TECHNICAL MANUAL

HOW TO PACKAGE AIR FORCE SPARES

(ATOS)

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Page No.	*Change No.	Page No.	*Change No.	Page No.	*Change No.
Title	0				
A	0				
i - ii	0				
1-1 - 1-3	0				
1-4 Blank	0				
2-1 - 2-2	0				
3-1 - 3-5	0				
3-6 Blank	0				
4-1 - 4-18	0				
5-1 - 5-19	0				
5-20 Blank	0				
A-1	0				
A-2 Blank	0				

*Zero in this column indicates an original page

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

LIST OF TABLES

CHAPTER 1
INTRODUCTION

1.1   PURPOSE.

1.1.1   This technical order (TO) provides essential information for packaging selected items of supply. Fast packs, standard packs, or other special packaging instructions (SPIs), as specified, will protect the items during shipment, storage, and on-base handling. These packs are reusable and are designed for shipment and storage of depot reparable and other selected items. Although most "SPI packs" are comprised of drawings or narratives, "SPI packs" in the fast pack and standard pack programs are comprised only of the codified numbering system outlined in this TO. This makes fast packs and standard packs "SPI packs" in name only. They are called "SPI packs" in order for data systems to recognize them and transmit them to bases to support their reusable container programs in accordance with (IAW) AFI 24-203, Preparation and Movement of Air Force Cargo.

1.1.2   This TO assigns responsibility for implementation, use, and control of the "SPI pack" program.

1.1.3   This TO defines the numbering system applied to the fast pack and standard pack in relation to the method of preservation, type of package, and size of pack. Simple instructions for fabricating the standard packs are also defined.

1.1.4   This TO contains a table of equivalent materials (section V) so standard packs can be constructed using materials available locally. This permits the packer to use a variety of materials without a waiver from the prime Air Logistics Center (ALC).

1.1.5   This TO shows how packing and crating activities determine the correct packaging required for each item of supply subject to depot level repair.

1.2   HOW TO USE THIS TECHNICAL ORDER (TO).

The following is a description of the five sections in this document.

1.2.1   Chapter 1, Introduction, gives the reason for this document and defines keywords and acronyms.

1.2.2   Chapter 2, General, describes the commonalities between the fast and standard pack numbering systems and helps the packer to understand these coded numbers. It also provides a national stock number (NSN)/SPI cross-reference listing for these packagings.

1.2.3   Chapter 3, General Packaging Requirements, covers the MIL-STD-2073-1 methods of preservation and specified materials for each. This chapter also describes the common characteristics between fast and standard packs. Figure 3-1 through 3-4 (Fast and Standard Pack Tape Methods for Closure) covers the four "tape methods" and illustrates each one.

1.2.4   Chapter 4, Detailed Requirements for Fast Packs, provides information unique to the fast pack and its numbering system. Several tables illustrate the four types of fast packs, their identification codes and dimensions. Other details include wrap, barrier, and desiccant requirements. All measurements are displayed in inch-pound and metric units (see paragraph 1.4).

1.2.5   Chapter 5, Detailed Requirements for Standard Packs, concerns details unique to the standard pack and its numbering system. The tables include container codes, sizes, and requirements for wraps, barriers, and desiccant. All measurements are displayed in inch-pound and metric units.

1.3   DEFINITIONS.

1.3.1   Depot Reparable Item.   An item that is unserviceable, but can economically be restored to serviceable condition by a depot level maintenance facility such as a Technology Repair Center (TRC) or a civilian contractor. Depot reparable items may be identified by the Expendability-Recoverability-Repairability Category (ERRC) codes designator (i.e., XD1, XD2, ND2).

1.3.2   Fast Pack.   A family of standard size, cushioned, reusable containers whose design permits shipment of a large variety of items within certain limits or size, weight, shape, and fragility. Fast packs are made in accordance with Federal Specification PPP-B-1672, and the cushion pads are bonded to the box. The types of fast packs and their maximum bare item

dimensions and item weight range for selecting items to be shipped and stored in fast packs are listed in Chapter 4 of this TO and MIL-STD-2073-1, Appendix D, Table I.

1.3.3 <u>POP Database</u>. A repository of test reports and packaging requirements used to properly prepare hazardous material for storage and/or shipment.

1.3.4 <u>Preservation</u>. Application of protective measures including cleaning, drying, preservative, protection wrapping, cushioning, barriers, and containers, when necessary.

1.3.5 <u>Reparable Item</u>. An item that is unserviceable but can be economically restored to serviceable condition.

1.3.6 <u>Routing Identifier Code (RIC)</u>. The RIC is found in block "U" of DD FORM 1348, DoD SINGLE LINE ITEM REQUISITION SYSTEM DOCUMENT (Manual), and block "16" of DD FORM 1348-1A, ISSUE RELEASE/RECEIPT DOCUMENT. It identifies the ALC that is responsible for assigning the packaging requirements. Phone numbers for the ALC Packaging Management Offices are provided below as points of contact on packaging inquiries.

RIC	Office Symbol	ALC & Base	Contact Information
FGZ	406 SCMS/GULAA	Ogden, UT Hill AFB UT	7973 Utility Dr Bldg 1135 Hill AFB, UT 84056-5306 DSN 777-4495 Comm (801) 777–4495
FHZ	406 SCMS/GULAA	Oklahoma City, OK Tinker AFB	7851 Arnold Street, Rm 102 Tinker AFB, OK 73145-8912 DSN 884-2798 Comm (405) 734-2798
FLZ	406 SCMS/GULAA	Warner Robins, GA Robins AFB	235 Byron Street, Suite 19A Robins AFB, GA 91098 DSN 497-6317 Comm (468) 327-6318

1.3.7 <u>Selected Item</u>. An item, usually depot reparable, is assigned to a fast pack, standard pack, or SPI by the ALC that has the Integrated Materiel Manager responsibility. The assignment is based on configuration, weight, size, and fragility of the item.

1.3.8 <u>Serviceable Item</u>. An item, new or used, that is in operating condition and meets performance specifications.

1.3.9 <u>Special Packaging Instructions (SPI)</u>. The SPI provides detailed instructions for construction of a package for an item that requires maximum protection. It usually consists of a drawing that details the cushioning, blocking, bracing, shock mounts, tie-down devices, etc. This is referred to as a SPI drawing. A SPI may also describe the required packaging by use of written instructions and specification references. This is referred to as a narrative SPI. This TO serves as a generic SPI for fast and standard packs although fast and standard packs do not require drawings or narratives to describe the item (reference paragraph 1.1). The SPI numbering system is explained in Chapter 2.

1.3.10 <u>Standard Pack</u>. A pack for which the packaging components, including the shipping container, have been standardized as to material and size. The cushioning in the standard pack is not bonded to the container walls. Items selected for standard packs are not very susceptible to damage from shock and vibration and require less cushioning protection than do those in fast packs. Because many different items are assigned to each standard pack, the reusability is increased. A complete list of standard pack sizes and NSNs are provided in Chapter 5 of this TO, MIL-STD-2073-1, Appendix C, Table III, and AFI 24-203.

1.4   UNITS OF MEASURE.

1.4.1 Values are stated in inch-pound units as the primary unit of measure, with metric equivalents (soft conversions) provided in parens immediately following or below each value. This was done for consistency with the documents referenced herein, and with referenced products and items (which are generally manufactured and sold using the inch-pound system as primary units of measure).

1.4.2 The primary metric abbreviations used in this document are for millimeter (mm), kilogram (kg), and liter (L). If the use of centimeter is preferred in place of millimeter, the conversion is 1 cm = 10 mm; either divide the value in mm by 10, or move the decimal point one place to the left.

1.5   RESPONSIBILITIES.

1.5.1 This TO will be used to number, identify, and pack reparable items requiring fast packs or standard packs.

1.5.2 It applies to all Air Force activities who pack items, particularly reparable items. It serves as a consolidated instruction/requirements reference document for Air Force base packaging operations.

1.5.3 Air Force Materiel Command (AFMC) responsibilities are as follows:

1.5.3.1 Headquarters AFMC/A4RT, Transportation and Packaging Policy Branch, will provide assistance to base-level units IAW AFI 24-203, Preparation and Movement of Air Force Cargo.

1.5.3.2 The Air Force Packaging Technology & Engineering Facility (AFPTEF), will test and evaluate packs which are proposed for the Air Force reusable container program, and recommend design and or material changes to improve cushioning characteristics, or to promote standardization. New fast pack and standard pack designs or sizes recommended for inclusion in the Air Force reusable container program must be approved by AFPTEF, IAW AFI 24-203. Testing and evaluation requests can be submitted to AFLCMC/EZPAA, 5215 Thurlow St, Ste 5, Wright-Patterson AFB, Ohio 45433; DSN 787-3362 or commercial 937-257-3362.

1.5.4 Major Commands are responsible for establishing the following procedures IAW AFI 24-203 to ensure that the subordinate commands:

1.5.4.1 Maintain sufficient stocks of fast and standard packs, and SPI containers, to support the mission.

1.5.4.2 Establish programs for reclamation, storage and reuse of reusable containers and packaging materials.

1.5.4.3 Comply with SPI procedures.

1.5.4.4 Request a packaging waiver IAW AFI 24-203 from the managing ALC when the prescribed SPI pack is not available for shipment.

1.5.5 Air Logistics Complexes will ensure that:

1.5.5.1 A reusable container or reclamation program is established IAW AFI 24-203 and AFMCI 24-201, AFMC Packaging and Materials Handling Policies and Procedures. As a serviceable item is received and removed from the pack, the unserviceable item is placed in the pack and returned to a depot for repair.

CHAPTER 2
GENERAL

2.1 NUMBERING SYSTEM.

2.1.1 Numbering System Used for Packaging Items.

2.1.1.1 This chapter explains the numbering system used for packaging items for off-base shipment and storage. It also tells where and how to find all the SPI data necessary to do the packaging.

2.1.1.2 Items that are ERRC coded as depot reparable will have a SPI, whether drawing, narrative, or Fast Pack/Standard Pack SPI number. This is the foundation of the Air Force Reusable Container Program. NSN to SPI cross-referencing ensures the proper reusable container is used for each reparable item (see paragraph 2.1.5). Other selected items that are not depot reparable can also be covered by SPI's based on peculiarities/fragility of the item. Instructions for packaging items not covered by a SPI may be found in MIL-STD-2073-1. Assistance in determining how to pack items covered by SPI's may be found in the ALC having area assistance or prime responsibility. Do not ship an item when there is doubt that it is properly protected. It is better to hold up a shipment until the item is protected than to ship it and risk damage.

2.1.2 Narrative or Discrete SPI. The first position of a narrative or discrete SPI is an alpha provided by the service or agency, (A = Army, D = DLA, F = Air Force, M = Marine Corps, N = Navy). Positions 2-10 usually include the National Item Identification Number (NIIN) of the first NSN for which it was designed.

   Example: SPI F000281457 is designated for item NSN 2840-00-028-1457PL. Similar items such as NSN 2840-00-040-4132PL are assigned to the same SPI and have the same SPI number (SPI F000281457). Some SPIs are only for one NSN, others may include hundreds of NSNs. The SPI drawing or narrative describes how to package the item with words or drawings.

2.1.3 Fast and Standard Packs. The first position of fast pack and standard pack SPI numbers is an alpha provided by the service or agency (reference paragraph 2.1.2 above). Positions 2-6 are always numeric zeros, and used as place holders to accommodate packaging data system requirements. The next four positions (7-10) are alphanumeric and are made up with codes that provide the information needed to pack the item (reference sections IV and V), though fast packs always have an "X" in position 8. Understanding the meaning of each code is the key to using fast and standard packs. Fast pack numbers are sometimes abbreviated, showing only the last four positions. The following steps will lead the packer through the process of interpreting the SPI numbers and the fast and standard pack codes:

2.1.3.1 Locate the SPI number in block "U" of DD FORM 1348 or block "16" of DD FORM 1348-1A.

2.1.3.2 Identify the kind of SPI that is needed to pack the item.

   Examples:
   (a) SPI F001234567   = Discrete or Narrative.
   (b) SPI F000004XA1 = Fast Pack.
   (c) SPI D000001D38   = Standard Pack.

2.1.3.3 Find the document that tells (exactly) how to pack the item.

2.1.3.3.1 Discrete or narrative SPI instruction sheets and drawings are on file at the base packaging activity.

2.1.3.3.2 Fast pack data and instructions are found in sections III and IV of this T.O.

2.1.3.3.3 Standard pack data and instructions are found in Chapter 3 and Chapter 4 of this T.O.

2.1.3.4 Locate the correct reusable pack by reading the SPI number on the containers in reclamation. For fast packs only, the last four positions might be shown on the container.

2.1.4 SPI Number. The SPI number will automatically print in block "U" of the DD FORM 1348-1 or block "16" of DD FORM 1348 shipping documents under the heading Freight Classification Nomenclature. Do not ship depot reparable Air Force items without the proper SPI pack. Depot reparable items identified by a "D" in the ERRC code without a SPI number on the shipping document will be checked against the SPI stock number cross-reference list. If a SPI is listed, it must be used.

If a SPI is not listed, request packaging instructions from the responsible ALC Packaging Management Office. When requesting packaging instructions from an ALC, provide the following information: item NSN, nomenclature, weight, dimensions, and unusual characteristics.

2.1.5 <u>D035T SPI/NSN Cross-Reference List</u>. The D035T SPI/NSN cross-reference list if produced in electronic format. This D035T product lists SPIs in numerical sequence with the corresponding NSN, or NSNs in numerical sequence with the corresponding SPI number, based on need. The D035T SPI/NSN digital product is available to DoD activities upon request submitted to: HQ AFMC/A4RT, Wright-Patterson AFB, OH, email: AFMC.A4RT.Workflow@us.af.mil.

CHAPTER 3
GENERAL PACKAGING REQUIREMENTS

3.1 REQUIREMENTS.

The requirements defined in this section apply to all items packaged in fast and standard packs. For more detailed requirements peculiar to fast pack packaging see Chapter 4. Detailed requirements for standard packs are found in Chapter 5.

3.1.1 Preservation.   The **seventh position** of fast and standard pack numbers specifies the MIL-STD-2073-1 method of preservation, by method code, required for the item. Corresponding numbers and methods, as well as the selection of material for level A preservation are found in Figure 5-2 through 5-5, and in the following information.

