INCH-POUND

MIL-STD-40076A (MI)
30 MAY 2018
SUPERSEDING
MIL-STD-40076(MI)
17 December 1997

DEPARTMENT OF DEFENSE

STANDARD PRACTICE

PRESERVATION AND PACKING OF ROCKET AND MISSILE SYSTEMS EQUIPMENT FOR SHIPMENT

AMSC N/A
AREA-PACK

FOREWORD

1. This standard is approved for use by all Departments and Agencies of the Department of Defense (DoD).

2. This standard details the general requirements for preservation, packing, and loading for shipment of rocket and missile systems ground support equipment and hazardous items for worldwide movement and storage.

3. Comments, suggestions, (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, U.S. Army Aviation and Missile Command, ATTN: RDMR-SET, Redstone Arsenal, AL 35898-5000 or Hattie.j.Strong.civ@mail.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at https://assist.dla.mil.

CONTENTS

CONTENTS

CONTENTS

CONTENTS

1. SCOPE

1.1 Scope. This standard establishes the general requirements for preservation, packing, and loading for shipment of rocket and missile systems ground support equipment and hazardous items for worldwide movement and storage.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, and 5 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements cited in sections 3, 4, and 5 of this standard, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following standards and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

2.2.2

DEPARTMENT OF DEFENSE STANDARDS

FEDERAL

MIL-STD-3010	Test Method Standard Test Procedures For Packaging Materials
FED-STD-191	Textile Test Methods

MILITARY

MIL-STD-129	Standard Practice for Military Marking
MIL-STD-709	Standard Practice for Ammunition ColorCoding
MIL-STD-2073-1	DoD Standard Practice for Military Packaging
MIL-STD-147	Palletized Unit Loads

(Copies of these documents are available online at http://quicksearch.dla.mil).

2.3. Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issue of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless

otherwise specified, the issue of a document not listed in the DODISS is the issue of the document cited in the solicitation (see 6.2).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D3330/D3330M	Standard Methods for Peel Adhesion of Pressure Sensitive Tape at 180 Degree Angles
ASTM D3816/D3816M	Standard Test Method for Water Penetration Rate of Pressure Sensitive Tape
ASTM D3654/D3654M	Standard Test Method for Holding Power of Pressure Sensitive Tape
ASTM D3759/D3759M	Standard Test Method for Tensile Strength and Elongation of Pressure Sensitive Tape

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

TECHNICAL ASSOCIATION OF PULP AND PAPER INDUSTRY (TAPPI)

TAPPI T 414	Internal Tearing Resistance
TAPPI T 456	Wet Tensile Breaking Strength of Paper Board

(Application for copies should be addressed to the Technical Association of Pulp and Paper Industry, 15 Technology South Parkway, Norcross, GA 30092)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. DEFINITIONS

3.1 Camouflage pattern painting (CPP). Camouflage painting for combat support equipment. Any combination of colors that will render an item “invisible” to an enemy by blending with the environment

3.2 Chemical agent resistant coating (CARC). Coatings that are approved for combat equipment, combat support equipment, tactical wheeled vehicles, aircraft, and essential ground support equipment.

3.3 Desiccant. A soluble or insoluble chemical substance that has such a great affinityfor

water that it will withdraw water from a great many fluid materials. A bagged, chemically inert, dehydrating agent.

3.4 Drawdown. Reduction of the moisture content of air by withdrawing water through dehumidification or desiccant use.

3.5 Exterior pack. A container, bundle, or assembly which is sufficient by reason of material, design, and construction to protect material during shipment and storage. This can be the unit pack or a container with any combination of unit or intermediatepacks.

3.6 Hazardous materials. A material, substance, or waste which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designated.

3.7 Intermediate pack. A wrap, box, or bundle which contains two or more unit packs of identical items.

3.8 Levels of protection. The levels of protection which apply equally to preservation and packing are detailed in the following paragraphs.

3.8.1 Level A. Level A designates the maximum level of preservation and packing required to meet the most severe worldwide shipping, handling, and storage conditions. Preservation and packing will be designed to protect material against direct exposure to extremes of climate, terrain, operational, and transportation environments without protection other than that provided by the pack.

3.8.2 Level B. Level B designates the intermediate level of preservation or packing required for the protection of materiel against physical damage and deterioration under anticipated favorable conditions during worldwide shipping, handling, and storage. Preservation and packing will be capable of protecting material not directly exposed to extremes of climate, terrain, and operational transportation environments.

3.9 Marking. Application of numbers, letters, labels, tags, symbols, or colors for handling or identification during shipment and storage.

3.10 Packaging. The processes and procedures used to protect material from deterioration, damage, or both, and includes cleaning, drying, preserving, packaging, marking, and unitization.

3.11 Packing. Assembling of items into a unit, intermediate, or exterior pack with necessary blocking, bracing, cushioning, weatherproofing, reinforcement, and marking.

3.12 Preservation. Application of protective measures, including cleaning, drying, preservative materials, barrier materials, cushioning, and containers when necessary.

3.13 Skid base. A wood or metal platform support on wheels, legs, or runners used for handling and moving material.

3.14 Static load. A nonvarying load; exerted by a mass at rest.

3.15 Unit pack. A first tie, wrap, or container applied to a single item or a quantity thereof, or to a group of items of a single stock number, preserved or unpreserved, which constitutes a complete or identifiable package. The unit pack should be over packed for shipment unless the unit container is specifically designed to provide shipping protection.

4. GENERAL REQUIREMENTS

4.1 General requirements.

4.1.1 Class I Ozone Depleting Chemicals (ODCs). Use of Class I Ozone Depleting Chemicals (ODCs) shall be avoided.

4.1.2 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

4.2 Packaging data sheets. When packaging data sheets are available for specified items of equipment, the requirements of this standard shall apply to the extent referenced therein. Processing instructions supplemental or additional to the requirements of this standard may also be included in packaging data sheets.

4.3 Packaging. Packaging shall provide the maximum practical protection, either level A or B, as designated, by means of the specified processing, against corrosion, deterioration, or physical functional damage during shipment and storage. Tape, or method of sealing, shall be uniformly applied.

4.4 Preparation prior to processing. Repairs and tests shall have been completed prior to processing. Associated equipment shall be installed and all adjustments shall be made to permit the item to be operated or shipped. Any painted surface (interior or exterior) that has defective or damaged paint film shall be repainted with materials of the same type and quality as the original application. Repainted spots shall blend inconspicuously with surrounding areas.

4.5 Reprocessing of equipment with controlled humidity. Shelters and van bodies processed for controlled humidity shall be reprocessed when the humidity indicator shows a relative humidity (RH) of 30 percent or more within 24 hours. Readings shall be documented and enclosed with the record forms secured to the exterior of processed unit(s) (see 5.5).

4.6 Dehumidified equipment. Free-breather systems, desiccant charges, and humidity indicators shall be properly installed and all sealing shall be adequate to ensure protection from damage due to corrosion.

4.7 CARC/CPP. Chemical agent resistant coatings (CARC) shall be used for all combat equipment, combat support equipment, tactical wheeled vehicles, aircraft, and essential ground support equipment. Three color camouflage pattern painting (CPP) shall be used when patterns

are available. When patterns are not available, base coats of polyurethane paint in colors that contribute to camouflage shall be applied.

