiberboard, or other suitable material.

3.3.2 Level B. Batteries and cells preserved and packaged as specified in paragraph 3.2.1 shall be packed in domestic type shipping containers conforming to PPP-B-576, PPP-B-601, PPP-B-621, PPP-B-636, and PPP-B-640. Containers shall be closed and strapped in accordance with applicable specification. Fiberboard material should be weather resistant.

3.3.3 Level C. Batteries and cells preserved and packaged in accordance with paragraph 3.2.1 shall be packed in exterior shipping containers in a manner which shall insure safe transportation at the lowest rate to the point of delivery. Containers shall comply with Uniform Freight Classification or National Motor Freight Classification, as applicable, and shall meet the rules of the mode of transportation selected.

3.4 Electrolyte. Electrolyte shall be prepared for shipment in conformance with MIL-B-26701, or MIL-S-207, as applicable for Type A and Type B Polyethylene bottles.

3.4.1 Containers. The number and size of polyethylene containers of electrolyte shall be determined by the size and type of battery procured. Total quantity shipped shall be governed by the mode of transportation and CFR-49, parts 100 through 199.

3.5 Marking. In accordance with MIL-STD-129 and markings required by the contract or order. Unit containers for batteries and cells shall be marked with arrows on all sides. In addition, "top" markings will be placed on all the tops of all unit containers.

3.6 Workmanship. All workmanship shall be in accordance with the best commercial practice. Applicable parts shall be uniformly constructed and shall be free from cuts, tears, chafed spots, and other imperfections which could impair their usefulness and from contamination such as dirt, grease, oil, or foreign matter.

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.

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4.2 Inspection conditions. Unless otherwise specified, all inspections shall be performed in accordance with the test conditions specified in 4.3 and 4.4 of this specification.

4.3 Quality conformance inspection.

4.3.1 Inspection of product for delivery. Inspection of product for delivery shall consist of those examinations and inspections in 4.4 of this specification.

4.3.2 Inspection lot. An inspection lot, as far as practicable, shall consist of all units of the same type, class, and size with the same level of packaging and packing.

4.3.2.1 Time period lot sampling. At the start of any specific production period, an estimate shall be made of the output of the processing line for the period. This estimate output shall be considered the lot size for the performance of inspection. This estimate and the associated lot size shall be revised as necessary to assure reasonable accuracy in forecasting the actual output of the line. If any article or package is found nonconforming in one or more aspects, it shall be cause for rejection. The rejection shall apply to all items or operations completed during the production period, regardless of the stage of completion which those items may have reached subsequent to the operation which was cause for the rejection.

4.3.2.2 Sampling. Sampling shall be in accordance with MIL-STD-105, using inspection level 1, AQL 4 percent unless otherwise specified in the procuring document.

4.4 Methods of examination and test.

4.4.1 Examination. Sample of packaging, including preparation for delivery as specified in Section 3 thereof shall be examined for the following defects:

Materials.....	3.1
Preservation/Packaging.....	3.2
Packing.....	3.3
Electrolyte.....	3.4
Containers.....	3.4.1
Marking.....	3.5
Workmanship.....	3.6

4.4.2 Inspection. All packaging and marking, and all materials thereof shall be subject to inspection for conformance to this specification. The passing as satisfactory of any detail or procedure of materials shall not relieve the contractor of responsibility for faulty workmanship or materials which may be discovered at any time prior to final acceptance.

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4.4.2.1 Visual and dimensional inspection. Each of the samples selected in accordance with 4.3.2.2 shall be visually and dimensionally inspected. Any sample containing one or more visual or dimensional defects shall be rejected, and if the number of the defective containers in any sample exceeds the acceptance number for that sample, the lot shall be rejected.

5. This section not applicable.

6. NOTES

6.1 Intended use. This specification is intended for use in the preparation of shielded and unshielded aircraft batteries and individual cells for shipment to government receiving activities.

6.2 Ordering Data. Procurement documents should specify the following:

- (a) Title, number and date of this specification.
- (b) Levels of packaging and packing for batteries, cells, and electrolyte
- (c) Exceptions to battery/cell condition (ref para 3.2).