Table 3-1.   Preservation Method Indicator for Fast and Standard Packs

Seventh Position Code	MIL-STD-2073-1 Method of Preservation	Wrap	Bag	Desiccant
1	Method 10, (Physical and Mechanical protection only)	SEE NOTES BELOW		
2 or 6	Method 33, (Greaseproof - waterproof bag, sealed) Method 30, Waterproof - greaseproof bag, sealed with preservative)	PPP-C-795 A-A-3129 MIL-PRF-121	MIL-PRF-121	
3 or 7	Method 41, (Watervapor proof bag, sealed) Method 41, (Watervapor proof bag, sealed, with preservative)	A-A-3174 PPP-C-795 A-A-3129 MIL-PRF-121	MILI-PRF-131 MIL-PRF-22191, Type I MIL-PRF-81705, Type I	
4	Method 51, (Watervapor proof bag with desiccant, humidity indicator, sealed)	A-A-3174 PPP-C-795 A-A-3129 MIL-PRF-121 MIL-DTL-17667	MIL-PRF-131 MIL-PRF-22191, Type I MIL-PRF-81705, Type I	MIL-D-3464
5	Method 20, (Preservative coating with greaseproof wrap as required)	MIL-PRF-121, Grade A or C	Bag may be used, not required	
9	Method 41, (Electrostatic discharge (ESD) protection) (See *NOTES 1, 2, & 3)	A-A-3129, Type III MIL-PRF-81705, Type II	MIL-B-81705, Type I	

NOTE

- 1. Code 9 items must use antistatic cushioning.

- 2. These items must be packaged by personnel trained to work with ESD sensitive (ESDS) items in an ESD protective area (reference TO 00-25-234, section VII). All items having a "3" in the "Type of Cargo" code block "G" on the DD FORM 1348 or block "8" on the DD FORM 1348-1A, are ESDS and handled as such. (Reference Table 4-2 and paragraph 5.3 of this T.O. for appropriate materials). **ESDS items must be protected at all times, regardless of condition in order to prevent damage or destruction of the item.**

- 3. All items that are designated as HAZARDOUS on the DD FORM 1348 in block "G" (Type of Cargo) or in block "8" of DD FORM 1348-1A shall be packaged and marked for shipment in accordance with the DLA POP Data base, 49CFR, AFMAN 24-404_IP, International Civil Aviation Organization (ICAO), or the International Maritime Dangerous Goods ((IMDG).

3.1.2 <u>Cleaning and Drying</u>.   Clean in accordance with MIL-STD-2073-1, Appendix J, Table J.II., code 1 (Any suitable process that is not injurious to the item.) and any suitable drying process.

3.1.3 <u>Preservative</u>.   Selection and application shall conform to the requirements of MIL-STD-2073-1.

3.1.4 <u>Container</u>.

3.1.4.1 For both fast and standard packs, use the specified container and place the item in the center of the container with an equal amount of cushioning all around. The item must be wrapped sufficiently with PPP-C-795 (cellular plastic film), A-A-59135 (sheet polyethylene), PPP-C-1797 (low density, unicellular polypropylene foam). In simplest terms, the wrapped item should fill the cavity. Items are not to be immobilized so tightly that shock and vibration will be transmitted to the item (reference paragraph 3.1.10). A properly placed item will move slightly in the cavity when the exterior container, with the packaged item, receives an impact.

3.1.4.2 An item's contact with the cushioning should compress the convoluted peaks of a fast pack no more than their normal depth and no less than 0.25 inches (6.4 mm) for standard pack cushioning (reference Chapter 4 and Chapter 5 and paragraph 4.1.2 and paragraph 5.1.3). Never use any form of "loose-fill" cushioning (e.g., polystyrene or starch "peanuts").

3.1.5 <u>Item Protrusions</u>.   If the item is preserved by a method that requires a heat sealed bag, wrap and cushion knobs, handles or any other pointed parts to prevent puncture of the barrier. If the item has knobs, handles or other thin parts that could be bent or broken during rough handling, make rolls out of wrapping or cushioning material and tape the rolls around those fragile protrusions to protect them.

3.1.6 <u>Desiccant</u>.   If desiccant is required, place the bags of desiccant so they cannot be broken during rough handling. If it is not possible to place the bags in a protected area, place them in cloth bags and protect the bags with cushioning as in paragraph 3.1.4. Desiccant must always be placed on the inside of the sealed barrier bag and should **never** be placed in direct contact with the item as it could create a chemical reaction resulting in damage to the item. Any wrap may be placed between the item and the desiccant to separate them.

3.1.7 <u>Marking</u>.   Markings shall be in accordance with MIL-STD-129.

3.1.8 <u>Relaxed Preservation Requirements</u>.   Unserviceable items being shipped to depots or contractors for repair, may be preserved to Method 10 of MIL-STD-2073-1 if shipped from bases within CONUS or from overseas bases by air if the preservation code is 1 through 7 (see Table 3-1).

3.1.8.1 **If shipped by surface from overseas bases, the unserviceable item shall be preserved to the method of preservation specified for the same item in serviceable condition.** If the item is greasy, rusting, or dirty, a greaseproof wrap or bag is required as <u>minimum</u> protection to prevent soiling of the container or cushioning.

3.1.8.2 **When the preservation code is 9, ESD protection for level A preservation is required regardless of the condition of the material,** with the following exception: barrier bags for unserviceable items with preservation code 9 or type cargo code 3 may be folded shut and held closed with ESD caution labels instead of heat sealing, if heat sealing equipment is not available. Do **not** use tape or staples on barriers for ESDS items.

3.1.9 <u>Preservative Requirements</u>. When the seventh digit of the Fast Pack or Standard Pack number is 5, 6, or 7, the preservatives most frequently used are:

3.1.9.1 P-2, thin film preservative (soft film, cold application). Reference Table 5-3 for NSN.

3.1.9.2 P-9, very light preservative oil (cold application). Reference Table 5-3 for NSN.

3.1.9.3 Operational fluids in all fuel devices, such as fuel assemblies, tanks/cells, controls, pumps, etc., identified as hazardous by the type cargo code, will be drained and purged, and all openings/fittings will be sealed in accordance with the applicable T.O. as required (reference AFI 24-204_IP). Reference MIL-STD-2073-1 for complete list of preservatives and preservative application criteria.

3.1.10 <u>Authorized Deviations</u>.

3.1.10.1 SPI packs (or alternate containers identified by an ALC waiver number in the lower right hand portion of the identification side of the container) shall be reused to ship or store items having the same NSN as the item received in the container (AFI 24-203). Any empty space between the wrapped item and the cavity surfaces will be filled with cushioning. If the right cushioning is not available, any soft, clean, non-dusting cushioning material may be used, such as reclaimed pieces of foam cushioning from SPI containers, fast packs, or standard packs. However, NEVER use reclaimed foam-in-place or loose-fill cushionings of any type in fast packs.

3.1.10.2 If the specified size is not available for a transportation priority 1 and 2 shipment, the next larger size of the Type I (Vehicle Star Pack) or Type II (Folding Convoluted Pack) may be used as long as there is no decrease in any of the container dimensions. The item must be wrapped sufficiently to build up the item so it fills up the cavity (reference paragraph 3.1.4).

3.2 CLOSURE, SEALING, REINFORCEMENT, AND OPENING.

3.2.1 Closure, sealing, and reinforcement for storage and shipment will be accomplished as required by ASTM D5118 and PPP-B-1672, Appendix A, with some relaxed requirements depending on the level of preservation specified for the item. Never use adhesives to close fast packs or standard packs. The following guidelines give the preferred method for each fast and standard pack as well as the level of packing they will satisfy: (1) The closure method prevents the container from opening. (2) Sealing prevents the entry of water and may also satisfy the closure requirements. (3) Reinforcement strengthens the container and may also satisfy the closure requirement. Only in rare cases will all three methods be used. Usually one method is all that is needed to complete the pack. Reference Figure 3-1 through 3-4 for specific details.

3.2.2 Do **not** use staples, stitches, or glue to make the final closure of fast or standard packs. This ruins the container for reclamation and reuse. Remove dust, dirt and grease from the container prior to taping.

3.2.3 Do **not** strip off labels or tape when opening reusable containers. This delaminates the box and reduces the serviceable life of the container. Carefully cut open taped container along the tape line. Labels shall be obliterated, but **never peeled off**(AFI 24-203).

3.2.4 Use the following procedures in Figure 3-1 through 3-4 to find the required tape method for closing, sealing, and reinforcing containers. Determine the type of fast or standard pack container and level of pack required and use one of the appropriate tape methods described.

3.2.5 When automatic strapping equipment is available, ASTM D3950 nonmetallic strapping may be used instead of ASTM D5330, pressure sensitive adhesive, filament reinforced tape. The number of ASTM D3950 straps and their location will be the same as specified for ASTM D3950 tape in Tape Method 4 of this table. The minimum width and thickness of ASTM D3950 straps should conform to Table 5 of ASTM D4675 and will vary depending on the weight of the container and contents. As an exception to the requirements of ASTM D5118, Type II fast packs under 15 lb (6.75 kg) may be closed with non-metallic strapping at least 0.25 inch (6.35 mm) wide and 0.014 inch (0.36 mm) thick, having a minimum breaking strength of 145 lb (65.25 kg) for the strapping and 110 lb (49.5 kg) for the closure.

2 in. (48 mm) WIDE ASTM D5486/D5486M
TYPE I, IV OR V
(SEE A3.1.1.2)

1/2 in. (12 mm) WIDE BAND OF
ASTM D5330/D5330M TYPE IV TAPE
OR ASTM D3950 1/4 in. (6 mm)
NONMETALLIC STRAPPING
(SEE A3.1.1.1.2)

MIN TYP. 2 in. (50 mm)

TYPE I

MFR. JOINT

STYLE A   STYLES B & C
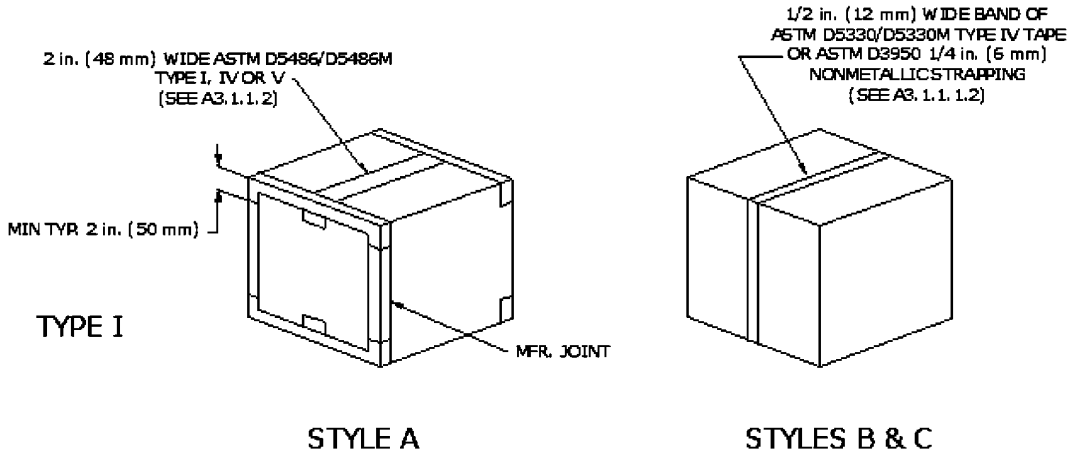
Tape Method 1: Seal with minimum 2 in. (48 mm) wide tape conforming to ASTM D5486/D5486M, Types I, IV or IV, applied over all seams, corners, and manufacturer's joints. The tape shall be centered over the seams and joints and shall extend over all the corners and edges of the box a minimum of 2 in. (50 mm) onto the adjacent box panels. Tape shall be applied over the lengthwise seam of the outer flaps, sealing the opening of the box and over the manufacturer's joint prior to tape being applied to the edge seams of the box. The tape applied to the manufacturer's joint shall cover the joint but not extend over the corners of the box onto the adjacent panels. This method also serves as the closure.

H9400019

Figure 3-1. Type I Fast Packs and Standard Packs

2 in. (48 mm) WIDE ASTM D5486/D5486M
TYPE I, IV OR V
(SEE A3.1.1.2)

MFR. JOINT

TYPE II

MIN TYP. 2 in. (50 mm)

STYLES D & E
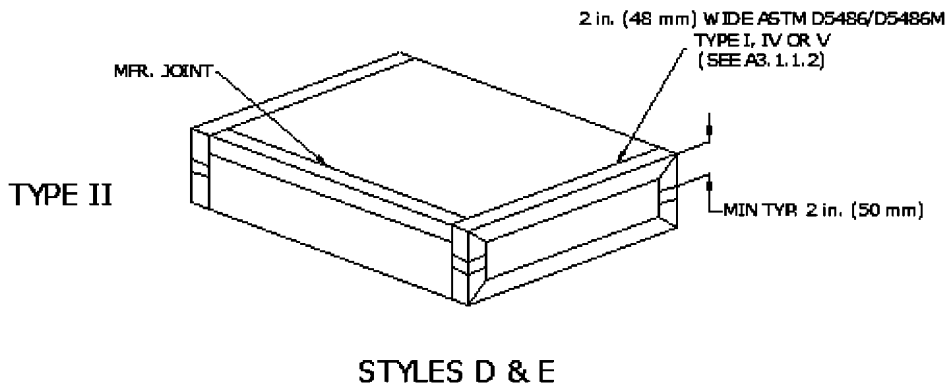
Tape Method 2: Seal all open seams and manufacturer's joints with 2 in. (48 mm) wide tape conforming to ASTM D5486/D5486M, Types I, IV or V. This method also serves as the closure.

H9400020

Figure 3-2. Type II Fast Packs

TYPE III

1/2 in. (12 mm) WIDE BAND OF
ASTM D5330/D5330M TYPE IV TAPE
OR ASTM D3950 1/4 in. (6 mm)
NONMETALLIC STRAPPING
(SEE A3.1.1.4)

6 in. (152 mm) TYP.

ADDITIONAL BAND FOR
XE9 AND XF1 BOXES ONLY.