4.8 Tags. Tags required for equipment processing shall be made of paper and not metal bound; however, tags used in controlled humidity areas may be metalbound.

4.9 Sealing tape. When required, sealing tape shall perform within a temperature rangeof -54º to 52ºC (Celsius) -65º to 125º F (Fahrenheit) and shall not require any preparation prior to application. The tape should also display the following:

a. Tensile strength (lbs/in width)	10 minimum
b. Elongation (percentage)	30 minimum
c. Water penetration rate (quart(qt)/100 in^2)	0.5 minimum
d. Holding power (in/24 hours(hr))	
low temperature slippage	0.25 maximum
high temperature slippage	0.25 maximum
e. Adhesion Peel (oz/in width)	
to steel	17 minimum
to backing	9 minimum
to coating	12 minimum

4.10 Barrier material. Barrier material may be required when tape and other means are not feasible for sealing openings. It shall be non-toxic and water vapor-proof. There shall be no leakage, or gradual escape or entry, at double seamed junctures.

4.11 Blocking, bracing, anchoring, cushioning, and waterproofing. Blocking, bracing, anchoring, cushioning, and waterproofing shall be compatible with the load to be supported and the size, shape, and strength of bearing areas.

4.12 Palletization. When required, palletization shall be as necessary to provide load stability using patterns appropriate to the load weight and dimensions with no overhang. The size and weight limits shall be appropriate to the carrier and the strapping shall be appropriate to the load type, weight, and size.

4.13 Containers. Unit, intermediate, and exterior containers shall be as necessary to provide load stability using size, weight, and type appropriate to the load.

5. DETAILED REQUIREMENTS

5.1 Preservation. Preservation shall be either level A or B, as specified.

5.1.1 Level A.

5.1.1.1 Cleaning. Cleaning and drying procedures shall result in exterior and interior surfaces free of dirt, dust, grease, and any other contaminants. Liquid oxygen lines and related components shall be purged and no petroleum solvents, compounds, or other organic materials shall be applied to line caps, threaded surfaces, couplings, or outlets of liquid oxygen equipment.

5.1.1.2 Preservative applications.

a. Unpainted metal surfaces shall be coated with an appropriate preservative to protect against corrosion, deterioration, and physical functional damage during storage of not less than one and not more than five years, and during multiple handling and shipments associated with the military distribution system. Coatings must be uniformly applied to cover all necessary surfaces. All grease fittings shall be lubricated, or injected with the lubricant, as specified.

b. Preservation of repair parts shall be in accordance with Appendix B.

c. Modification kits shall be adequately preserved and placed in interior containers appropriate to the level of item with which they are associated.

5.1.1.3 Disassembled parts. When disassembly is permitted, parts shall be provided with level A protection, as appropriate, against corrosion, deterioration, and physical damage. When practical, the packaged parts shall be placed in a protected location on or in the item from which they were removed and secured in a manner to prevent movement and damage during shipment.

5.1.1.4 Shelters and van bodies.

5.1.1.4.1 Interior. Equipment shall be secured with strapping or locking devices, where provided. Tape, or the equivalent, shall be used to immobilize locking devices and shall be interlaced between locking devices as practical. Tape, or the equivalent, shall be applied to glass surfaces (dials, indicators, and such). Disconnected cable connectors and hose ends not provided with covers or plugs shall be covered with tight-fitting caps or plugs. All openings, except pressure relief valves and the vent to which the breather hose is attached, shall be sealed with tape, or the equivalent. Openings which are impractical to seal shall be covered with barrier material and the edges sealed with tape, or the equivalent. As required, additional immobilization shall be accomplished by blocking, bracing, strapping, or taping. Abrasive or corrosive action shall be prevented by the use of cushioning pads or barrier material. Shelters and van bodies requiring water vapor-proof enclosure with desiccant and preservatives, as required, shall be processed accordingly with a breather activated dehumidification system installed in accordance with Appendix A (see 5.3.2*).* In addition, a static load of desiccant shall be distributed within the equipment (see 5.1.2*).* The static load shall be computed by using 1.2 units (that quantity which will absorb, at equilibrium with air at 25 ºC, at least 3 grams of water vapor at 20 percent RH and 6 grams of water vapor at 40 percent RH) of desiccant for each cubic foot of air within the equipment. The desiccant for the static load shall be placed in containers 12 inches

above the floor. Placement of the static load shall be accomplished simultaneously with activation of the breather systems. A humidity indicator shall be installed in each shelter or van (see 5.1.1.5). This indicator shall be clearly visible from the exterior of the equipment.

5.1.1.4.2 Exterior. Equipment, such as spring-mounted air conditioners, shall have the mounting bolts loosened and wooden blocks inserted between the shelter or van frame members and the equipment frame to relieve spring tension. The mounting bolts shall be tightened, and the doors and covers shall be closed. All openings and seams except pressure relief valves and the vent to which the breather hose is attached shall be sealed with tape or the equivalent. Openings which are impractical to seal shall be covered with barrier material, and the edges sealed with tape, or the equivalent. Equipment such as cable reel assemblies, ladders, and antennas shall be secured with their designated locking devices. Apply preservatives in accordance with 5.1.1.2. Secure all cable connectors and covers.

5.1.1.5 Wheeled and tracked vehicles. Trailers, trailers chassis, and trailer dollies shall be processed in accordance with the contract. Carried equipment shall be secured with locking devices provided and with strapping and blocking, as required. (Process van bodies and shelters in accordance with 5.1.1.4.) Other carried equipment requiring preservation with a water vapor-proof enclosure, with desiccant and preservatives as required, shall be processed according to the contract, or in an equally appropriate manner. Desiccant shall be secured to prevent movement and shall not be placed in direct contact with equipment. Openings not equipped with gasketed covers shall be sealed with tape, or the equivalent. Humidity indicators shall be installed in all desiccated compartments. Secure quick release pins, chains, and the like, as required, to prevent damage and abrasive action. Apply preservatives. Secure all cable connections and electrical outlet covers. Fire extinguishers mounted on vehicle exteriors shall be removed, wrapped in barrier material, and placed in overseas type containers. The containerized fire extinguishers shall be secured inside the vehicle or strapped to the vehicle.

5.1.1.6 Equipment requiring controlled ventilation. Equipment requiring controlled ventilation (excluding equipment covered in 5.1.1.4) shall have all exterior openings, except floor or drain openings, sealed with tape, or shall be shrouded with material. Shrouding shall be watertight on the top, ends, and sides, and shall be secured with strapping or the equivalent.. Barrier rupture or abrasive damage shall be prevented by securing cushioning pads over sharp edges, corners, or protrusions, and between banding and shrouding material. Cushioning pads shall be water resistant and compatible with the surfaces to which they areapplied.

5.1.1.7 Basic issue items. Basic issue items for military vehicles, carriages, and equipment shall be packaged and packed and secured to the floor inside the vehicle in such a way as to ensure they will not be damaged by shock, abrasion, or corrosion during storing and shipping.