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.

Custodian:
Army - GL
Navy - AS
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Preparing Activity
Air Force - 99

(Project 6140-0457)

Review Activity
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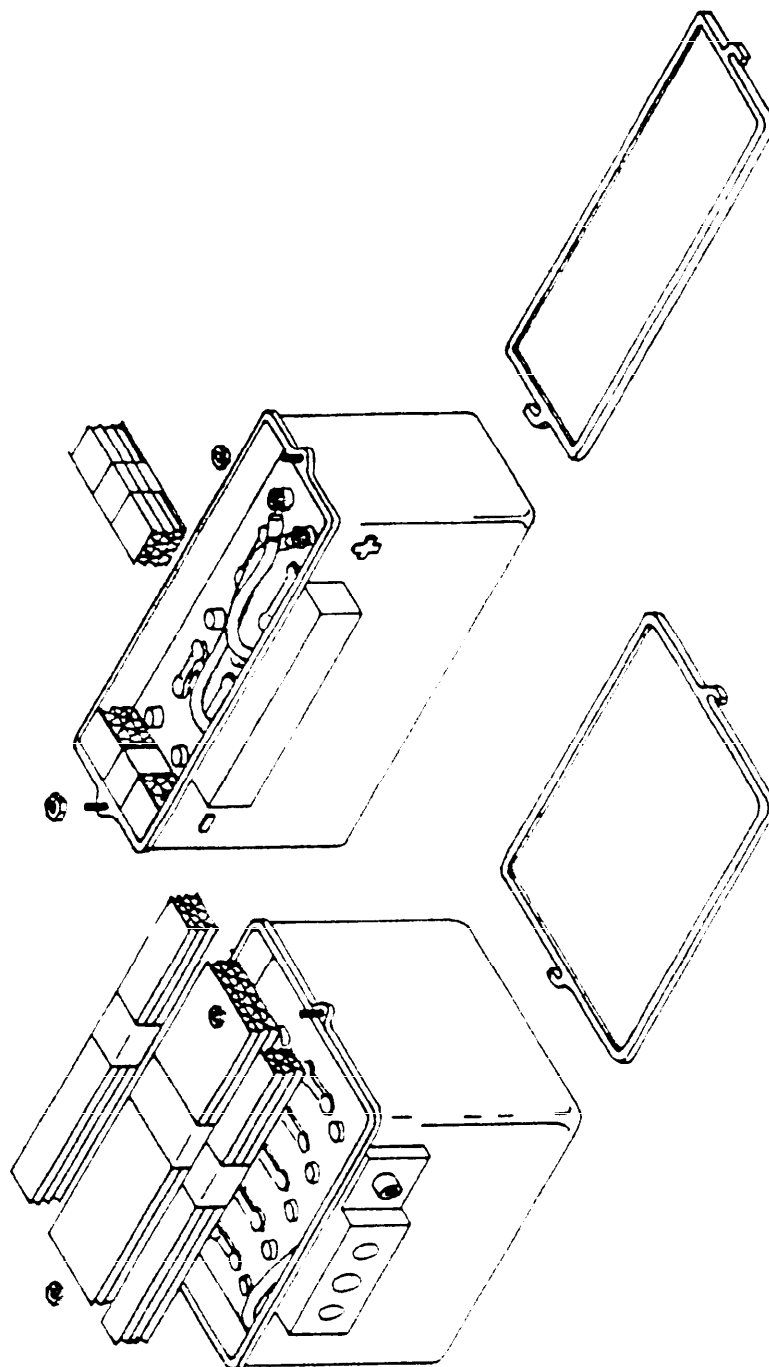