STYLE G
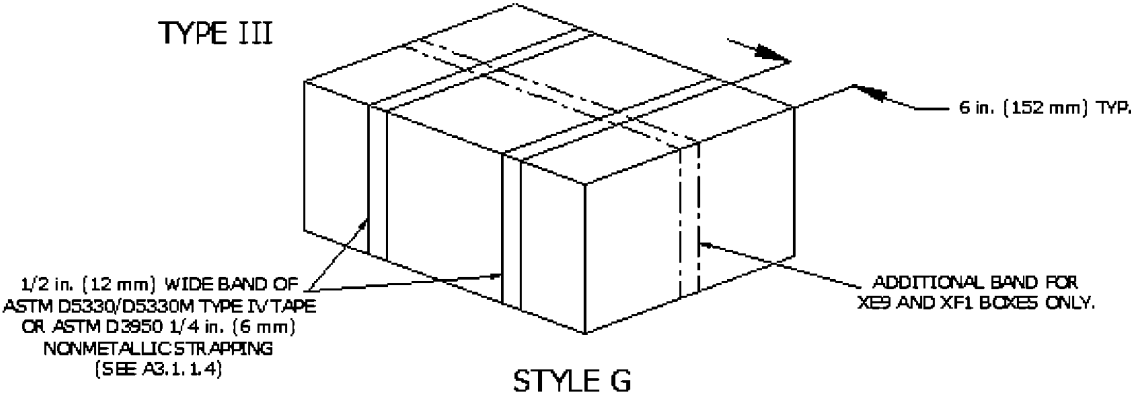
Tape Method 3: For Type III fast packs, reinforce with t wo full encircling bands of 1/2 in. (12 mm) wide tape conforming to ASTM D5330/D5330M Type IV, or ASTM D3950 nonmetallic strapping. Position the bands 6 in. (150 mm) from the ends over the top, bottom, and sides. Add one lengthwise band over the top, bottom, and ends for XE9 and XF1 fast packs. This method also serves as the closure, sealing is not required.

H9400021

Figure 3-3.   Type III Fast Packs

TYPE IV

1/2 in. (12 mm) WIDE BAND OF
ASTM D5330/D5330M TYPE IV TAPE
OR ASTM D3950 1/4 in. (6 mm)
NONMETALLIC STRAPPING
(SEE A3.1.1.5)

6 in. (152 mm) TYP.

STYLE B
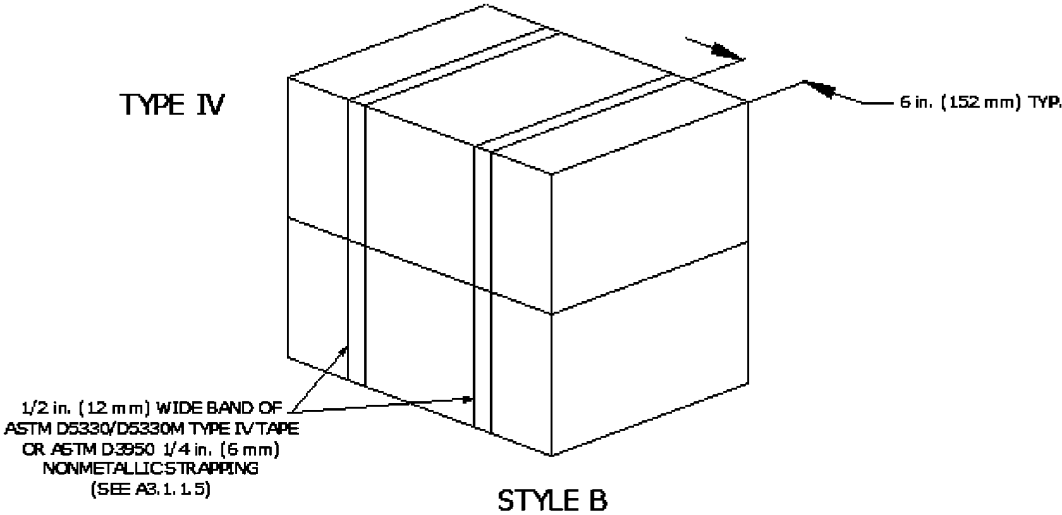
Tape Method 4: For Type IV fast packs, reinforce with t wo full encircling bands of 1/2 in. (12 mm) wide tape conforming to ASTM D5330/D5330M Type IV. Position the bands 6 in. (150 mm) from the ends over the top, bottom, and sides. This method also serves as the closure; sealing is not required.

H9400022

Figure 3-4.   Type IV Fast Packs

CHAPTER 4
DETAILED REQUIREMENTS FOR FAST PACKS

4.1 CONTAINER.

4.1.1 The four types of fast packs are listed below this paragraph. The construction and sizes of each type are detailed in PPP-B-1672. The fast pack numbering system is detailed in Figure 4-1, and the four types are identified in Figure 4-2 of this T.O. Table 4-1 provides the code number, inner dimensions, and National Stock Number for each pack. Table 4-2 provides dimensions of prescribed wraps and barrier bags as well as the recommended units of desiccant (reference also paragraph 3.1.6). Preformed MIL-DTL-117 bags may be used as well. Tables 4-3 through 4-6 provide references to the item weight/range, bare item maximum/minimum dimensions, maximum shock (Gs) transmitted to item, container dimensions and cube, and NSNs for fast packs. Tables 4-3 through 4-6 are used by bases in selecting the proper fast pack for shipment of items not covered by a SPI.

The four types of fast packs are:

Type I	(Vertical Star Pack)
Type II	(Folding Convoluted Pack)
Type III	(Telescopic Encapsulated Pack)
Type IV	(Horizontal Star Pack)

4.1.2 Use the specified container and place the items in the center of the container with an equal amount of cushioning on all sides.

4.1.3 Table 5-3 provides a reference to specification materials that may be used with fast packs.

4.2 AUTHORIZED DEVIATIONS.

If the specified size is not available for a transportation priority 1 or 2 shipment, the next larger size of the Type I or Type II fast pack may be used as long as there is no decrease in any of the container dimensions.

FAST PACK

Example SPI Number   A 00000 4 X A 5

Service/Agency Identifier
(Para. 2-1.3)

All Fast Packs and Standard Packs have
numeric zeros in the next 5 spaces
(Para. 2-1.4)

Fast Pack preservation code and MIL-STD-2073-1
method of preservation (Para. 3-1.1)
(Example Code "4" = Method 51)

All Fast Packs will be identified by an "X" in this position
(Para. 2-1.4)

Identifies Type of Fast Pack (para. 4-1.1)
(Example "A" = Type I, Vertical Star Pack)

Specifies Container Size (Figure 4-2)
(Example "5" – 12 x 12 x 18 in. pack)

"XA5" identifies a Vertical Star Pack with inner box dimensions 12 x 12 x 18.

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Figure 4-1. Fast Pack Numbering System

**TYPE I
VERTICAL
STAR PACK**
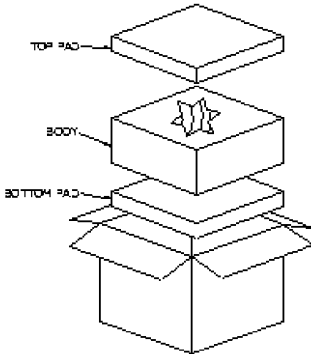
**TYPE II
FOLDING
CONVOLUTED PACK**
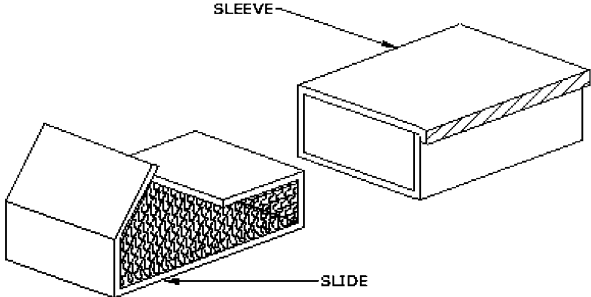
**TYPE III
TELESCOPING
ENCAPSULATING PACK**
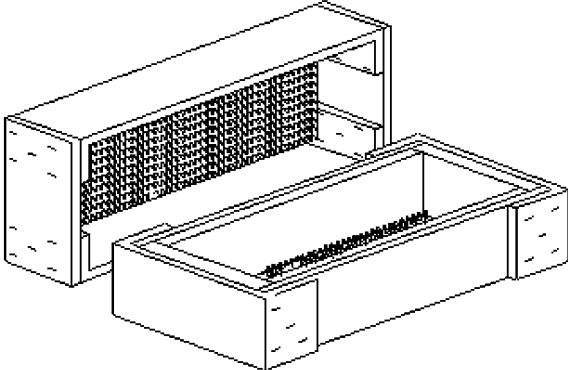
**TYPE IV
HORIZONTAL
STAR PACK**
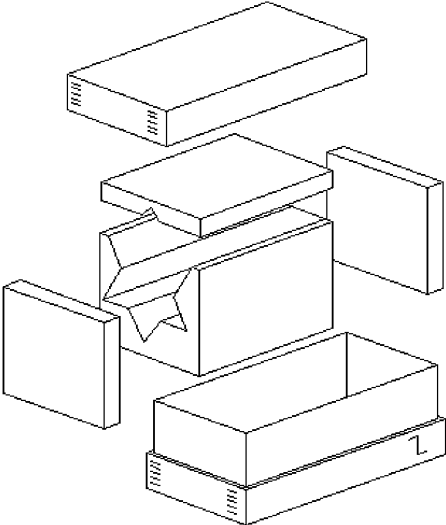
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Figure 4-2.   Fast Pack Sizes

Table 4-1.   Fast Pack Sizes

	Fast Pack Code #	Container Size (Inner Dimensions) in. (mm)	National Stock Number
TYPE I VERTICAL STAR PACK	-XA1	6 x 6 x 10 (152 x 152 x 254)	8115-00-192-1603
	-XA2	8 x 8 x 12 (203 x 203 x 305)	8115-00-192-1604
	-XA3	10 x 10 x 12 (254 x 254 x 305)	8115-00-192-1605
	-XA4	12 x 12 x 14 (305 x 305 x 356)	8115-00-134-3655
	-XA5	12 x 12 x 18 (305 x 305 x 457)	8115-00-050-5237
	-XA6	14 x 14 x 16 (356 x 356 x 406)	8115-00-134-3656
TYPE II FOLDING CONVOLUTED PACK	-XC1	6 x 5 x 2-1/2 (155 x 125 x 65)	8115-00-787-2142
	-XC2	6 x 5 x 3-1/2 (155 x 125 x 90)	8115-00-787-2147
	-XC3	9 x 6 x 2-1/2 (230 x 155 x 65)	8115-00-101-7647
	-XC4	9 x 6 x 3-1/2 (230 x 155 x 90)	8115-00-101-7638
	-XC5	12 x 8 x 2-1/2 (305 x 205 x 65)	8115-00-787-2146
	-XC6	12 x 8 x 3-1/2 (305 x 205 x 90)	8115-00-787-2148
	-XC7	18 x 12 x 2-1/2 (460 x 305 x 65)	8115-01-019-4085
	-XC8	18 x 12 x 3-1/2 (460 x 305 x 65)	8115-01-019-4084
	-XC9	10 x 10 x 3-1/2 (255 x 255 x 90)	8115-01-056-1244
	-XD1	13 x 13 x 3-1/2 (330 x 330 x 90)	8115-01-057-1243
	-XD2	16 x 16 x 3-1/2 (405 x 405 x 90)	8115-01-057-1245
	-XD3	24 x 16 x 3-1/2 (610 x 405 x 90)	8115-01-093-3730
	-XD4	9 x 6 x 4-1/2 (230 x 155 x 115)	8115-01-499-0898

Table 4-1.   Fast Pack Sizes - Continued

	Fast Pack Code #	Container Size (Inner Dimensions) in. (mm)	National Stock Number
TYPE III TELES- COPING ENCAPSU- LATING PACK	-XE1	30 x 16 x 14 (762 x 402 x 356)	8115-00-516-0242
	-XE2	32 x 12 x 14 (813 x 305 x 356)	8115-00-519-1825
	-XE3	24 x 14 x 14 (610 x 356 x 356)	8115-00-550-3558
	-XE4	20 x 14 x 9 (508 x 356 x 229)	8115-00-516-0251
	-XE5	25 x 14 x 14 (635 x 356 x 356)	8115-00-550-3574
	-XE6	32 x 18 x 16 (813 x 457 x 406)	8115-01-015-1315
	-XE7	24 x 18 x 16 (610 x 457 x 406)	8115-01-015-1312
	-XE8	26 x 9 x 9 (660 x 229 x 229)	8115-01-015-1313
	-XE9	34 x 24 x 18 (864 x 610 x 457)	8115-01-015-1314
	-XF1	30 x 27 x 14 (762 x 686 x 356)	8115-01-094-6520
	-XF2	30 x 30 x 9 (762 x 762 x 229)	8115-01-499-0895
	-XF3	40 x 40 x 9 (1016 x 1016 x 229)	8115-01-499-0897
TYPE IV HORIZON- TAL STAR PACK	-XG1	20 x 14 x 14 (508 x 356 x 356)	8115-01-010-8956
	-XG2	22 x 16 x 16 (559 x 406 x 406)	8115-01-006-7257

Table 4-2.   Fast Pack Wraps, Bags, and Desiccant Units (As Required)

Type I - Vertical Star Pack

	Wrap *NOTE 1	Barrier Bags *NOTE 2	Desiccant *NOTE 3	Desiccant *NOTE 4
XA1	14.0 x 11.0 (356 x 279)	10.5 x 9.0 (267 x 229)	11.5 x 9.0 (292 x 229)	3
XA2	18.0 x 14.0 (457 x 356)	13.5 x 11.0 (343 x 279)	14.5 x 11.0 (368 x 279)	4
XA3	22.0 x 13.0 (559 x 330)	12.5 x 13.0 (318 x 330)	13.5 x 13.0 (343 x 330)	4
XA4	26.0 x 16.0 (660 x 406)	15.5 x 15.0 (394 x 381)	16.5 x 15.0 (419 x 381)	6
XA5	26.0 x 18.0 (660 x 457)	17.5 x 15.0 (445 x 381)	18.5 x 15.0 (470 x 381)	8
XA6	30.0 x 19.0 (762 x 483)	18.5 x 17.0 (470 x 432)	19.5 x 17.0 (495 x 432)	8

Type II - Folding Convoluted Pack

	Wrap *NOTE 1	Barrier Bags *NOTE 2	Desiccant *NOTE 3	Desiccant *NOTE 4
XC1	13.0 x 8.5 (330 x 216)	9.0 x 7.0 (229 x 178)	10.0 x 7.0 (254 x 178)	3
XC2	15.5 x 9.5 (394 x 241)	10.0 x 8.0 (254 x 203)	11.0 x 8.0 (279 x 203)	3
XC3	15.5 x 11.0 (394 x 279)	12.0 x 8.0 (305 x 203)	13.0 x 8.0 (330 x 203)	4
XC4	17.5 x 12.0 (445 x 305)	13.0 x 9.0 (330 x 229)	14.0 x 9.0 (356 x 229)	4
XC5	19.5 x 14.0 (495 x 356)	15.0 x 10.0 (381 x 254)	16.0 x 11.0 (406 x 279)	5
XC6	21.5 x 15.0 (546 x 381)	16.0 x 11.0 (406 x 279)	17.0 x 11.0 (432 x 279)	6
XC7	27.5 x 20.0 (699 x 508)	21.0 x 14.0 (533 x 356)	22.0 x 14.0 (559 x 356)	7
XC8	29.5 x 21.0 (749 x 533)	22.0 x 15.0 (559 x 381)	23.0 x 15.0 (583 x 381)	8
XC9	25.2 x 13.0 (648 x 330)	14.0 x 13.0 (356 x 330)	15.0 x 13.0 (381 x 330)	6
XD1	31.5 x 16.0 (800 x 406)	17.0 x 16.0 (432 x 406)	18.0 x 16.0 (457 x 406)	7
XD2	37.5 x 19.0 (953 x 486)	20.0 x 19.0 (508 x 483)	21.0 x 19.0 (533 x 483)	8
XD3	29.0 x 39.0 (737 x 991	22.0 x 39.0 (559 x 991)	22.0 x 39.0 (559 x 991)	8
XD4	23.0 x 17.0 (584 x 432	14.0 x 17.0 (356 x 432	14.0 x 17.0 356 x 432)	3