5.1.1.8 Engines. Engines that are operated in connection with loading or moving vehicles shall be reprocessed. Unmounted gasoline and diesel engines shall be cleaned, preserved, and packaged to ensure that they will not be damaged by shock, abrasion, or corrosion during storing and shipping.

5.1.1.9 Air compressors. Air compressors shall be cleaned, preserved, and packaged inorder to prevent damage from abrasion, shock, or corrosion during shipping and storing.

5.1.1.10 Electric cables. Electric cables shall be packaged in such a way as to prevent any damage, deterioration, or corrosion during shipment and storage.

5.1.1.11 Other equipment.

a. Preservation of repair parts and/or spare parts shall be in accordance with Appendix B.
b. Modification kits shall be preserved to prevent any corrosion, deterioration, and physical damage during shipment and storage.

5.1.1.12 Hazardous items. Preservation of hazardous items shall be in accordance with packaging drawings or packaging data sheets, as applicable, and the hazardous materials regulations of the Department of Transportation.

5.1.2 Level B. For items specified in 5.1.1.8 through 5.1.1.12, processing shall be in accordance with level B requirements of applicable referenced specification. The desiccated breather assembly and static charge specified in 5.1.1.4.1 for shelters and van bodies are not required when total shipment time does not exceed 30 days (see 5.2.1.5).

5.2 Packing. Packing shall be either level A or B, as specified.

5.2.1 Level A. Packed items shall be in conformance with 5.2 through 5.2.1.7. Containers shall be built and designed to provide protection against environmental and physical functional damage during shipping and storage, and as designated in table C.II, Appendix C, MIL-STD-2073-1. Closure and strapping shall be sufficient to prevent slippage during shipment and storage. Skids must be used on items weighing more than 200 pounds.

5.2.1.1 Shelters. Shelters shall be packed in crates for marine transportation. For air transportation, shelters shall be mounted on skid bases.

5.2.1.2 Engines. Unmounted engines shall be packed in containers as designated in table C.II, Appendix C, MIL-STD-2073-1. If applicable, special containers designed for specific engines shall be used.

5.2.1.3 Air compressors. Unmounted air compressors shall be packed in crates, built and designed to ensure protection from damage due to corrosion, shock, or abrasion, as dictated in table C.II, Appendix C, MIL-STD-2073-1.

5.2.1.4 Electric cables. Electric cables shall be packed without using fiberboard and paper overlaid veneer containers, and according to the characteristics of level, weight, dimensions, and particular use. Packing shall ensure protection from damage due to shock, abrasion, or corrosion during shipping and storing.

5.2.1.5 Other equipment. Equipment preserved and packaged in accordance with 5.1.1.11 shall be packed in containers in accordance with 5.2.1.7, mounted on skids and other elevated

supports, as applicable, and built and designed to ensure protection from damage.

5.2.1.6 Hazardous items. Packing of hazardous items shall be in accordance with packaging data sheets, as applicable, and the hazardous materials regulations of the Department of Transportation.

5.2.1.7 Container Construction. Containers shall be constructed from materials appropriate to the characteristics of the item (preservation and packing, level, weight, dimensions, and mode of transportation). The size should be such that the contents fill at least 80 percent of the space. Exterior containers weighing more than 200 pounds gross weight shall be provided with skids and closed and strapped appropriately to protect the contents from damage during shipment or storage.

5.2.2 Level B.

5.2.2.1 Shelters. Shelters shall be mounted on skids for air shipment in such a way as to ensure protection from damage and corrosion.

5.2.2.2 Engines. Unmounted engines shall be packed in containers selected from 5.2.2.6, or, if applicable, in special containers designed for specific engines in such a way as to ensure shipping and storage without damage and corrosion.

5.2.2.3 Air compressors. Unmounted compressors shall be packed in containers, as designated in table VII, Appendix A of MIL-STD-2073-1, that are designed and constructed in such a way as to ensure shipping and storing without damage and corrosion.

5.2.2.4 Electric cables. Electric cables shall be packed to ensure shipping and storing without damage or corrosion in containers specified in table C.II, Appendix C, MIL-STD-2073-1.

5.2.2.5 Other equipment. Equipment preserved and packaged in accordance with 5.2.2 shall be packed in accordance with contract specifications or drawings, packed in containers selected from 5.2.2.6, and mounted on skids, and other elevated supports, as applicable.

5.2.2.6 Performance oriented packing (POP) for hazardous materials. Packaging and marking for hazardous material shipments shall be in accordance with requirements stated in the contract with each unit pack containing one of the units of issue and appropriately marked.

5.2.2.7 Containers. Except as otherwise specified herein, exterior shipping containers shall protect the contents from damage due to shock or abrasion, and shall be appropriately closed and strapped. Any container exceeding 200 pounds gross weight shall be provided with skids or pallet base, as applicable. Table C.II, Appendix C, MIL-STD-2073-1, lists the types of containers that are appropriate according to levels of protection and maximum weight of the contents.

53 Marking. Marking shall be in accordance with MIL-STD-129 and as specifiedherein.

5.3.1 Markings for vehicle carried equipment. All desiccated compartments shall belabeled on the exterior. When a humidity indicator is placed inside a compartment, a tag reading "HUMIDITY INDICATOR ATTACHED TO INSIDE OF DOOR (OR COVER)" shall be secured adjacent to the exterior label.

5.3.2 Markings for shelters and van bodies. A label shall be applied to the exterior of the main entry door of a desiccated shelter or van body (see 5.1.1.4). When a humidity indicator is attached to the inside of the door, adjacent to the stencil or label: "HUMIDITY INDICATOR ATTACHED TO INSIDE OF DOOR." Attach a tab or label to the exterior of the main entry door which reads: "THIS EQUIPMENT PRESERVED WITH A 3-INCH BREATHER PORT THROUGH A DESICCANT BED. FOR STORAGE OR RESHIPMENT, THE HUMIDITY INDICATOR SHALL BE INSPECTED AND DESICCANT REPLACED IF NECESSARY."

5.3.3 Hazardous item markings. Markings for hazardous items shall be in accordance with packing drawings, packaging data sheet, and MIL-STD-129, as applicable, and the hazardous material regulations of the Department of Transportation.

5.3.4 Missile and rocket ammunition containers. If applicable, container marking shall be in accordance with the contract. Containers for which drawings are not applicable shall be marked with appropriate requirements of paragraphs 5.3.4.1 and 5.3.4.2, and MIL-STD-129.

5.3.4.1 General. Identification and data markings shall be of a color that provides maximum contrast to the container color. Color codes shall be in accordance with MIL-STD-709 and shall be applied as squares, not to exceed four inches in size, at diametrically opposite corners (ends, sides, and on top -- four places, total). Markings shall not be placed under or on strapping or other obstructions which could cause difficulty in reading. Each marking shall be in capital letters of equal height, 0.75 inch minimum, and 2.75 inches maximum, for containers over 3x2x2 feet, and 0.25 inch minimum to 0.75 inch maximum for smaller containers.