FIGURE 1. Typical Top Pad Design Type I Battery

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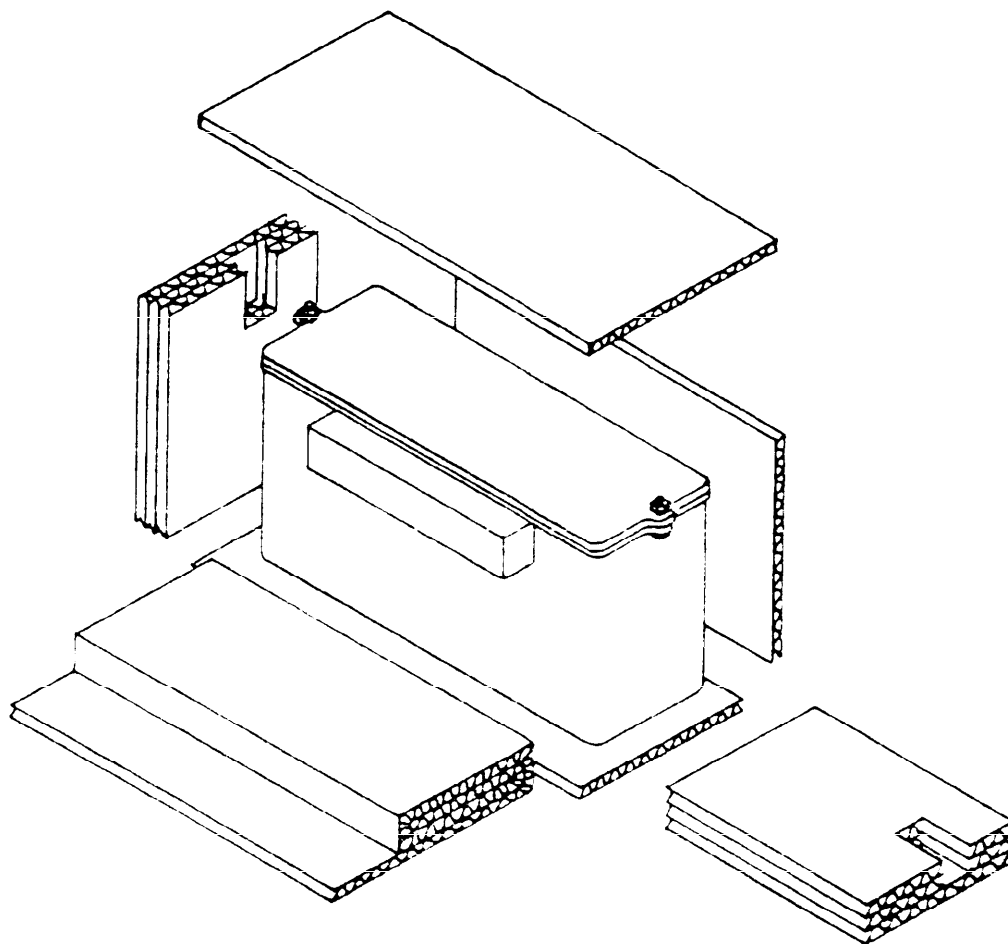


FIGURE 2. Typical Insert Design Type I Battery

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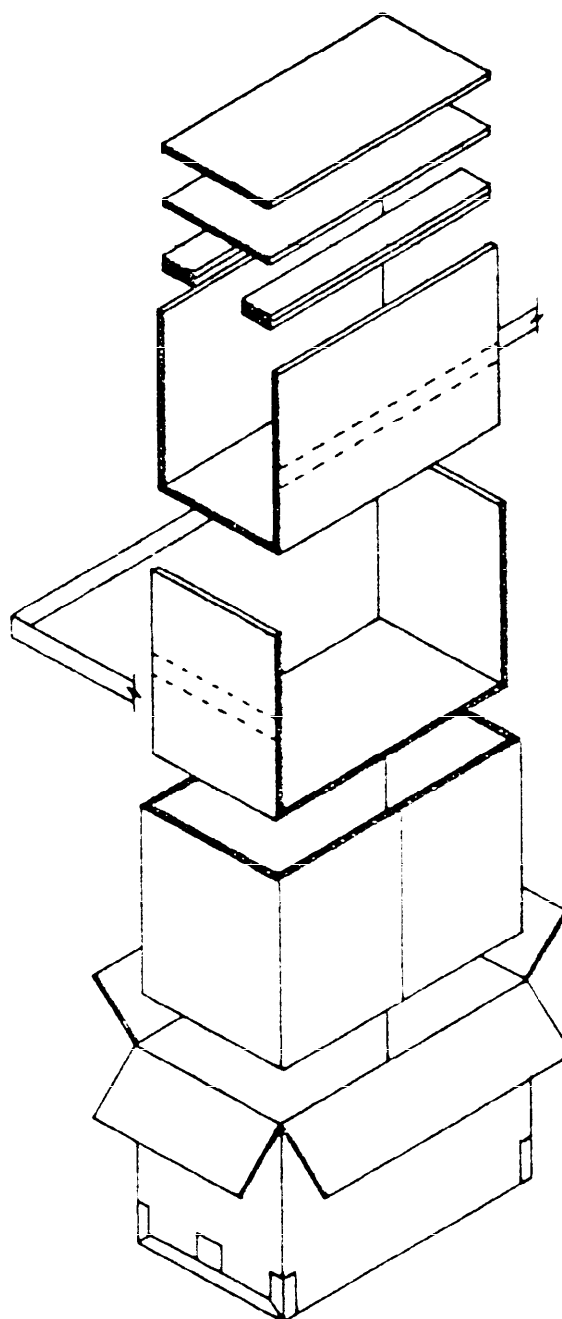