Table 4-2.   Fast Pack Wraps, Bags, and Desiccant Units (As Required) - Continued

Type III - Telescoping Encapsulated Pack

	Wrap *NOTE 5	Barrier Bags *NOTE 6	Desiccant *NOTE 7
XE1	42.0 x 38.0 (1067 x 965)	23.0 x 38.0 (584 x 965)	24
XE2	34.0 x 37.0 (864 x 940)	18.0 x 38.0 (457 x 965)	20
XE3	34.0 x 28.0 (864 x 711)	18.0 x 30.0 (457 x 762)	16
XE4	34.0 x 24.0 (864 x 610)	18.0 x 30.0 (457 x 762)	16
XE5	30.0 x 22.0 (762 x 559)	15.0 x 25.0 (381 x 635)	12
XE6	50.0 x 37.0 (1270 x 940)	23.0 x 38.0 (584 x 965)	24
XE7	50.0 x 31.0 1270 x 787)	27.0 x 31.0 (686 x 787)	24
XE8	22.0 x 29.0 (559 x 737)	15.0 x 25.0 (381 x 635)	12
XE9	62.0 x 39.0 (1575 x 991)	32.0 x 44.0 (813 x 1118)	36
XF1	65.0 x 35.0 (1651 x 889)	32.0 x 36.0 (813 x 914)	32
XF2	67.0 x 36.0 (1702 x 914)	36 x 36 (914 x 914)	16
XF3	87.0 x 46.0 (2210 x 1168)	46.0 x 46.0 (1168 x 1168)	28

Type IV - Horizontal Star Pack

	*NOTE 8		
XG1	26.0 x 22.0 (660 x 559)	17.0 x 26.0 (432 x 660)	12
XG2	26.0 x 22.0 (660 x 559)	19.0 x 29.0 (483 x 737)	16

*NOTE 1:   A-A-3174 or MIL-PRF-121 with preservation code 1 - 7, and --3129, Type III or MIL-PRF-81705, Type II with preservation code 9.

*NOTE 2:   MIL-PRF-121 with preservation codes 2 or 6.

*NOTE 3:   MIL-PRF-131 with preservation codes 3, 4, or 7, and MIL-PRF-81705, type I with preservation code 9.

*NOTE 4:   Units per package, MIL-D-3464 desiccant with preservation code 4.

*NOTE 5:   PPP-C-795 with preservation codes 1 - 7, or PPP-C-1752 with preservation codes 1, 3, 4, or 5, or A-A-3129, Type III with preservation code 9.

*NOTE 6:   MIL-PRF-131 with preservation code 1 - 7, or MIL-PRF-81705, Type I with preservation code 9.

*NOTE 7:   Units per package, MIL-D-3464 desiccant with preservation codes 4 or 8.

*NOTE 8:   A-A-3174 or MIL-PRF-121 with preservation codes 3, 4 and 7, A-A-3129, Type III or MIL-PRF-81705, Type II with preservation code 9.

Table 4-3. Fast Pack/Item Selection Chart - PPP-B-1672, Type I, Vertical Star (MIL-STD-2073-1, Code NR)

Container Interior Dimensions Inches (mm) National Stock Number	Fast Pack Code	Recommended Maximum Bare Item Dimensions Inches (mm)	Item Weight Range lb (kg)	Maximum Shock Transmitted to Item (G's)	Packaged Outer Dimensions Inches (mm)	Packaged Cube feet (m)	Tare Weight lb (kg)
6.0 x 6.0 x 10.0 (152 x 152 x 254) NSN 8115-00-192-1603	XA1	3.0 dia x 6.0 (76 dia x 152)	1.0 -- 1.5 (0.45 --0.675)	30 -- 40	6.3 x 6.3 x 10.5 (160 x 160 x 263)	0.241 (0.00673)	1.35 (0.616)
			1.6 -- 2.25 (0.72 -- 1.013)	25 -- 29			
			2.3 -- 3.0 (1.04 -- 1.35)	30 -- 40			
		3.0 x 3.0 x 6.0 (76 x 76 x 152)	1.5 -- 4.0 (0.675 -- 1.8)	30 -- 40			
8.0 x 8.0 x 12.0 (203 x 203 x 305) NSN 8115-00-192-1604	XA2	3.0 x 3.0 x 8.0 (76 x 76 x 203)	1.5 -- 4.0 (0.675 -- 1.8)	30 -- 40	8.3 x 8.3 x 12.5 (211 x 211 x 318)	0.498 (0.0142)	0.240 (1.012)
		4.0 dia x 8.0 (02 dia x 203)	3.0 -- 7.5 (1.35 -- 3.375)	25 -- 29			
			7.6 -- 8.5 (3.42 -- 3.825)	30 -- 40			
		4.0 x 4.0 x 8.0 (102 x 102 203)	3.0 -- 5.0 (1.35 -- 2.25)	25 -- 29			
			5.1 -- 7.0 (2.295 -- 3.15)	30 -- 40			
		5.0 dia x 8.0 (127 dia x 203)	3.5 -- 5.5 (1.575 -- 2.475)	30 -- 40			
10.0 x 10.0 x 12.0 (254 x 254 x 305) NSN 8115-00-192-1605	XA3	4.0 dia x 6.0 (102 dia x 152)	2.0 -- 3.0 (0.9 -- 1.35)	30 -- 40	10.5 x 10.5 x 12.5 (267 x 267 x 318)	0.798 (0.0227)	3.20 (1.45)
			3.1 -- 4.5 (1.395 -- 2.025)	25 -- 29			
			4.6 -- 5.0 (2.07 -- 2.25)	30 -- 40			

Table 4-3. Fast Pack/Item Selection Chart - PPP-B-1672, Type I, Vertical Star (MIL-STD-2073-1, Code NR) - Continued

Container Interior Dimensions Inches (mm) National Stock Number	Fast Pack Code	Recommended Maximum Bare Item Dimensions Inches (mm)	Item Weight Range lb (kg)	Maximum Shock Transmitted to Item (G's)	Packaged Outer Dimensions Inches (mm)	Packaged Cube feet (m)	Tare Weight lb (kg)
		5.0 dia x 6.0 (127 dia x 152)	3.0 -- 6.0 (1.35 -- 2.7)	30 -- 40			
		6.0 dia x 6.0 (152 dia x 152)	4.5 -- 7.0 (2.025 -- 3.15)	30 -- 40			
		5.0 x 5.0 x 6.0 (127 x 127 x 152)	4.0 -- 9.0 (1.8 -- 4.05)	30 -- 40			
120 x 120 x 140 (305 x 305 x 356) NSN 8115-00-134-3655	XA4	5.0 dia x 8.0 127 dia x 203)	3.5 -- 4.5 (1.575 -- 2.025)	25 -- 29	12.5 x 12.5 x 14.5 (318 x 318 x 368)	1.311 (0.0372)	4.80 (2.18)
			4.6 -- 8.5 (2.07 -- 3.825)	20 -- 24			
		6.0 dia x 8.0 (152 dia x 203)	5.0 -- 7.0 (2.25 -- 3.15)	25 -- 29			
			7.1 -- 13.0 (3.195 -- 5.85)	20 -- 24			
		5.0 x 5.0 x 8.0 (127 x 127 x 203)	3.0 -- 5.0 (1.35 -- 2.25)	30 -- 40			
			5.1 -- 7.0 (2.295 -- 3.15)	25 -- 29			
			7.1 -- 11.0 (3.195 -- 4.95)	20 -- 24			
		6.0 x 6.0 x 8.0 (152 x 152 x 203)	5.0 -- 7.0 (2.25 -- 3.15)	30 -- 40			
			7.1 -- 10.0 (3.195 -- 4.5)	25 -- 29			
			10.1 -- 12.0 (4.545 -- 5.4)	20 -- 24			

Table 4-3. Fast Pack/Item Selection Chart - PPP-B-1672, Type I, Vertical Star (MIL-STD-2073-1, Code NR) - Continued

Container Interior Dimensions Inches (mm) National Stock Number	Fast Pack Code	Recommended Maximum Bare Item Dimensions Inches (mm)	Item Weight Range lb (kg)	Maximum Shock Transmitted to Item (G's)	Packaged Outer Dimensions Inches (mm)	Packaged Cube feet (m)	Tare Weight lb (kg)
12.0 x 12.0 x 18.0 (305 x 305 x 457) NSN 8115-00-050-5237	XA5	5.0 dia x 10.0 (127 dia x 254)	4.0 -- 5.0 (1.8 -- 2.25)	25 -- 29	12.5 x 12.5 x 18.5 (318 x 318 x 470)	1.673 0.0475	5.27 (23.9)
			5.1 -- 11.0 (2.295 -- 4.95)	20 -- 24			
		6.0 dia x 10.0 (152 dia x 254)	6.0 -- 8.0 (2.7 -- 3.6)	25 -- 29			
			8.1 -- 16.0 (3.65 -- 7.2)	20 -- 24			
		5.0 x 5.0 x 10.0 (127 x 127 x 254)	4.0 -- 6.0 (1.8 -- 2.7)	30 -- 40			
			6.1 -- 8.0 (2.745 -- 3.6)	25 -- 29			
			8.1 -- 13.0 (3.65 -- 5.85)	20 -- 24			
		6.0 x 6.0 x 10.0 (152 x 152 x 254)	8.0 -- 10.0 (3.6 -- 4.5)	30 -- 40			
			10.1 -- 14.0 (4.545 -- 6.3)	25 -- 29			
			14.1 -- 20.0 (6.345 -- 9.0)	20 -- 24			

Table 4-3.   Fast Pack/Item Selection Chart - PPP-B-1672, Type I, Vertical Star (MIL-STD-2073-1, Code NR) - Continued

Container Interior Dimensions Inches (mm) National Stock Number	Fast Pack Code	Recommended Maximum Bare Item Dimensions Inches (mm)	Item Weight Range lb (kg)	Maximum Shock Transmitted to Item (G's)	Packaged Outer Dimensions Inches (mm)	Packaged Cube feet (m)	Tare Weight lb (kg)
14.0 x 14.0 x 16.0 (356 x 356 x 406) NSN 8115-00-134-3656	XA6	6.0 dia x 10.0 (152 dia x 254)	6.5 -- 15.0 (2.7 -- 6.75)	25 -- 29	14.5 x 14.5 x 16.5 (368 x 368 x 419)	2.008 (0.0567)	7.5 (3.4)
		7.0 dia x 10.0 (178 dia x 254)	8.0 -- 14.0 (3.6 -- 6.3)	20 -- 24			
			14.1 -- 17.0 (6.345 -- 7.65)	24 -- 29			
			17.1 -- 20.0 (7.695 -- 9.0)	30 -- 40			
		6.0 x 6.0 x 10.0 152 x 152 x 254	5.0 -- 7.0 (2.25 -- 3.15)	30 -- 40			
			7.1 -- 9.0 (3.195 -- 4.05)	24 -- 29			
			9.1 -- 12.0 (4.095 -- 5.4)	20 -- 24			
		7.0 x 7.0 x 10.0 (178 x 178 x 254)	6.5 -- 9.0 (2.925 -- 4.05)	30 -- 40			
			9.1 -- 12.0 (4.095 -- 5.4)	25 -- 29			
			12.1 -- 21.0 (5.445 -- 9.45)	20 -- 24			
			21.1 -- 23.0 (9.495 -- 10.35)	25 -- 29			

Table 4-4. Fast Pack/Item Selection Chart - PPP-B-1672, Type II, Folding Convoluted (MIL-STD-2073-1, Code NS)

Container Interior Dimensions Inches (mm) National Stock Number	Fast Pack Code	Recommended Maximum Bare Item Dimensions Inches (mm)	Item Weight Maximum lb (kg)	Maximum Shock Transmitted to Item (G's)	Packaged Outer Dimensions Inches (mm)	Packaged Cube feet (m)	Tare Weight lb (kg)
6.0 x 5.0 x 2.5 (15.24 x 12.7 x 6.35) NSN 8115-00-787-2142	XC1	5.0 x 4.5 x 1.25 (127 x 114 x 32)	0.5 (0.23)	NOTE: Items assigned to these packs are not fragile, dynamic cushioning values have not been determined.	6.3 x 5.3 x 3.0 (160 x 135 x 76)	0.058 (0.0016)	0.30 (0.14)
6.0 x 5.0 x 3.5 (152 x 127 x 89) NSN 8115-00-787-2147	XC2	5.0 x 4.5 x 2.25 (127 x 114 x 57)	1.0 (0.45)		6.3 x 5.3 x 4.0 (160 x 135 x 102)	0.078 (0.00220)	0.42 (0.19)
9.0 x 6.0 x 2.5 (229 x 152 x 64) NSN 8115-00-101-7647	XC3	8.0 x 5.5 x 1.25 (203 x 140 x 32)	0.9 (.41)		9.3 x 6.3 x 4.0 (236 x 160 x 76)	0.102 (0.00287)	0.60 (0.27)
9.0 x 6.0 x 3.5 (229 x 152 x 89) NSN 8115-00-101-7638	XC4	8.0 x 5.5 x 2.25 (203 x 140 x 57)	1.8 (0.82)		9.3 x 6.3 x 4.0 (236 x 160 x 102)	0.136 (0.00385)	0.68 (0.31)
12.0 x 8.0 x 2.5 (305 x 203 x 64) NSN 8115-00-787-2146	XC5	11.0 x 7.5 x 1.25 (279 x 191 x 32)	1.8 (0.82)		12.5 x 8.3 x 3.0 (318 x 211 x 76)	0.180 (0.0051)	0.73 (0.33)
12.0 x 8.0 x 3.5 (305 x 203 x 89)	XC6	11.0 x 7.5 x 2.25 (279 x 191 x 57)	3.6 (1.63)		12.5 x 8.3 x 4.0 (318 x 211 x 102)	0.240 (0.00684)	0.86 (0.39)