5.3.4.2 Required markings. The minimum required markings are:

a. National Stock Number (NSN).
b. Department of Defense Identification Code (DODIC).
c. Official nomenclature and model designator.
d. Quantity and unit of issue.
e. Gross weight (to nearest pound).
f. Cube (to nearest 0.10 cubic foot).
g. Month and year of loading and packing.
h. Department of Transportation (DOT) shipping name.
i. Serial number.
j. Lot number.
k. Color code.

When applicable, the DODIC will be applied with the NSN and on each end of the containers. As required, storage temperature limits (forward/aft end for missiles and rockets), dimensions, DOT labels, and contract data marking will be applied. Figures 1, 2, and 3 indicate relative positions of the various markings (see 5.3.4).

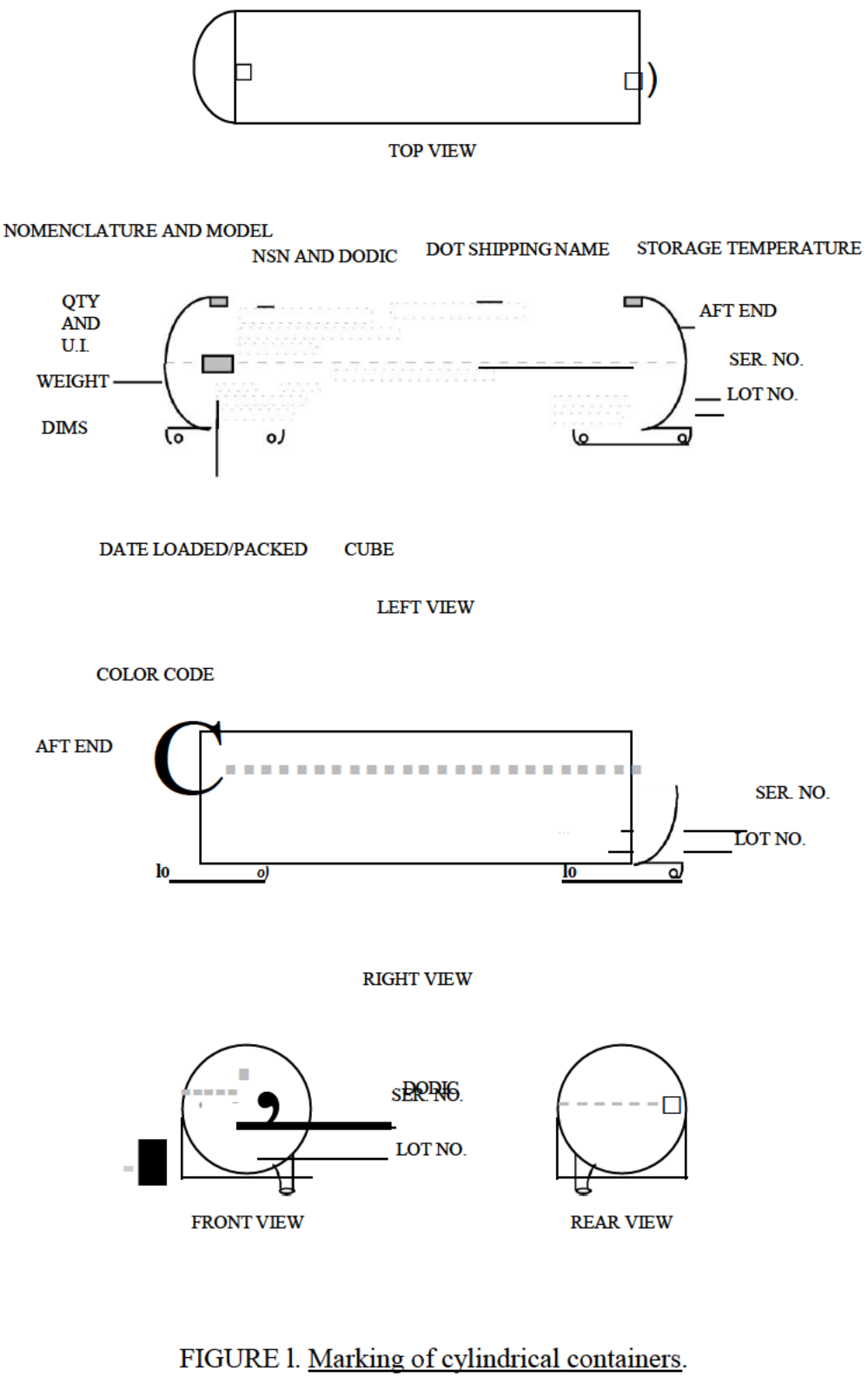
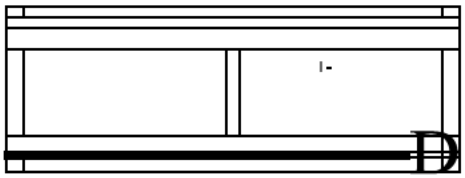


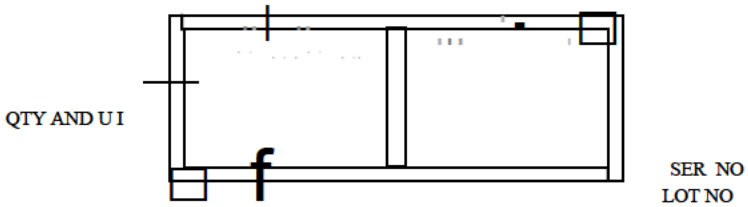
FIGURE 1. Marking of cylindrical containers.

CONTRACT DATA MARKINGS



REAR VIEW

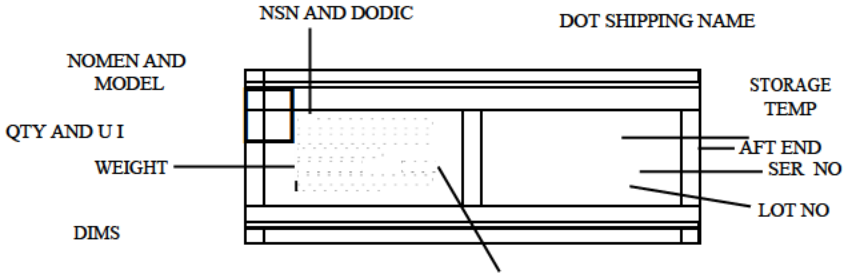
NOMENCLATURE AND MODEL
NSN AND DODIC
DOT SHIPPING NAME



QTY AND U I
SER NO
LOT NO

STORAGE TEMPERATURE

TOP VIEW

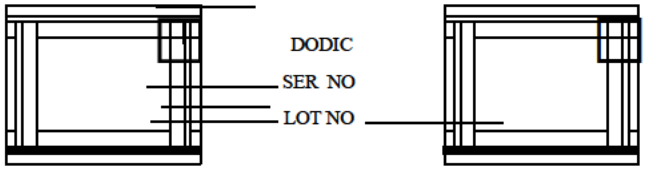


DATE LOADED/PACKED

CUBE

FRONT VIEW

COLOR CODE



FWD END

AFT END

FIGURE 2. Marking of rectangular containers.