FIGURE 3. Typical Insert Design Type II Battery

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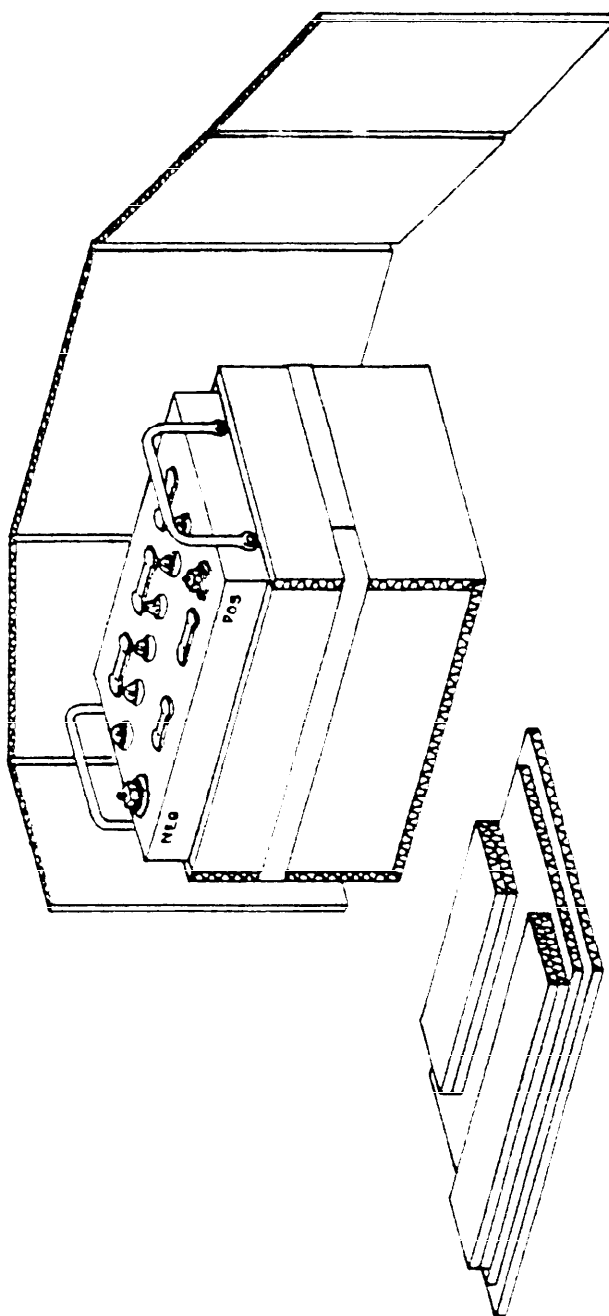


FIGURE 4. Typical Insert Design Type II Battery

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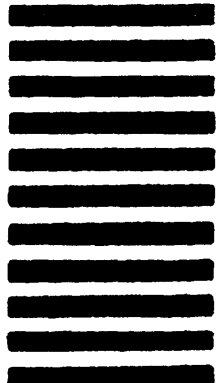
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