Table 4-4. Fast Pack/Item Selection Chart - PPP-B-1672, Type II, Folding Convoluted (MIL-STD-2073-1, Code NS) - Continued

Container Interior Dimensions Inches (mm) National Stock Number	Fast Pack Code	Recommended Maximum Bare Item Dimensions Inches (mm)	Item Weight Maximum lb (kg)	Maximum Shock Transmitted to Item (G's)	Packaged Outer Dimensions Inches (mm)	Packaged Cube feet (m)	Tare Weight lb (kg)
NSN 8115-00-787-2148							
18.0 x 12.0 x 2.5 (457 x 305 x 64) NSN 8115-01-019-4085	XC7	17.0 x 11.5 x 1.25 (432 x 292 x 32)	4.3 (2.0)	See Note Above	18.5 x 12.5 x 3.0 (470 x 318 x 76)	0.402 (0.011)	2.75 (1.25)
18.0 x 12.0 x 3.5 (457 x 305 x 89) NSN 8115-01-019-4084	XC8	17.0 x 11.5 x 2.25 (432 x 292 x 57)	8.6 (3.9)		18.5 x 12.5 x 4.0 (470 x 318 x 102)	0.535 (0.00152)	2.92 (1.32)
10.0 x 10.0 x 3.5 (254 x 254 x 89) NSN 8115-01-057-1244	XC9	9.0 x 9.5 x 2.25 (228 x 241 x 57)	1.8 (0.82)		10.5 x 10.5 x 4.0 (267 x 267 x 102)	0.255 (0.00727)	1.00 (0.450)
13.0 x 13.0 x 3.5 (330 x 330 x 89) NSN 8115-01-057-1243	XD1	12.0 x 12.5 x 2.25 (305 x 318 x 58)	4.3 (2.0)		13.5 x 13.5 x 4.0 (343 x 343 x 102)	0.422 (0.0120)	1.50 (0.680)
16.0 x 16.0 x 3.5 (406 x 406 x 89) NSN 8115-01-051-1245	XD2	15.0 x 15.5 x 2.25 (381 x 394 x 57)	8.6 (3.9)		16.5 x 16.5 x 4.0 (419 x 419 x 102)	0.630 (0.0179)	2.00 (0.907)
24.0 x 16.0 x 3.5 (610 x 406 x 89) NSN 8115-01-093-3730	XD3	23.0 x 15.0 x 2.25 (584 x 381 x 57)	10.0 (4.54)		24.5 x 16.5 x 4.0 (622 x 419 x 102)	0.936 (0.0266)	3.45 (1.57)
9 x 6 x 4-1/2 (230 x 155 x 115) NSN 8115-01-499-0898	XD4	8 x 5.5 x 3.25 (203 x 140 x 83)	1.8 (0.82)		9.3 x 6.3 x 5.0 (236 x 160 x 127)	0.170 (0.005)	1.25 (0.567)

Table 4-5. Fast Pack/Item Selection Chart - PPP-B-1672, Type III, Telescoping Encapsulated (MIL-STD-2073-1, Code NV)

Container Interior Dimensions Inches (mm) National Stock Number	Fast Pack Code	Recommended Maximum Bare Item Dimensions Inches (mm)	Item Weight Range lb (kg)	Maximum Shock Transmitted to Item (G's)	Packaged Outer Dimensions Inches (mm)	Packaged Cube feet (m)	Tare Weight lb (kg)
30.0 x 16.0 x 14.0 (762 x 406 x 356) NSN 8115-00-516-0242	XE1	24.0 x 11.0 x 9.0 (610 x 279 x 229) min: 24.0 x 8.0 x 7.0 (508 x 203 x 178)	28 -- 48 (12.6 -- 21.6) 49 -- 54 (22.05 -- 24.3)	30 -- 39 40 -- 50	31.0 x 17.0 x 14.5 (787 x 432 x 368)	4.422 (0.125)	13.0 (5.90)
32.0 x 12.0 x 14.0 (813 x 305 x 356) NSN 8115-00-519-1825	XE2	26.0 x 6.0 x 8.0 (660 x 152 x 203) min: 22.0 x 4.0 x 5.0 (559 x 102 x 127)	12 -- 20 (5.4 -- 9.0) 20 -- 29 (9.0 -- 13.05) 30 -- 33 (13.5 -- 14.85)	30 -- 39 25 -- 29 40 -- 50	33.0 x 13.0 x 14.5 (838 x 330 x 368)	3.6 (0.102)	11.0 (5.00)
24.0 x 14.0 x 14.0 (610 x 356 x 356) NSN 8115-00-550-3558	XE3	18.0 x 8.0 x 8.0 (457 x 203 x 203) min: 14.0 x 6.0 x 6.0 (356 x 152 x 152)	13 -- 16 (5.85 -- 7.2) 17 -- 38 (7.65 -- 17.1)	30 -- 39 25 -- 29	25.0 x 15.0 x 14.5 (635 x 381 x 368)	3.147 (0.0890)	9.50 (4.31)
20.0 x 14.0 x 9.0 (508 x 356 x 229) NSN 8115-00-516-0251	XE4	16.0 x 10.0 x 5.0 (406 x 254 x 127) min: 15.0 x 10.0 x 3.0 (381 x 254 x 76)	6 -- 7 (2.7 -- 3.5) 7 -- 8 (3.15 -- 3.6)	30 -- 39 40 -- 50	21.0 x 15.0 x 9.3 (534 x 381 x 236)	1.695 (0.0480)	4.25 (1.93)
25.0 x 14.0 x 14.0 (635 x 356 x 356) NSN 8115-00-550-3574	XE5	13.0 x 7.0 x 7.0 (330 x 178 x 178) min: 8.0 x 4.0 x 4.0 (203 x 102 x 102)	7 -- 14 (3.15 -- 6.3) 15 -- 16 (6.75 -- 7.2) 17 -- 19 (7.65 -- 8.55)	20 -- 24 30 -- 39 40 -- 50	26.0 x 15.0 x 14.5 (660 x 381 x 368)	3.273 (0.0925)	12.0 (5.44)

Table 4-5. Fast Pack/Item Selection Chart - PPP-B-1672, Type III, Telescoping Encapsulated (MIL-STD-2073-1, Code NV) - Continued

Container Interior Dimensions Inches (mm) National Stock Number	Fast Pack Code	Recommended Maximum Bare Item Dimensions Inches (mm)	Item Weight Range lb (kg)	Maximum Shock Transmitted to Item (G's)	Packaged Outer Dimensions Inches (mm)	Packaged Cube feet (m)	Tare Weight lb (kg)
32.0 x 18.0 x 16.0 (813 x 457 x 160) NSN 8115-01-015-1315	XE6	24.0 x 13.0 x 11.0 (610 x 330 x 279) min: 20.0 x 10.0 x 8.0 (508 x 254 x 203)	80 (max) (36 kg)	20 -- 24	34.5 x 20.5 x 17.0 (876 x 521 x 432)	6.958 (0.197)	22.0 (9.99)
24.0 x 18.0 x 16.0 (610 x 457 x 406) NSN 8115-01-015-1312	XE7	18.0 x 13.0 x 11.0 (457 x 330 x 279) min: 14.0 x 10.0 x 8.0 (356 x 254 x 203)	20 -- 39 (9.0 -- 17.55) 40 -- 50 (18 -- 22.5)	25 -- 29 30 -- 39	25.0 x 19.0 x 16.5 (635 x 483 x 419)	4.536 (0.128)	14.0 (6.35)
26.0 x 9.0 x 9.0 (660 x 229 x 229) NSN 8115-01-015-1313	XE8	20.0 x 5.0 x 5.0 (508 x 127 x 127) min: 12.0 x 3.0 x 3.0 (305 x 76 x 76)	20 (max) (9.1)	50 (max)	27.0 x 10.0 x 9.3 (686 x 254 x 236)	1.453 (0.0412)	5.50 (2.50)
34.0 x 24.0 x 18.0 (864 x 610 x 457) NSN 8115-01-015-1314	XE9	25.0 x 18.0 x 12.0 (635 x 457 x 305) min: 21.0 x 16.0 x 8.0 (533 x 406 x 203)	90 (max) (40.8)	35 (max)	36.5 x 26.5 x 19.0 (927 x 673 x 483)	10.635 (0.301)	27.0 (12.2)
30.0 x 27.0 x 14.0 (762 x 686 x 356) NSN 8115-01-094-6520	XF1	24.0 x 21.0 x 18.0 (610 x 533 x 457) min: 20.0 x 17.0 x 4.0 (508 x 432 x 102)	26 -- 45 (11.8 -- 20.4) 46 -- 50 (20.9 -- 22.7)	21 -- 28 23 -- 30	31.0 x 28.0 x 15.0 (787 x 711 x 381)	7.535 (0.213)	18.0 (8.2)
30.0 x 30.0 x 9.0 (762 x 762 x 229) NSN 8115-01-499-0895	XF2	24.0 x 26.0 x 5.0 (660 x 660 x 127) min: 20.0 x 17.0 x 4.0 (508 x 432 x 102)	20 (max) (9.1)	50 (max)	31.0 x 31.0 x 10.0 (787 x 787 x 254)	5.561 (0.157)	20.0 (9.1)

Table 4-5.   Fast Pack/Item Selection Chart - PPP-B-1672, Type III, Telescoping Encapsulated (MIL-STD-2073-1, Code NV) - Continued

Container Interior Dimensions Inches (mm) National Stock Number	Fast Pack Code	Recommended Maximum Bare Item Dimensions Inches (mm)	Item Weight Range lb (kg)	Maximum Shock Transmitted to Item (G's)	Packaged Outer Dimensions Inches (mm)	Packaged Cube feet (m)	Tare Weight lb (kg)
40.0 x 40.0 x 9.0 (762 x 686 x 356) NSN 8115-01-499-0897	XF3	30.0 x 36.0 x 5.0 (762 x 914 x 127) min: 38.0 x 30.0 x 4.0 (965 x 763 x 102)			41.0 x 41.0 x 10.0 (1041 x 1041 x 254)	9.728 (0.275)	25.0 (11.3)

Table 4-6. Fast Pack/Item Selection Chart - PPP-B-1672, Type IV, Horizontal Star (MIL-STD-2073-1, Code NW)

Container Interior Dimensions Inches (mm) National Stock Number	Fast Pack Code	Recommended Maximum Bare Item Dimension Inches (mm)	Item Weight Range lb (kg)	Maximum Shock Transmitted to Item (G's)	Packaged Outer Dimensions Inches (mm)	Packaged Cube feet (m)	Tare Weight lb (kg)
20.0 x 14.0 x 14.0 (508 x 356 x 356) NSN 8115-01-010-8956	XG1	min: 14.0 x 5.125 x 5.375 (356 x 130 x 137)	6.0 -- 14.0 (2.7 -- 6.3)	25 -- 29	20.5 x 36.83 x 36.83 (521 x 935 x 935)	2.494 (.0456)	8.40 (3.81)
			15.0 -- 18.0 (6.75 -- 8.1)	30 -- 39			
			19.0 -- 21.0 (8.55 -- 9.45)	40 -- 50			
		14.0 x 7.0 x 7.0 (356 x 178 x 178)	10.0 -- 14.0 (4.5 -- 6.3)	30 -- 39			
			15.0 -- 19.0 (6.75 -- 8.55)	20 -- 24			
			20.0 -- 23.0 (9.0 -- 10.35)	25 -- 29			
			24.0 -- 26.0 (10.8 -- 11.7)	30 -- 39			
			27.0 -- 29.0 (12.15 -- 13.05)	40 -- 50			
22.0 x 16.0 x 16.0 (559 x 406 x 406) NSN 8115-01-006-7257	XG2	min: 16.0 x 6.375 x 6.375 (406 x 162 x 162)	8.0 -- 20.0 (3.6 -- 9.0)	25 -- 29	22.5 x 16.5 x 16.5 (572 x 419 x 419)	3.545 (0.100)	9.0 (4.1)
			21.0 -- 27.0 (9.45 -- 12.15)	30 -- 39			
			28.0 -- 31.0 (12.6 -- 13.95)	40 -- 50			
		16.0 x 7.25 x 7.25 (406 x 184 x 184)	11.0 -- 16.0 (4.95 -- 7.2)	25 -- 29			
			17.0 -- 21.0 (7.65 -- 9.45)	20 -- 24			

Table 4-6. Fast Pack/Item Selection Chart - PPP-B-1672, Type IV, Horizontal Star (MIL-STD-2073-1, Code NW) - Continued

Container Interior Dimensions Inches (mm) National Stock Number	Fast Pack Code	Recommended Maximum Bare Item Dimension Inches (mm)	Item Weight Range lb (kg)	Maximum Shock Transmitted to Item (G's)	Packaged Outer Dimensions Inches (mm)	Packaged Cube feet (m)	Tare Weight lb (kg)
			22.0 -- 24.0 (9.9 -- 10.8)	25 -- 29			
			25.0 -- 27.0 (11.25 -- 12.15)	30 -- 39			
			28.0 -- 31.0 (12.6 -- 13.95)	40 -- 50			

CHAPTER 5
DETAILED REQUIREMENTS FOR STANDARD PACKS

5.1 CONTAINER.

5.1.1 Standard packs are ASTM D5118, Type RSC, Class Weather-Resistant fiberboard containers used primarily for shipment of depot level reparables.

5.1.2 The last two digits of the standard pack number specify the size of the container. See Chapter 2 and Figure 5-1 for complete explanation of the number. The Container Standardization Master List, Table 5-1, provides essential data related to this code.

5.1.3 Use the specified container and place the item in the center of the container with an equal amount of cushioning all around (reference paragraph 3.1.4).

5.2 METHOD OF PRESERVATION.

5.2.1 The MIL-STD-2073-1 methods of preservation are specified for fast and standard packs in paragraph 3.1.1.

5.2.2 For preservation codes 1 through 9, always use the specified preservation method when a SERVICEABLE item is packaged for shipment/storage. UNSERVICEABLE items being returned for depot level repair shall be packaged as specified in paragraph 3.1.8. Preservation is always required for both serviceable and unserviceable items when preservation code 9 is specified.

5.3 SIMPLE INSTRUCTION CODE.

5.3.1 The **eighth position** of the standard pack number specifies the kind of packaging materials needed to preserve and protect the item. Below are the codes used in this position (reference Figure 5-1).