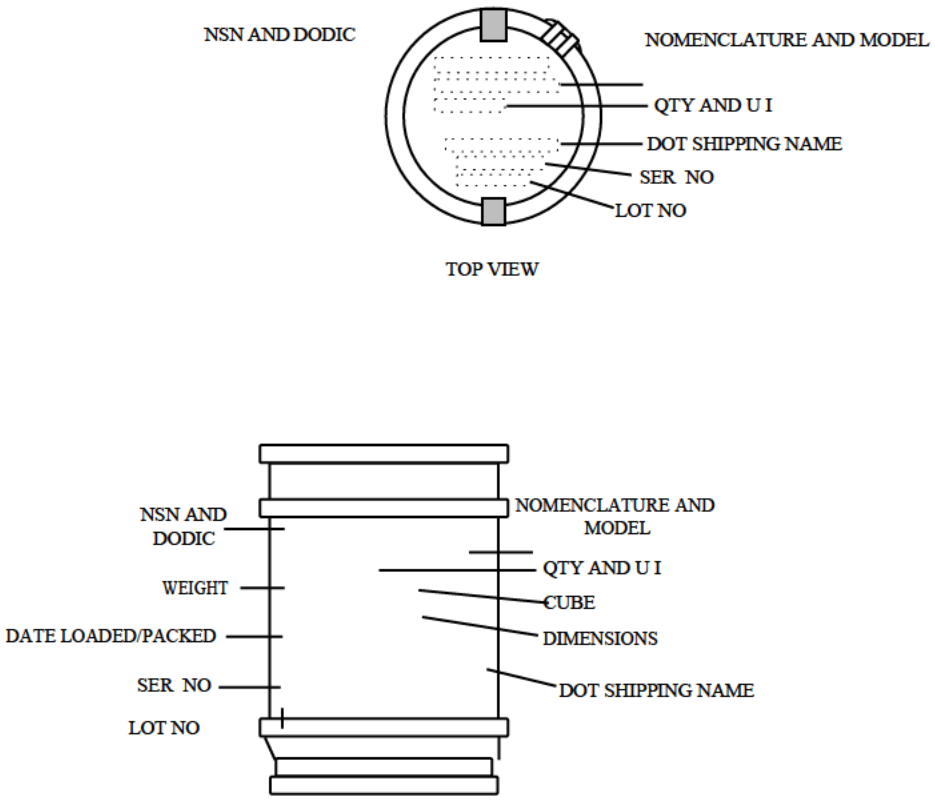


FIGURE 3. Marking of drums.

5.4 Loading.

5.4.1 Rail shipment. Loading of equipment for rail shipment shall be in accordance with the applicable Army Materiel Command carloading drawing. When car loading drawings are not available, the applicable loading rules of the Association of American Railroads shall be used. Hazardous materials and substances shall be packaged and packed in accordance with current reference regulations applicable for the mode of transportation and destinationinvolved.

5.4.2 Highway shipment. Loading of equipment for highway shipment shall be in accordance with the applicable Army Materiel Command truck loading drawing cited in the contract. When truck loading drawings are not available, the applicable American Trucking Association publications shall be used.

5.4.3 Aircraft shipment. Shipments shall comply with the requirements of the load officer or his authorized agent. Hazardous materials and substances shall be packaged and packed in accordance with current reference regulations applicable for the mode of transportation and destination involved.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. This standard is intended to be used in support of packaging data sheets to the extent specified therein, or when specified in the absence of the packaging data sheets, it will provide basic requirements for preservation, packing, and loading of missile weapon system equipment.

6.2 Issue of DoDISS. When this statement is used in acquisition, the applicable issue of the DoDISS must be cited in the solicitation (see 2.2.1 and 2.3).

6.3 Subject term (keyword) listing.

Boxes, shipping
Breather, free
CARC/CPP
Containers
Crates, shipping
Package
Shipping and loading
Vent, free breathing

6.4 Metric equivalents. Metric equivalents, in accordance with FED-STD-376, are acceptable for use in this document.

INSTALLATION OF A STATIC-FREE BREATHER DEHUMIDIFICATION SYSTEM

A.1 SCOPE

A.1.1 This Appendix provides information on installation of a static-free breather dehumidification system. This Appendix is a mandatory part of the standard. The information contained herein is intended for compliance.

A.2 APPLICABLE DOCUMENTS

A.2.1 Government documents.

A.2.1.1 None.

A.3 REQUIREMENTS

A.3.1 Components.

A.3.1.1 Breather vent. Devise and insert a suitable temporary vent assembly into the wall of the shelter or van when a vent is needed for attaching the free breatherassembly.

A.3.1.2 Free breather assemblies. Use static-free breather assemblies.

A.3.1.3 Desiccant. Use a desiccant with an absorption capacity range of 5.5 percent at 10 percent RH to 33 percent at 80 percent RH. Use a minimum of 0.9 units (that quantity which will absorb, at equilibrium with air at 25ºC at least 3 grams of water vapor at 20 percent RH and 6 grams of water vapor at 40 percent RH) of desiccant per cubic foot of air contained in the shelter, unless it is known that a single set of conditions listed in table A-I will apply for the period of time that the equipment is expected to remain desiccated (see A.3.2.2).

TABLE A-I. Desiccant requirements for free breather system.

Climatic region	Units of desiccant per cubic foot[1]	
	Summer	Winter[2]
Tropic	.9	.9
Continental and Maritime	.9	.6
Arctic and Highlands	.6	.4
Ice Cap	.4	.4

1. The volume of air to be desiccated shall be considered as that which is free to flow in and out through the free breather as a result of expansion and contraction. This volume shall be computed as $V = V_1 - (V_2 + V_3 + V_4 + ...)$ where V_1 is the internal cube (length X width X height) of the shelter, V_2 is the volume of air displaced by equipment, V_3 is the volume of air displaced by tightly closed chests, boxes, and cabinets, V_4 is the volume of air displaced by benches and desks. The volume will vary; however, in general, electronic and mechanical equipment displace 25 percent of their cube (V_2), closed cabinets and chests having relatively tight closures displace 90 percent of their cube (V_3), and benches and desks displace from 5 to 10 percent of their cube (V_4).

2. Northern hemisphere, 1 October through 31 March.

A.3.2 Installation.

A.3.2.1 Free breathing vent. An emergency access hatch, a shelter control window, or some other easily removed panel can be removed to provide an opening for a temporary vent if required (see A.3.1.1). Use of an adapter plate for mounting the vent in the opening will provide a complete seal allowing air to enter only through the vent tube.

A.3.2.2 Free breather assembly. Locate the free breather assembly in the shelter as centrally as possible. Secure the assembly to the shelter so that it will not be displaced or damaged during transportation and handling. Secure external lines to the free-breather assembly to prevent kinking or flattening.

A.3.2.2.1 Desiccant bag. Place the desiccant in a container that will allow free flow of air through it when it is lowered into the breather assembly.

A.3.2.2.2 Assembly requirements. Install a free breather dehumidification system for each 800 ± 50 cubic feet of air contained in the shelter. Compute the volume of air to be desiccated using table A-I. When more than one system is used, locate the system to service equal volumes

of air contained in the shelter.