Code A	=	Wrap only.
Code B	=	Type A Cushion only.
Code C	=	Bag only.
Code D	=	Wrap and Type A cushion.
Code E	=	Wrap, Type A cushion, and bag.
Code F	=	Wrap and bag.
Code G	=	Type A cushion and bag.
Code H	=	Wrap and Type B cushion.
Code I	=	Wrap, bag, and Type B cushion.
Code J	=	Bag and Type B cushion.
Code K	=	Wrap, Type A cushion, and Type B cushion.
Code L	=	Type B cushion only.
Code M	=	Block and brace with wood or rigid MIL-PRF-26514, Class 1.
Code N	=	Place in MIL-DTL-81997 only.

NOTE

The process is to be performed in the order stated for each code.

5.3.2 If Type A or B cushioning is specified in the simple instruction code, select the material from this paragraph.

 If **Type A** cushion is specified by the Simple Instruction Code, select from the following materials:

PPP-C-795	- Flexible Closed Cell Plastic Film
A-A-59135	- Packaging Material, Sheet

A-A-459136   - Cushioning Material, Packaging, Closed Cell Foam Plank

PPP-C-1797   - Unicellular Polypropylene Foam

If **Type B** cushion is specified by the Simple Instruction Code, use MIL-PRF-26514, Type I, Class 2, Flexible Polyurethane Foam, Preformed Sheet Stock.

<div align="center">

NOTE

</div>

- Cushioning for preservation code 9 items **must** be antistatic.

- A wrap is required for preservation code 1 only when necessary to protect the item against contamination or abrasion by the cushioning/dunnage. A wrap may also be required for reparable items to prevent soiling the cushioning.

5.3.3 If a wrap or bag is specified by the Simple Instruction Code, select from Figure 5-2 through 5-5 using the table of materials that corresponds to the preservation method indicated by the seventh digit of the standard pack number.

<div align="center">

NOTE

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A wrap is required for Method 10 (Code 1) only to protect the item from abrasion or contamination from the cushioning/dunnage. A wrap may also be required to prevent soiling by a greasy, rusty or dirty item being shipped for repair. A bag (MIL-PRF-121, etc.), heat-sealed, or otherwise, may be used instead of a wrap. Care should be taken to cushion knobs, sharp corners or other pointed parts to prevent puncture of the wrap or bag.

5.4   WRAPS, BAGS, AND DESICCANT.

5.4.1 Table 5-2 lists wraps and/or bags in the proper sizes to be used with the corresponding container code. These are the maximum sizes to be used with the corresponding container code. These are the maximum sizes for a given container. Preformed bags may be used instead of the wrap (reference Table 4-1 sizes of wraps and bags).

5.4.2 Table 5-2 also lists the number of desiccant units to be used when Method 50 preservation is required. The number of desiccant units prescribed is based on the maximum quantity of cushioning and dunnage that might be used in the standard size container. The number of desiccant units required for bound fiber and cellulosic cushioning is greater, because it will retain more moisture than synthetic cushioning. Other cushioning materials shown in paragraph 5.3.1 are synthetic.

5.4.3 Table 5-3 provides a reference to specification materials used with standard packs.

STANDARD PACK

NOTE: Only SPI number positions 8 through 10 differ from Fast Pack SPI numbers

Example SPI Number   M 00000 4 D 38

Service/Agency Identifier
(para. 2-1.3)

All Fast Packs and Standard Packs have
numeric zeros in the next 5 spaces
(para. 2-1.4)

Std Pack preservation code and MIL-STD-2073-1
method of preservation (para. 3-1.1)

The Simple Instruction Code determines the wrap,
barrier, and cushioning needed. (para. 5-3, and figures
5-2 through 5-5)

The container size code is found in
Table 5-1, Container Standardization Master List.
Code 00 indicates that no container is required.

H9400027

Figure 5-1.   Standard Pack Numbering System

WRAP
PPP-B-795
A-A-3129
MIL-PRF-121

BAG
A-A-3174
MIL-PRF-121

H9400028

Figure 5-2.   Preservation Code 2, Method 1C-1/Code 6, Method I (with preservative) (Greaseproof - Waterproof)

WRAP
PPP-C-795
PPP-C-795, Cl 2 (static-dissipative)
PPP-C-1797, Type II (static dissipative)
A-A-59135, Grade B (static-dissipative)
A-A-3129
A-A-3129, Type III (static-dissipative)
MIL-PRF-121
MIL-PRF-17667
MIL-PRF-81705, Type II (static-dissipative)

BAG
MIL-PRF-121
MIL-PRF-22191, Type I
MIL-PRF-81705, Type I
(static shielding)

H9400173

Figure 5-3.   Preservation Code 3, Method 1A-8/Code 7, Method I8 (with preservative)/Code 9, Method IA-8
(with Electrostatic Discharge (ESD) Protection (Waterproof)

WRAP
PPP-B-795
A-A-3129
A-A-3174
MIL-PRF-121
MIL-PRF-17667

DESICCANT
MIL-D-3464

BAG
MIL-PRF-131
MIL-PRF-22191, Type I
MIL-PRF-81705, Type I
(static shielding)

H9400174

Figure 5-4.   Preservation Code 4, Method IIC (Greaseproof - Waterproof)

WRAP
MIL-PRF-121

BAG
Not required by this method, but
may be used.

H9400175

Figure 5-5.   Preservation Code 5, Method I (Greaseproof)

Table 5-1. Container Standardization Master List

Container Size Code	Container Size ID In (mm)	Container Size OD In (mm)	Cube OD cu ft (cu m)	Container Wt lb (kg)	NSN
01	4.0 x 4.0 x 4.0 (102 x 102 x 102)	4.3 x 4.3 x 4.5 (109 x 109 x 114)	0.048 (0.0014)	0.25 (0.11)	8115-00-265-7059
02	4.0 x 4.0 x 12.0 (102 x 102 x 305)	4.3 x 4.3 x 12.5 (109 x 109 x 318)	0.134 (0.0039)	0.74 (0.34)	8115-00-418-4660
03	4.0 x 4.0 x 16.0 (102 x 102 x 406)	4.3 x 4.3 x 16.5 (109 x 109 x 419)	0.177 (0.0050)	0.72 (0.33)	8115-00-200-6954
04	5.0 x 5.0 x 20.0 (127 x 127 x 508)	5.3 x 5.3 x 20.5 (135 x 135 x 521)	0.333 (0.0095)	0.88 (0.40)	8115-00-030-3532
05	6.0 x 4.0 x 8.0 (152 x 102 x 203)	6.3 x 4.3 x 8.5 (160 x 109 x 216)	0.133 (0.0038)	0.45 (0.20)	8115-00-190-4888
06	6.0 x 6.0 x 6.0 (152 x 152 x 152)	6.3 x 6.3 x 6.5 (160 x 160 x 165)	0.149 (0.0042)	0.52 (0.24)	8115-00-183-9503
07	6.0 x 6.0 x 10.0 (152 x 152 x 254)	6.3 x 6.3 x 10.5 (160 x 160 x 267)	0.241 (0.0068)	0.68 (0.31)	8115-00-417-9440
08	6.0 x 6.0 x 15.0 (152 x 152 x 381)	6.3 x 6.3 x 15.5 (160 x 160 x 394)	0.356 (0.010)	0.88 (0.40)	8115-01-166-6458
09	6.0 x 6.0 x 18.0 (12 x 152 x 457)	6.3 x 6.3 x 18.5 (160 x 160 x 470)	0.425 (0.012)	1.00 (0.45)	8115-00-190-4920
10	6.0 x 6.0 x 24.0 (152 x 152 x 610)	6.3 x 6.3 x 24.5 (160 x 160 x 622)	0.563 (0.016)	1.25 (0.57)	8115-00-190-4920
11	8.0 x 4.0 x 4.0 (203 x 102 x 102)	8.3 x 4.3 x 4.5 (211 x 109 x 114)	0.093 (0.0026)	0.38 (0.17)	8115-00-183-9500
12	8.0 x 8.0 x 4.0 (203 x 203 x 102)	8.3 x 8.3 x 4.5 (211 x 211 x 114)	0.179 (0.0051)	0.60 (0.27)	8115-00-281-3878
13	8.0 x 8.0 x 8.0 (203 x 203 x 203)	8.3 x 8.3 x 8.5 (211 x 211 x 216)	0.339 (0.0096)	0.90 (0.41)	8115-00-183-9498
14	8.0 x 8.0 x 10.0 (203 x 203 x 254)	8.3 x 8.3 x 10.5 (211 x 211 x 267)	0.149 (0.0012)	1.02 (0.46)	8115-00-183-9499
15	8.0 x 8.0 x 12.0 (203 x 203 x 305)	8.3 x 8.3 x 12.5 (211 x 211 x 318)	0.498 (0.0141)	1.12 (0.51)	8115-00-281-3882
16	8.0 x 8.0 x 14.0 (203 x 203 x 356)	8.3 x 8.3 x 14.5 (211 x 211 x 368)	0.578 (0.0164)	1.25 (0.57)	8115-01-166-6459
17	8.0 x 8.0 x 16.0 (203 x 203 x 406)	8.3 x 8.3 x 16.5 (211 x 211 x 419)	0.658 (0.0187)	1.35 (0.61)	8115-00-190-4936

Table 5-1.   Container Standardization Master List - Continued

Container Size Code	Container Size ID In (mm)	Container Size OD In (mm)	Cube OD cu ft (cu m)	Container Wt lb (kg)	NSN
18	8.0 x 8.0 x 24.0 (203 x 203 x 610)	8.3 x 8.3 x 24.5 (211 x 211 x 622)	0.977 (0.0277)	1.80 (0.82)	8115-00-417-9442
19	9.0 x 6.0 x 6.0 (229 x 152 x 152)	9.3 x 6.3 x 6.5 (236 x 160 x 165)	0.220 (0.0623)	0.66 (0.30)	8115-00-190-4950
20	9.0 x 6.0 x 18.0 (229 x 152 x 457)	9.3 x 6.3 x 18.5 (236 x 160 x 470)	0.627 (0.0177)	1.50 (0.68)	8115-01-029-6777
21	9.0 x 9.0 x 9.0 (229 x 229 x 229)	9.3 x 9.3 x 9.5 (236 x 236 x 241)	0.476 (0.0134)	1.15 (0.52)	8115-01-166-6460
22	10.0 x 6.0 x 4.0 (254 x 152 x 102)	10.5 x 6.3 x 4.5 (267 x 160 x 114)	0.172 (0.00487)	0.60 (0.27)	8115-00-183-9496
23	10.0 x 6.0 x 10.0 (254 x 152 x 254)	10.5 x 6.3 x 10.5 (267 x 160 x 267)	0.402 (0.0114)	0.85 (0.39)	8115-00-255-1341
24	10.0 x 8.0 x 6.0 (254 x 203 x 152)	10.5 x 8.3 x 6.5 (267 x 211 x 165)	0.328 (0.0930)	0.90 (0.41)	8115-00-183-9497
25	10.0 x 10.0 x 8.0 (254 x 254 x 203)	10.5 x 10.5 x 8.5 (267 x 267 x 216)	0.542 (0.0154)	1.26 (0.57)	8115-00-183-9494
26	10.0 x 10.0 x 10.0 (254 x 254 x 254)	10.5 x 10.5 x 10.5 (267 x 267 x 267)	0.670 (0.0227)	1.40 (0.64)	8115-00-190-4959
27	10.0 x 10.0 x 12.0 (254 x 254 x 309)	10.5 x 10.5 x 12.5 (267 x 267 x 318)	0.798 (0.9223)	1.50 (0.68)	8115-01-034-0370
28	11.0 x 11.0 x 11.0 (279 x 279 x 279)	11.5 x 11.5 x 11.5 (292 x 292 x 292)	0.880 (0.024)	1.70 (0.77)	8115-00-417-9406
29	11.25 x 8.75 x 4.0 (286 x 222 x 102)	11.5 x 9.0 x 4.5 (292 x 229 x 114)	0.270 (0.0762)	0.92 (0.42)	8115-01-012-5003
30	11.25 x 8.75 x 18.0 (286 x 222 x 457)	11.5 x 9.0 x 18.5 (292 x 229 x 470)	1.108 (0.0314)	1.86 (0.84)	8115-00-190-4969
31	12.0 x 6.0 x 6.0 (305 x 152 x 152)	12.5 x 6.3 x 6.5 (318 x 160 x 165)	0.296 (0.0840)	0.78 (0.35)	8115-00-183-9492
32	12.0 x 6.0 x 12.0 (305 x 152 x 305)	12.5 x 6.3 x 12.5 (318 x 160 x 318)	0.570 (0.0162)	1.25 (0.57)	8115-00-190-4974
33	12.0 x 6.0 x 15.0 (305 x 152 x 381)	12.5 x 6.3 x 15.5 (318 x 160 x 394)	0.706 (0.0200)	1.32 (0.60)	8115-00-417-9380
34	12.0 x 9.0 x 6.0 (305 x 229 x 152)	12.5 x 9.3 x 6.5 (318 x 236 x 165)	0.437 (0.0124)	1.10 (0.50)	8115-01-011-3626

Table 5-1.   Container Standardization Master List - Continued

Container Size Code	Container Size ID In (mm)	Container Size OD In (mm)	Cube OD cu ft (cu m)	Container Wt lb (kg)	NSN
35	12.0 x 9.5 x 9.5 (305 x 241 x 241)	12.5 x 10.0 x 10.0 (318 x 254 x 254)	0.723 (0.0205)	1.40 (0.64)	8115-00-132-9531
36	12.0 x 12.0 x 4.0 (305 x 305 x 102)	12.5 x 12.5 x 4.5 (318 x 318 x 114)	0.407 (0.0115)	1.35 (0.61)	8115-00-190-4860
37	12.0 x 12.0 x 8.0 (305 x 305 x 203)	12.5 x 12.5 x 8.5 (318 x 318 x 216)	0.769 (0.0218)	1.50 (0.68)	8115-00-417-9378
38	12.0 x 12.0 x 10.0 (305 x 305 x 254)	12.5 x 12.5 x 10.5 (318 x 318 x 267)	0.949 (0.0285)	1.81 (0.82)	8115-00-183-9490
39	12.0 x 12.0 x 12.0 (305 x 305 x 305)	12.5 x 12.5 x 12.5 (318 x 318 x 318)	1.131 (0.0322)	1.97 (0.89)	8115-00-183-9491
40	12.0 x 12.0 x 14.0 (305 x 305 x 356)	12.5 x 12.5 x 14.5 (318 x 318 x 368)	1.311 (0.0372)	2.14 (0.97)	8115-00-409-3807
41	13.0 x 13.0 x 13.0 (330 x 330 x 330)	13.5 x 13.5 x 13.5 (343 x 343 x 343)	1.424 (0.0404)	2.48 (1.12)	8115-01-166-6461
42	14.0 x 10.0 x 6.0 (356 x 254 x 152)	14.5 x 10.5 x 6.5 (368 x 267 x 165)	0.573 (0.0162)	1.35 (0.62)	8115-00-495-5458
43	14.0 x 10.0 x 10.0 (356 x 254 x 254)	14.5 x 10.5 x 10.5 (368 x 267 x 267)	0.925 (0.0262)	1.68 (0.762)	8115-01-030-3537
44	14.0 x 12.0 x 8.0 (356 x 305 x 203)	14.5 x 12.5 x 8.5 (368 x 318 x 216)	0.892 (0.0253)	1.80 (0.82)	8115-00-183-9488
45	14.0 x 14.0 x 12.0 (356 x 356 x 305)	14.5 x 14.5 x 12.5 (368 x 368 x 318)	1.521 (0.0431)	2.22 (1.01)	8115-00-183-9489
46	14.0 x 14.0 x 14.0 (356 x 356 x 356)	14.5 x 14.5 x 14.5 (368 x 368 x 368)	1.764 (0.0498)	2.68 (1.22)	8115-00-417-9321
47	14.0 x 14.0 x 16.0 (356 x 356 x 406)	14.5 x 14.5 x 16.5 (368 x 368 x 419)	2.008 (0.0567)	2.75 (1.25)	8115-00-585-4906
48	14.0 x 14.0 x 18.0 (356 x 356 x 457)	14.5 x 14.5 x 18.5 (368 x 368 x 470)	2.251 (0.0637)	3.00 (1.36)	8115-00-417-9320
49	15.0 x 15.0 x 10.0 (381 x 381 x 254)	15.5 x 15.5 x 10.5 (394 x 394 x 267)	1.460 (0.0415)	2.55 (1.16)	8115-00-417-9318
50	16.0 x 10.0 x 10.0 (406 x 254 x 254)	16.5 x 10.5 x 10.5 (419 x 267 x 267)	1.053 (0.0299)	1.80 (0.82)	8115-01-030-4249
51	16.0 x 12.0 x 8.0 (406 x 308 x 203)	16.5 x 12.5 x 8.5 (419 x 318 x 216)	1.145 (0.0288)	1.93 (0.88)	8115-00-183-9487

Table 5-1.   Container Standardization Master List - Continued

Container Size Code	Container Size ID In (mm)	Container Size OD In (mm)	Cube OD cu ft (cu m)	Container Wt lb (kg)	NSN
52	16.0 x 12.0 x 12.0 (406 x 308 x 308)	16.5 x 12.5 x 12.5 (419 x 318 x 318)	1.492 (0.0424)	2.28 (1.03)	8115-00-418-4653
53	16.0 x 16.0 x 12.0 (406 x 406 x 308)	16.5 x 16.5 x 12.5 (419 x 419 x 318)	1.970 (0.0550)	3.09 (1.40)	8115-00-451-7853
54	16.0 x 16.0 x 16.0 (406 x 406 x 406)	16.5 x 16.5 x 16.5 (419 x 419 x 419)	2.60 (0.0736)	3.50 (1.59)	8115-00-190-5002
55	18.0 x 12.0 x 12.0 (457 x 308 x 308)	18.5 x 12.5 x 12.5 (470 x 318 x 318)	1.673 (0.0475)	2.50 (1.13)	8115-00-514-2409
56	18.0 x 15.0 x 10.0 (457 x 381 x 254)	18.5 x 15.5 x 10.5 (470 x 394 x 267)	1.742 (0.0494)	2.81 (1.27)	8115-00-190-5007
57	18.0 x 15.0 x 15.0 (457 x 381 x 381)	18.5 x 15.5 x 15.5 (470 x 394 x 394)	2.572 (0.0730)	3.34 (1.52)	8115-00-417-9292
58	18.0 x 18.0 x 12.0 (457 x 457 x 308)	18.5 x 18.5 x 12.5 (470 x 470 x 318)	2.476 (0.0703)	3.64 (1.65)	8115-00-183-9482
59	18.0 x 18.0 x 18.0 (457 x 457 x 457)	18.5 x 18.5 x 18.5 (470 x 470 x 470)	3.664 (0.104)	4.38 (1.99)	8115-00-428-4185
60	20.0 x 10.0 x 10.0 (508 x 254 x 254)	20.5 x 10.5 x 10.5 (527 x 267 x 267)	1.308 (0.0377)	2.05 (0.93)	8115-01-166-6462
61	20.0 x 12.0 x 12.0 (508 x 308 x 308)	20.5 x 12.5 x 12.5 (521 x 317 x 317)	1.85 (0.0526)	2.60 (1.18)	8115-01-008-3645
62	20.0 x 16.0 x 16.0 (508 x 406 x 406)	20.5 x 16.5 x 16.5 (521 x 419 x 419)	3.23 (0.0915)	3.90 (1.77)	8115-00-275-5777
63	20.0 x 20.0 x 6.0 (508 x 508 x 152)	20.5 x 20.5 x 6.5 (521 x 521 x 165)	1.58 (0.0448)	3.53 (1.60)	8115-00-417-9253
64	20.0 x 20.0 x 12.0 (508 x 508 x 305)	20.5 x 20.5 x 12.5 (521 x 521 x 318)	3.04 (0.0863)	4.30 (1.95)	8115-00-428-4183
65	20.0 x 20.0 x 20.0 (508 x 508 x 305)	20.5 x 20.5 x 20.5 (521 x 521 x 521)	4.986 (0.141)	5.35 (2.43)	8115-00-428-4158
66	22.0 x 22.0 x 12.0 (559 x 559 x 305)	22.5 x 22.5 x 12.5 (572 x 572 x 318)	3.662 (0.104)	5.00 (2.27)	8115-00-428-4145
67	24.0 x 12.0 x 12.0 (610 x 305 x 305)	24.5 x 12.5 x 12.5 (622 x 318 x 318)	2.215 (0.0629)	2.90 (1.32)	8115-01-166-6464
68	24.0 x 14.0 x 14.0 (610 x 356 x 356)	24.5 x 14.5 x 14.5 (622 x 368 x 368)	2.981 (0.0842)	3.60 (1.63)	8115-01-071-2972

Table 5-1. Container Standardization Master List - Continued

Container Size Code	Container Size ID In (mm)	Container Size OD In (mm)	Cube OD cu ft (cu m)	Container Wt lb (kg)	NSN
69	24.0 x 16.0 x 12.0 (610 x 406 x 305)	24.5 x 16.5 x 12.5 (622 x 419 x 318)	2.924 (0.0829)	3.80 (1.72)	8115-00-183-9481
70	24.0 x 16.0 x 16.0 (610 x 406 x 406)	24.5 x 16.5 x 16.5 (622 x 419 x 419)	3.860 (0.109)	4.32 (1.96)	8115-00-292-0123
71	24.0 x 18.0 x 18.0 (610 x 457 x 457)	24.5 x 18.5 x 18.5 (622 x 470 x 470)	4.853 (0.137)	5.00 (2.27)	8115-01-163-9189
72	24.0 x 20.0 x 16.0 (610 x 508 x 406)	24.5 x 20.5 x 16.5 (622 x 521 x 419)	4.796 (0.136)	5.30 (2.40)	8115-00-417-9236
73	24.0 x 24.0 x 10.0 (610 x 610 x 254)	24.5 x 24.5 x 10.5 (622 x 622 x 267)	3.647 (0.103)	5.45 (2.47)	8115-00-428-4124
74	24.0 x 24.0 x 12.0 (610 x 610 x 305)	24.5 x 24.5 x 12.5 (622 x 622 x 318)	4.342 (0.123)	5.75 (2.61)	8115-00-174-2354
75	24.0 x 24.0 x 16.0 (610 x 610 x 406)	24.5 x 24.5 x 16.5 (622 x 622 x 419)	5.732 (0.162)	6.05 (2.74)	8115-01-119-2523
76	24.0 x 24.0 x 20.0 (610 x 610 x 508)	24.5 x 24.5 x 20.5 (622 x 622 x 521)	7.121 (0.202)	6.70 (3.04)	8115-01-166-6451
77	24.0 x 24.0 x 24.0 (610 x 610 x 610)	24.5 x 24.5 x 24.5 (622 x 622 x 622)	8.511 (0.241)	7.62 (3.46)	8115-00-417-9416
78	26.0 x 12.0 x 8.0 (660 x 305 x 203)	26.5 x 12.5 x 8.5 (673 x 318 x 216)	1.629 (0.0462)	3.00 (1.36)	8115-01-166-6450
79	26.0 x 12.0 x 10.0 (660 x 305 x 254)	26.5 x 12.5 x 10.5 (673 x 318 x 267)	2.013 (0.0571)	3.30 (1.50)	8115-01-166-6449
80	26.0 x 18.0 x 18.0 (660 x 457 x 457)	26.5 x 18.5 x 18.5 (673 x 470 x 470)	5.249 (0.149)	5.50 (2.49)	8115-01-166-6454
81	26.0 x 26.0 x 20.0 (660 x 660 x 508)	26.5 x 26.5 x 20.5 673 x 673 x 521)	8.331 (0.2360)	7.00 (3.18)	8115-01-166-6463
82	29.0 x 14.0 x 14.0 (737 x 356 x 356)	29.5 x 14.5 x 14.5 (749 x 368 x 368)	3.589 (0.101)	4.00 (1.81)	8115-01-166-6447
83	30.0 x 12.0 x 6.0 (762 x 305 x 152)	30.5 x 12.5 x 6.5 (775 x 318 x 165)	1.434 (0.0407)	2.61 (1.18)	8115-00-190-5017
84	30.0 x 12.0 x 12.0 (762 x 305 x 305)	30.5 x 12.5 x 12.5 (775 x 318 x 318)	2.758 (0.0784)	3.50 (1.59)	8115-01-166-6448
85	30.0 x 16.0 x 16.0 (762 x 406 x 406)	30.5 x 16.5 x 16.5 (775 x 419 x 419)	4.805 (0.136)	5.00 (2.27)	8115-00-292-0120

Table 5-1. Container Standardization Master List - Continued

Container Size Code	Container Size ID In (mm)	Container Size OD In (mm)	Cube OD cu ft (cu m)	Container Wt lb (kg)	NSN
86	30.0 x 20.0 x 12.0 (762 x 508 x 305)	30.5 x 20.5 x 12.5 (775 x 521 x 318)	4.523 (0.128)	4.80 (2.18)	8115-01-163-3446
87	30.0 x 20.0 x 20.0 (762 x 508 x 508)	30.5 x 20.5 x 20.5 (775 x 521 x 521)	7.418 (0.210)	6.50 (2.95)	8115-01-163-3447
88	30.0 x 26.0 x 20.0 (762 x 660 x 508)	30.5 x 26.5 x 20.5 (775 x 673 x 521)	9.589 (0.272)	7.10 (3.22)	8115-01-163-3448
89	32.0 x 26.0 x 16.0 (813 x 660 x 406)	32.5 x 26.5 x 16.5 (826 x 673 x 419)	8.224 (0.239)	6.85 (3.11)	8115-01-163-9188
90	32.0 x 26.0 x 26.0 (813 x 660 x 660)	32.5 x 26.5 x 26.5 (826 x 673 x 673)	13.208 (0.374)	7.60 (3.45)	8115-01-163-3449
91	34.0 x 14.0 x 10.0 (864 x 356 x 254)	34.5 x 14.5 x 10.5 (876 x 368 x 267)	2.895 (0.0861)	3.75 (1.70)	8115-00-564-8053
92	34.0 x 20.0 x 15.0 (864 x 508 x 381)	34.5 x 20.5 x 15.5 (876 x 521 x 394)	6.344 (0.180)	6.00 (2.72)	8115-01-166-6455
93	34.0 x 20.0 x 20.0 (864 x 508 x 508)	34.5 x 20.5 x 20.5 (876 x 521 x 521)	8.390 (0.238)	6.50 (2.95)	8115-01-166-6456
94	36.0 x 12.0 x 12.0 (914 x 305 x 305)	36.5 x 12.5 x 12.5 (927 x 318 x 318)	3.30 (0.094)	3.82 (1.73)	8115-01-166-6457
95	36.0 x 14.0 x 14.0 (914 x 356 x 356)	36.5 x 14.5 x 14.5 (927 x 368 x 368)	4.441 (0.126)	4.70 (2.13)	8115-00-190-5020
96	36.0 x 24.0 x 22.0 (914 x 610 x 559)	36.5 x 24.5 x 22.5 (927 x 622 x 572)	11.644 (0.330)	7.20 (3.27)	8115-01-166-5118
97	36.0 x 26.0 x 18.0 (914 x 660 x 457)	36.5 x 26.5 x 18.5 (927 x 673 x 470)	10.355 (0.293)	6.80 (3.08)	8115-01-166-6453
98	40.0 x 14.0 x 14.0 (1016 x 356 x 356)	40.5 x 14.5 x 14.5 (1029 x 368 x 368)	4.928 (0.139)	6.00 (2.72)	8115-01-166-6452

Table 5-2. Standard Pack Wraps, Bags, and Desiccant Units (As Required)