A.3.2.3 Equipment qualifications. The shelter shall show no evidence of free air passages except as provided by the breather system when all the direct openings have been sealed and all the doors and vents are closed.

A.3.3 Preparation for activation.

A.3.3.1 Moisture drawdown. Reduce the moisture content of the internal air in the shelter to the equivalent of two grains of moisture per cubic foot prior to activation of the static-free breather dehumidification system (see table A-II). Air moisture content drawdown may be accomplished by either dynamic dehumidification or by using a static charge of desiccant.

TABLE A-II. Water vapor computation for obtaining two grains.

Temperature Degrees F	100 Percent Relative Humidity Grains per Cubic Foot Air	Relative Humidity to Attain Two Grains of Moisture per Cubic Foot of Air in Percent
30	1.9	100
35	2.3	87
40	2.9	69
45	3.4	59
50	4.1	49
55	4.9	41
60	5.8	34
65	6.9	29
70	8.1	25
75	9.5	21
80	11.1	18
85	12.9	15
90	15.0	13
95	17.3	11
100	20.0	10

A.3.3.2 Preparation of desiccant charges. Place the required quantity of desiccant into the hermetically sealed containers until drawdown is completed (see A.3.1.3, A.3.2.2.1, and A.3.3.1).

A.3.4 Activation. Activate the static-free breather dehumidification system as soon as the moisture content of the internal air has reached the level specified in A.3.3.1. Place the packaged

desiccant (see A.3.3.2) in the free breather assembly as rapidly as possible (see A.4.3). Clamp the body cover, seal the entry, and place the free breathing vent into the open position.

A.4 NOTES

A.4.1 Intended use. The static-free breather dehumidification system was designed to provide a simple means for preserving equipment contained in large rigid containers such as shelters and vans. The expansion and contraction of the air contained in large shelters result in unusual problems in maintaining hermetic seals of air tightness. The free breather system overcomes many of these problems by reducing the degree of air pressure tightness required so that any shelter or container which is or can be sealed against free entry of air is a satisfactory item for use of the system. A free breather system consists of two basic parts, a designed venting system, and a bed of desiccant, through which all air is exchanged. The length to diameter ratio of the flexible tubing used to attach the free breather assembly to the external vent shall never be less than 10 to 1, and in this instance, the tubing shall be not less than 30 inches in length. A major factor in the success or failure of the system is the air flow through the desiccant and not around it.

A.4.2 Tiedown. The tie down of the free breather assembly may be accomplished in several ways as long as there is no tearing of the free breather assemblywall.

A.4.3 Activation. Rapid completion of system activation can be accomplished if the free breather assembly has been removed during the drawdown period and access to the assemblies from the entrance has been planned. Caution should be taken upon insertion of the desiccant charge to completely block the air passage with the desiccant.

APPENDIX B

PROCEDURAL REQUIREMENTS FOR THE PRESERVATION AND PACKAGING OF REPAIR PARTS AND SPARE PARTS

B.1 SCOPE

B.1.1 This Appendix provides procedural requirements for the preservation and packaging of repair parts and spare parts prior to shipment. This Appendix is a mandatory part of the standard. The information contained herein is intended for compliance.

B.2 APPLICABLE DOCUMENTS

B.2.1 Government documents.

B.2.1.1 Other Government documents, drawings, and publications. The following other documents form a part of this Appendix to the extent specified.

DEPARTMENT OF THE AIR FORCE

AFR 71-4	Preparation of Hazardous Material for Military Air Shipment

(Obtain copies from the procuring activity or as directed by the contracting officer.)

B.2.1.2 Non-Government publications. The following documents form a part of this Appendix to the extent specified. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3950	Standard Specification for Strapping, Plastic (and Seals)
ASTM D 4675	Selection and Use of Flat Strapping Materials
ASTM D 5330/D 5330M	Standard Specification for Pressure Sensitive Tape Packaging, Filament-Reinforced

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

B.3 REQUIREMENTS

B.3.1 Cleaning. Clean all items to be preserved and packed prior to processing in accordance with this standard.

B.3.1.1 Impregnated items. Items impregnated with oil or graphite shall be cleaned with a solvent in such a way as to avoid dissolving impregnated lubricants.

B.3.1.2 Complex items. Drain all trapped cleaning fluid from items requiring interior cleaning.

B.3.1.3 Nonmetallic items. Unless otherwise specified, items such as rubber, leather, and cork shall be cleaned by any process or combination of processes where a thorough cleaning is achieved without damage to the item.

B.3.1.4 Material used with liquid oxygen. Immediately after cleaning, pre-package items that will be in direct contact with liquid oxygen in heat sealed bags, or the equivalent, to ensure that there will be no contamination.

B.3.1.5 Optical elements and assemblies. Clean and dry optical elements and assemblies and ensure that they are adequately wrapped with the least amount of materials, that they are water vapor-proof, that there is proper cushioning, and that they are legiblymarked.

B.3.2 Drying. After cleaning, thoroughly dry optical elements and assemblies to remove residual cleaning solutions or moisture by using the drying technique most appropriate for the cleaning technique used.

B.3.3 Preservation application. Immediately after cleaning and drying, apply a continuous coating of the appropriate contact preservative to unpainted metal surfaces by using a process that ensures complete coverage.

B.3.3.1 Partially painted or combinations of metallic/nonmetallic parts. Unless otherwise specified, the appropriate preservative should only be applied to the unpainted, unplated ferrous metal surfaces.

B.3.3.2 Nonferrous and plated items. No preservation is required on exterior parts that are completely nonferrous, or plated with gold, silver, cadmium, zinc, or tin as long as the plating materials are of the non-flash variety. Items plated with phosphate do require preservation. No preservation is required on items constructed of 18-8 stainless steel.

B.3.3.3 Sealing openings in items. All ports and/or orifices in fluid and/or gaseous systems (such as hydraulic, fuel, oil, and pneumatic) shall be sealed in such a way as to ensure no leakage. Visual inspection for drips upon repositioning of the article will verify sealefficiency.

B.3.4 Coating impregnated items. Unless otherwise specified, coat all oil impregnated items with a compatible preservative oil to ensure no loss. Graphite impregnated items do not requirea

preservative coating.

B.3.5 Internally preserved items. Application of preservatives to internal areas shall be accomplished in a manner that ensures complete coverage. Preservative oil shall thoroughly cover both interior and exterior surfaces, and then be totally drained to prevent any oil entrapment that could cause subsequent damage to the package. Seal the item by design feature (lids, hatches, etc.) or by other means that ensure no loss of preservative. Verify seal efficiency by visual inspection for drips or leaks upon repositioning of the items.

B.3.6 Rubber and synthetic rubber items. Individual rubber or synthetic rubber pieces that are unit packed in quantities of more than one should be packed or treated in such a way as to prevent any contact with each other.

B.3.7 Items with grease fittings. Pressure-fill universal joints and flexible cable equipped with grease fittings or tapped holes for such fittings with the grease specified for normal operations, unless otherwise specified.

B.3.8 Supplemental oil application. When the engineering drawing or other technical instruction requires that a supplementary oil finish be applied to metals with phosphate and black oxide coatings, apply the supplemental oil after cleaning, unless otherwise specified.

B.3.9 Preparation of flexible/coilable items. Flexible, coilable items constructed in a loop, such as fan belts or door seals, and having a diameter of 14 inches or greater, shall be coiled upon themselves for packing. Do not coil the items if distortion or other damage or strain results. Items conducive to folding or rolling shall be folded or rolled to the minimum cube that will prevent deformation or "set" to the item during long term storage.

B.3.10 Caging or damping sensitive items. Items such as gyroscopes, motion sensors, or other delicate instruments that incorporate caging or damping devices in their design to secure movable parts in position, shall be properly caged or electrically damped prior to packaging.

B.3.11 Packaging gaskets or seals. Mark or identify preservative gaskets or seals that are used with selected preservation procedures, so that they will not be accidentally used in ultimate item installation.

B.3.12 Equipment mounts. Equipment having vibration/shock mounts must be immobilized on the mounts, unless the mounts are an integral part of the equipment. Any equipment must be suitably cushioned prior to shipping.

B.3.13 Electronic devices subject to damage by environmental field forces. Use only non-corrosive electrostatic-protective wrapping or cushioning for sensitive electronic devices (including modules, circuit card assemblies, and printed wiring boards containing one or more of these sensitive components) that have been packaged to ensure total protection.

Insert each device, appropriately wrapped or cushioned, into a heat-sealed, or similarly sealed, bag that ensures complete electromagnetic, electrostatic, and water vapor-proof

protection.

The sensitive electronic device symbol and associated cautionary label shall be attached in conformance with MIL-STD-129 on all unit, intermediate, and exterior containers enclosing these devices. Sensitive electronic device packages should be opened in areas which ensure field force protection.

B.3.14 Radioactive materials. Handle radioactive materials in compliance with requirements stated in the contract. Markings shall be in accordance with MIL-STD-129.

B.3.15 Unit pack requirements.

B.3.15.1 Level A unit pack requirements.

B.3.15.1.1 Intimate wrapping. When more than a single item is specified for unit pack wrapping, individual items weighing more than 0.25 pounds and all fragile items, shall be individually wrapped. If individual items weigh less than 0.25 pounds, or are not considered fragile, all of the specified items shall be included in only one wrap. Arrangement of multiple items within the wrap shall be such as to provide minimum cube.

B.3.15.1.1.1 Intimate wrap size. The minimum acceptable size for intimate wrap is 3 by 3 inches.

B.3.15.1.2 Intimate neutral wraps. Substitute neutral papers for a barrier material where greaseproofness (no contact preservative) is not a requirement and barrier material is required for an intimate wrap.

B.3.15.1.3 Stiffeners. Place the item between two stiffeners that are at least .5 inch larger in length and width than the item. Secure the item within the stiffeners without disturbing the item. Use mailing tubes, vacuum-formed material, or some other material to prevent deformation or set of items subject to deformation, such as preformed material or synthetic seals and gaskets.

B.3.15.1.3.1 Load deflector stiffeners. Use stiffeners that ensure load deflection for items that require protection from compression forces or from being otherwise deformed (such as O-rings with an outside diameter of more than two inches).

B.3.15.1.4 Desiccant application. Desiccant shall be placed in mesh bags, or some other comparable container that facilitates air passage. Bags shall be placed so they will not be load bearing, or shall be cushioned as much as possible. Desiccant shall not be in direct contact with the item and if it is placed next to metal, it should be insulated with barrier material to ensure no contact.

B.3.15.1.5 Unit pack containers. Unit pack containers shall be as specified in the contract or as specified in this standard. Packs shall be designed to conserve weight and cube while retaining the required protection and enhancing stabilization. Individual wrap shall be appropriate to the item to ensure adequate preservation and protection from physical function and environ-

mental damage. The unit pack shall provide protection from shock and vibration and other hazards during shipment and storage. Items of different physical characteristics can be consolidated as long as the preservation methods are the same or are compatible. Marking should correctly identify units and consolidated groups.

B.3.15.1.5.1 Container size. Flexible and rigid containers shall be of a size to provide a snug fit for the wrapped and cushioned item. Items, with wrap and cushioning, shall fill at least 80 percent of the container and appropriate dunnage shall fill any voids.

B.3.15.1.5.2 Conforming heat sealed bags. When unit-packed items use heat sealed bags as the exterior unit container, the bag shall conform to the configuration of the parts, or the container, as applicable. This requirement shall not apply when stiffeners are used in conjunction with heat sealed bags, or if the item has been coiled prior to the application of the stiffeners.

B.3.15.2 Level B unit-pack requirements.

B.3.15.2.1 Preservation requirements. Preservation shall be in accordance with B.3.15.2.3 through B.3.15.2.7.

B.3.15.2.3 Ferrous and nonferrous item combinations. All items of composite construction, including those which are partially painted or plated, shall be coated with lubricating, water-displacing, low temperature, preservative oil on the bare ferrous surfaces only. When a preservative is applied, the unit quantity shall be wrapped in barrier material that is coated or impregnated with a corrosion inhibitor in such a way as to allow the vapor to pass through to protect adjacent metal surfaces.

B.3.15.2.4 Fully painted, plated, and nonferrous items. All fully painted, plated, and nonferrous items, including stainless steel, shall be packed with no preservativeapplication.

B.3.15.2.5 Items requiring protection from direct contact with water. When the nature of an item is such that using a contact preservative is not appropriate, the quantity of items to be contained in the unit pack shall be wrapped in a flexible, grease-proofed, water-proofed barrier material for protection during transportation and storage under all climate conditions. The material shall be arranged on or around the items so that free water (rain or melting snow) cannot directly enter the interior of the unit pack.

B.3.15.2.6 Cushioning. Items shall be cushioned within the unit pack to prevent any damage which could result from movement of the items within the package.

B.3.15.2.7 Unit containers. Unit containers shall provide protection from shock and vibration and other hazards during shipment and storage. If the outer container is not a bag, it may serve as a shipping container if it provides suspension or cushioning systems making up the unit pack that protect from hazards encountered during shipping, handling, andstorage.

B.3.16 Intermediate pack requirements.

B.3.16.1 Levels A and B pack requirements.

B.3.16.1.1 Intermediate container. The intermediate container shall be as specified in the contract or in this standard. Intermediate containers shall be used under the following conditions:

a) When they are considered economical because of total ordered quantity, production schedule, or when they facilitate handling, storage, or shipment;
b) When the quantity to be shipped to a single destination permits the use of two or more intermediate containers in an exterior container;
c) When the exterior surface of the unit pack is a bag or wrapping material of any kind;and
d) When the unit pack volume is less than 64 cubic inches and the exterior container isrigid.

B.3.16.1.2 Quantities in intermediate containers. Except as otherwise specified herein, or specified by the contract or packaging document, unit packs requiring intermediate containers shall be packed in quantities as follows:

a) A maximum of 100 unit packs to the intermediate container;
b) A maximum net load of 40 pounds; or
c) A maximum size of 1.5 cubic feet with at least two dimensions not exceeding 16inches.

B.3.16.1.3 Intermediate container limitations. Prescribed quantities of unit packs may be varied under the following conditions:

a) When the quantity to be shipped to a single destination is less than the established intermediate quantity, the total quantity shall be placed in a shipping container of a minimum size to contain the pack;
b) When the contract or purchase order specifies a total quantity that is more than the established intermediate quantity, established quantities shall be packed in the required number of intermediate containers, and the remaining quantity shall be placed in the smallest container that will accommodate the unit pack; and
c) When the contract or purchase order specifies a quantity that is more than twice the established maximum permissible intermediate quantity, select the container size to ensure that voids are held to an absolute minimum.

B.3.16.1.4 Closure. Container closure shall be applicable and appropriate to the type of container used.

B.3.17 Exterior packing requirements.

B.3.17.1 General considerations. Exterior containers being shipped to a single destination shall (as far as practical):

a) Contain items having the same National Stock Number (NSN);
b) Contain identical quantities of unit/intermediate packs;
c) Contain items covered by the same contract or purchase order;

d) Contain items having cure, manufacture, or expiration dates; and
e) Have a minimum size of 3 cubic feet, with the following exceptions:

1) When the maximum gross weight precludes the use of the minimum size:
2) When the total quantity to be shipped to a single destination displaces less than 3 cubic feet, the exterior container will be the size necessary for shipment; and
3) If more than one contract line item is involved, those items whose cube is less than 3 cubic feet and whose weight is less than 200 pounds will be consolidated to the fullest extent practical.

B.3.17.2 Containers with skids. All shipping containers except drums and fiberboard containers, with gross weights exceeding 200 pounds, and containers with length and width dimensions of 48 by 24 inches or larger and weighing more than 100 pounds will be provided with skids to facilitate handling. The skids shall be constructed, at a minimum, of 3 by 4 inch lumber, or the equivalent, laid flat, or as specified in the applicable container specification. Pallets shall be used for fiberboard containers meeting the above dimensions for shipment and/or storage.

B.3.17.3 Shipping containers. Exterior shipping containers shall be of the minimum size necessary to contain the packs. Unless otherwise specified, exterior containers shall be standard size, and should conform, to the maximum extent possible, to those listed in MIL-STD-147.

B.3.17.4 Closure. Closure of the exterior container shall be in accordance with the applicable container to ensure that the pack will be contained without any damage during shipping and storing.

B.3.17.5 Reinforcement strapping of exterior containers. Reinforcement strapping of exterior containers shall be in accordance with the applicable container, except that metal strapping for wooden boxes shall conform to ASTM D 3953 (Type 1, finish A), and fiberboard container reinforcing shall be in accordance with ASTM D 5330/D 5330M or ASTM D 3950 and ASTM D 4675. Strapping is not required under the following conditions:

a) Continental United States (CONUS) shipments (does not include overseas shipments through ocean or air terminals);
b) Shipments through a consolidation depot or from consignor to consignee in MILVANS or SEAVANS; and
c) Containers composing a pallet load.

B.3.17.6 Shipments by parcel post. Parcel post shipments shall meet all requirements specified by postal service regulations.

B.3.17.7 Consolidated pack. Consolidated packs shall be exterior containers used to consolidate shipments of two or more assorted packed items to a single destination, when the total cube of each item displaces less than 3 cubic feet. A cover shall be fastened to the container to prevent pilferage or loss of the enclosed packages. The total quantity of the same line items (unit or intermediate packs) shall be positioned during packing to permit ready identification

upon opening, or shall be consolidated by means such as bagging, tying, bundling, or wrapping and cartonizing, and then identified before being placed in a consolidation container. Consolidated packs weighing over 200 pounds or larger than 20 cubic feet shall be provided with skids to facilitate handling. Use containers that provide a snug fit for the item which should fill at least 80 percent of the container. Consolidation containers normally will not exceed 36 inches in depth.

B.3.17.8 Unitization/consolidation.

B.3.17.8.1 Pallets. Pallets shall be used to the greatest extent possible where the volume of homogeneous commodities are destined for CONUS or overseas shipment. Unless otherwise specified, material shall be palletized when containers do not require skids; when quantities per destination exceed either a total of 250 pounds (excluding the pallet) or a volume of 20 cubic feet; and when the container size permits the use of one of the pallet patterns described in MIL-STD-147. Load shall be Type I. Pallets shall be standard, providing for fork-lift notches The load shall be "bonded" to the pallet by strapping, by shrink film, or by stretch wrapping. Unitization of ammunition loads shall be fleet issue unit loads (FIUL) for transfer at sea, amphibious, or loaded as assault cargo in ships, and shall facilitate movement without restrictions through special routing and escort, as detailed in service directives and drawings.

B.3.17.8.2 Criteria for unitization and consolidation. The following factors shall be used in determining the feasibility of and requirements for unitization and consolidation.

B.3.17.8.2.1 Palletized loads. Palletization of exterior containers is determined by the following criteria:

a) The load shall consist of four or more unskidded containers being shipped to the same destination;
b) The load shall cover a minimum of 80 percent of the pallet base; and
c) The loaded pallet height shall be such that is safe and bearable for storage purposes.

B.3.17.9 Stackability and superimposed loads. Shipping containers for all levels shall be capable of being stacked and of supporting superimposed loads during shipment and storage without damaging containers or contents.

B.3.18 Preparation of general cargo for air shipment. Material shipped by air should be packaged so that the cube and gross weight are minimal. Any decision to repack should balance transportation cost savings against the costs of repackaging and/or possible delay in shipment.

B.3.18 Shipment of hazardous materials.

B.3.18.1 Shipment of hazardous materials by military air. Shipments of hazardous materials by military aircraft, or shipments delivered to an airport for shipment by military aircraft (including Logair and Quicktrans) shall be prepared for shipment in accordance with the provisions of Air Force Regulation 71-4.

B.3.18.2 Shipment of hazardous materials by other than military air. Hazardous material shipment by a mode of transportation other than by military aircraft shall be prepared in accordance with requirements stated in the contract. Hazardous material shipments by Parcel Post must comply with Postal Service regulations.

B.3.19 Marking.

B.3.19.1 General marking information. Unless otherwise specified, marking shall be in accordance with MIL-STD-129.

B.3.19.2 Shelf life codes. Unless otherwise specified, shelf life codes shall be marked on unit, intermediate, and exterior containers in accordance with MIL-STD-129.

B.3.20 Packaging design validation. Unless otherwise specified in the contract or purchase order, the contractor shall be required to perform packaging validation tests on selective and special group items, unless one of the following conditions exists:

a) The contractor can produce previous successful test records for the same or similar items;
b) The contractor can produce previous engineering data which has been approved by a cognizant DoD activity and which indicates that the proposed packaging design will successfully meet or exceed contractual requirements; and
c) The contractor can produce historical shipping data confirming that adequate protection is provided using the same or upgraded packaging.

CONCLUDING MATERIAL

Custodian:
Army – MI

Preparing Activity:
Army – MI

Reviewer:
Army – SM
DLA – DH

(PACK-2018-006)

NOTE: The activities listed above were interested in this document as of the date of this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.dla.mil.