Container Size Code	Container Size ID (in) (mm)	Wrap (in) (mm) (NOTE 1)	Barrier Bag (in) (mm) (NOTE 2)	Barrier Bag (in) (mm) (NOTE 3)	Units of Desiccant w/Pres CODE 4 *Cell/Syn	
01	4.0 x 4.0 x 4.0 (102 x 102 x 102)	14.0 x 8.0 (356 x 203)	8.0 x 9.0 (203 x 229)	9.0 x 9.0 (229 x 229)	4	2
02	4.0 x 4.0 x 12.0 (102 x 102 x 305)	14.0 x 16.0 (356 x 406)	8.0 x 17.0 (203 x 432)	9.0 x 17.0 (229 x 432)	8	4
03	4.0 x 4.0 x 16.0 (102 x 102 x 406)	14.0 x 20.0 (356 x 508)	8.0 x 21.0 (203 x 533)	9.0 x 21.0 (229 x 533)	10	5
04	5.0 x 5.0 x 20.0 (127 x 127 x 508)	18.0 x 25.0 (457 x 635)	10.0 x 26.0 (254 x 660)	11.0 x 26.0 (279 x 660)	15	7
05	6.0 x 4.0 x 8.0 (152 x 102 x 203)	18.0 x 14.0 (457 x 356)	10.0 x 15.0 (254 x 381)	11.0 x 15.0 (279 x 381)	9	4
06	6.0 x 6.0 x 6.0 (152 x 152 x 152)	22.0 x 12.0 (559 x 305)	12.0 x 13.0 (305 x 330)	13.0 x 13.0 (330 x 330)	9	4
07	6.0 x 6.0 x 10.0 (152 x 152 x 254)	22.0 x 16.0 (559 x 406)	12.0 x 17.0 (305 x 432)	13.0 x 17.0 (330 x 432)	12	6
08	6.0 x 6.0 x 15.0 (152 x 152 x 381)	22.0 x 21.0 (559 x 533)	12.0 x 22.0 (305 x 559)	13.0 x 22.0 (330 x 559)	16	7
09	6.0 x 6.0 x 18.0 (152 x 152 x 457)	22.0 x 24.0 (559 x 610)	12.0 x 25.0 (305 x 635)	13.0 x 25.0 (330 x 635)	18	8
10	6.0 x 6.0 x 24.0 (152 x 152 x 610)	22.0 x 30.0 (559 x 762)	12.0 x 31.0 (305 x 787)	13.0 x 31.0 (330 x 787)	22	10
11	8.0 x 4.0 x 4.0 (203 x 102 x 102)	14.0 x 12.0 (356 x 305)	8.0 x 13.0 (203 x 330)	9.0 x 13.0 (229 x 330)	6	3
12	8.0 x 8.0 x 4.0 (203 x 203 x 102)	22.0 x 12.0 (559 x 305)	12.0 x 13.0 (305 x 330)	13.0 x 13.0 (330 x 330)	9	4
13	8.0 x 8.0 x 8.0 (203 x 203 x 203)	30.0 x 16.0 (762 x 406)	16.0 x 17.0 (406 x 432)	17.0 x 17.0 (432 x 432)	16	7
14	8.0 x 8.0 x 10.0 (203 x 203 x 254)	30.0 x 18.0 (762 x 457)	16.0 x 19.0 (406 x 483)	17.0 x 19.0 (432 x 483)	18	8
15	8.0 x 8.0 x 12.0 (203 x 203 x 305)	30.0 x 20.0 (762 x 508)	16.0 x 21.0 (406 x 533)	17.0 x 21.0 (432 x 533)	20	9
16	8.0 x 8.0 x 14.0 (203 x 203 x 356)	30.0 x 22.0 (762 x 559)	16.0 x 23.0 (406 x 584)	17.0 x 23.0 (432 x 584)	22	10
17	8.0 x 8.0 x 16.0 (203 x 203 x 406)	30.0 x 24.0 (762 x 610)	16.0 x 25.0 (406 x 635)	17.0 x 25.0 (432 x 635)	24	11

Table 5-2. Standard Pack Wraps, Bags, and Desiccant Units (As Required) - Continued

Container Size Code	Container Size ID (in) (mm)	Wrap (in) (mm) (NOTE 1)	Barrier Bag (in) (mm) (NOTE 2)	Barrier Bag (in) (mm) (NOTE 3)	Units of Desiccant w/Pres CODE 4 *Cell/Syn	
18	8.0 x 8.0 x 24.0 (203 x 203 x 610)	26.0 x 30.0 (660 x 762)	14.0 x 31.0 (356 x 787)	15.0 x 31.0 (381 x 787)	26	11
19	9.0 x 6.0 x 6.0 (229 x 152 x 152)	22.0 x 15.0 (559 x 381)	12.0 x 16.0 (305 x 406)	13.0 x 16.0 (330 x 406)	11	9
20	9.0 x 6.0 x 18.0 (229 x 152 x 457)	28.0 x 27.0 (711 x 686)	15.0 x 28.0 (381 x 711)	16.0 x 28.0 (406 x 711)	25	11
21	9.0 x 9.0 x 9.0 (229 x 229 x 229)	34.0 x 18.0 (864 x 457)	18.0 x 19.0 (457 x 483)	19.0 x 19.0 (483 x 483)	20	9
22	10.0 x 6.0 x 4.0 (254 x 152 x 102)	18.0 x 14.0 (457 x 356)	10.0 x 15.0 (254 x 381)	11.0 x 15.0 (279 x 381)	9	4
23	10.0 x 6.0 x 10.0 (254 x 152 x 254)	30.0 x 20.0 (762 x 508)	16.0 x 21.0 (406 x 533)	17.0 x 21.0 (432 x 533)	20	9
24	10.0 x 8.0 x 6.0 (254 x 203 x 152)	26.0 x 16.0 (660 x 406)	14.0 x 17.0 (356 x 432)	15.0 x 17.0 (381 x 432)	14	6
25	10.0 x 10.0 x 8.0 (254 x 254 x 203)	34.0 x 18.0 (864 x 457)	18.0 x 19.0 (457 x 483)	19.0 x 19.0 (483 x 483)	20	9
26	10.0 x 10.0 x 10.0 (254 x 254 x 254)	38.0 x 20.0 (965 x 508)	20.0 x 21.0 (508 x 533)	21.0 x 21.0 (533 x 533)	25	11
27	10.0 x 10.0 x 12.0 (254 x 254 x 305)	38.0 x 22.0 (965 x 559)	20.0 x 23.0 (508 x 584)	21.0 x 23.0 (533 x 584)	28	11
28	11.0 x 11.0 x 11.0 (279 x 279 x 279)	42.0 x 22.0 (1067 x 559)	22.0 x 23.0 (559 x 584)	23.0 x 23.0 (584 x 584)	31	13
29	11.25 x 8.75 x 4.0 (286 x 222 x 102)	24.0 x 15.0 (610 x 381)	13.0 x 17.0 (330 x 432)	14.0 x 17.0 (356 x 432)	13	6
30	11.25 x 8.75 x 18.0 (286 x 222 x 457)	38.0 x 29.0 (965 x 737)	20.0 x 31.0 (508 x 787)	21.0 x 31.0 (533 x 787)	37	16
31	12.0 x 6.0 x 6.0 (305 x 152 x 152)	22.0 x 18.0 (559 x 457)	12.0 x 19.0 (305 x 485)	13.0 x 19.0 (330 x 485)	14	6
32	12.0 x 6.0 x 12.0 (305 x 152 x 305)	34.0 x 24.0 (864 x 610)	18.0 x 25.0 (457 x 635)	19.0 x 25.0 (483 x 635)	27	12
33	12.0 x 6.0 x 15.0 (305 x 152 x 381)	34.0 x 27.0 (864 x 686)	18.0 x 28.0 (457 x 711)	19.0 x 28.0 (483 x 711)	30	13
34	12.0 x 9.0 x 6.0 (305 x 229 x 152)	28.0 x 18.0 (711 x 457)	15.0 x 19.0 (381 x 485)	16.0 x 19.0 (406 x 483)	17	8

Table 5-2.   Standard Pack Wraps, Bags, and Desiccant Units (As Required) - Continued

Container Size Code	Container Size ID (in) (mm)	Wrap (in) (mm) (NOTE 1)	Barrier Bag (in) (mm) (NOTE 2)	Barrier Bag (in) (mm) (NOTE 3)	Units of Desiccant w/Pres CODE 4 *Cell/Syn	
35	12.0 x 9.5 x 9.5 (305 x 241 x 241)	36.0 x 21.0 (914 x 533)	19.0 x 23.0 (483 x 584)	20.0 x 23.0 (508 x 584)	26	11
36	12.0 x 12.0 x 4.0 (305 x 305 x 102)	30.0 x 16.0 (762 x 406)	16.0 x 17.0 (406 x 432)	17.0 x 17.0 (432 x 432)	16	7
37	12.0 x 12.0 x 8.0 (305 x 305 x 203)	38.0 x 20.0 (965 x 508)	20.0 x 21.0 (508 x 533)	21.0 x 21.0 (533 x 533)	25	11
38	12.0 x 12.0 x 10.0 (305 x 305 x 254)	42.0 x 22.0 (1067 x 559)	22.0 x 23.0 (559 x 584)	23.0 x 23.0 (584 x 584)	30	13
39	12.0 x 12.0 x 12.0 (305 x 305 x 305)	46.0 x 24.0 (1169 x 610)	24.0 x 25.0 (610 x 635)	25.0 x 25.0 (635 x 635)	36	15
40	12.0 x 12.0 x 14.0 (305 x 305 x 356)	46.0 x 26.0 (1168 x 660)	24.0 x 27.0 (610 x 686)	25.0 x 27.0 (635 x 686)	39	17
41	13.0 x 13.0 x 13.0 (330 x 330 x 330)	50.0 x 26.0 (1270 x 660)	26.0 x 27.0 (660 x 686)	27.0 x 27.0 (686 x 686)	42	18
42	14.0 x 10.0 x 6.0 (356 x 254 x 152)	30.0 x 20.0 (762 x 508)	16.0 x 21.0 (406 x 533)	17.0 x 21.0 (533 x 533)	20	9
43	14.0 x 10.0 x 10.0 (356 x 254 x 254)	38.0 x 24.0 (965 x 610)	20.0 x 25.0 (508 x 635)	21.0 x 25.0 (533 x 635)	30	13
44	14.0 x 12.0 x 8.0 (356 x 305 x 203)	38.0 x 22.0 (965 x 559)	20.0 x 23.0 (508 x 584)	21.0 x 23.0 (533 x 584)	28	12
45	14.0 x 14.0 x 12.0 (356 x 356 x 305)	46.0 x 24.0 (1168 x 610)	24.0 x 25.0 (610 x 635)	25.0 x 25.0 (635 x 635)	36	15
46	14.0 x 14.0 x 14.0 (356 x 356 x 356)	50.0 x 26.0 (1270 x 660)	26.0 x 27.0 (660 x 686)	27.0 x 27.0 (686 x 686)	42	18
47	14.0 x 14.0 x 16.0 (356 x 356 x 406)	50.0 x 28.0 (1270 x 712)	26.0 x 29.0 (660 x 737)	27.0 x 29.0 (686 x 737)	46	15
48	14.0 x 14.0 x 18.0 (356 x 356 x 457)	58.0 x 30.0 (1473 x 762)	30.0 x 31.0 (762 x 787)	31.0 x 31.0 (787 x 787)	56	24
49	15.0 x 15.0 x 10.0 (381 x 381 x 254)	44.0 x 23.0 (1118 x 584)	23.0 x 24.0 (584 x 610)	24.0 x 24.0 (610 x 610)	33	14
50	16.0 x 10.0 x 10.0 (406 x 254 x 254)	38.0 x 26.0 (965 x 660)	20.0 x 27.0 (508 x 686)	21.0 x 27.0 (533 x 686)	33	14
51	16.0 x 12.0 x 8.0 (406 x 305 x 203)	38.0 x 24.0 (965 x 610)	20.0 x 25.0 (508 x 635)	21.0 x 25.0 (533 x 635)	30	13

Table 5-2. Standard Pack Wraps, Bags, and Desiccant Units (As Required) - Continued

Container Size Code	Container Size ID (in) (mm)	Wrap (in) (mm) (NOTE 1)	Barrier Bag (in) (mm) (NOTE 2)	Barrier Bag (in) (mm) (NOTE 3)	Units of Desiccant w/Pres CODE 4 *Cell	/Syn
52	16.0 x 12.0 x 12.0 (406 x 305 x 305)	42.0 x 26.0 (1067 x 660)	22.0 x 27.0 (559 x 686)	23.0 x 27.0 (584 x 686)	15	36
53	16.0 x 16.0 x 12.0 (406 x 406 x 305)	50.0 x 26.0 (1270 x 660)	26.0 x 27.0 (660 x 686)	27.0 x 27.0 (686 x 686)	18	42
54	16.0 x 16.0 x 16.0 (406 x 406 x 406)	58.0 x 30.0 (1473 x 762)	30.0 x 31.0 (762 x 787)	31.0 x 31.0 (787 x 787)	24	56
55	18.0 x 12.0 x 12.0 (457 x 305 x 305)	42.0 x 28.0 (1067 x 711)	22.0 x 29.0 (559 x 737)	23.0 x 29.0 (584 x 737)	17	39
56	18.0 x 15.0 x 10.0 (457 x 381 x 254)	44.0 x 26.0 (1118 x 660)	23.0 x 27.0 (584 x 686)	24.0 x 27.0 (610 x 686)	16	38
57	18.0 x 15.0 x 15.0 (457 x 381 x 381)	54.0 x 31.0 (1372 x 787)	28.0 x 32.0 (711 x 813)	29.0 x 32.0 (737 x 813)	23	54
58	18.0 x 18.0 x 12.0 (457 x 457 x 305)	54.0 x 28.0 (1372 x 711)	28.0 x 29.0 (711 x 737)	29.0 x 29.0 (737 x 737)	21	49
59	18.0 x 18.0 x 18.0 (457 x 457 x 457)	66.0 x 34.0 (1676 x 864)	34.0 x 35.0 (864 x 889)	35.0 x 35.0 (889 x 889)	30	72
60	20.0 x 10.0 x 10.0 (508 x 254 x 254)	34.0 x 28.0 (867 x 711)	18.0 x 29.0 (457 x 737)	19.0 x 29.0 (483 x 483)	14	32
61	20.0 x 12.0 x 12.0 (508 x 305 x 305)	42.0 x 30.0 (1067 x 762)	22.0 x 31.0 (559 x 787)	23.0 x 31.0 (584 x 787)	18	40
62	20.0 x 16.0 x 16.0 (508 x 406 x 406)	58.0 x 34.0 (1473 x 863)	30.0 x 35.0 (762 x 889)	31.0 x 35.0 (787 x 889)	27	64
63	20.0 x 20.0 x 6.0 (508 x 508 x 152)	46.0 x 24.0 (1168 x 610)	24.0 x 25.0 (610 x 635)	25.0 x 25.0 (635 x 635)	16	36
64	20.0 x 20.0 x 12.0 (508 x 508 x 305)	58.0 x 30.0 (1473 x 762)	30.0 x 31.0 (762 x 787)	31.0 x 31.0 (787 x 787)	24	56
65	20.0 x 20.0 x 20.0 (508 x 508 x 508)	74.0 x 38.0 (1880 x 965)	38.0 x 39.0 (965 x 991)	39.0 x 39.0 (991 x 991)	37	89
66	22.0 x 22.0 x 12.0 (559 x 558 x 305)	62.0 x 32.0 (1575 x 813)	32.0 x 33.0 (813 x 838)	33.0 x 33.0 (838 x 838)	27	64
67	24.0 x 12.0 x 12.0 (610 x 305 x 305)	42.0 x 34.0 (1067 x 864)	22.0 x 35.0 (559 x 889)	23.0 x 35.0 (584 x 889)	20	47
68	24.0 x 14.0 x 14.0 (610 x 356 x 356)	50.0 x 34.0 (1270 x 864)	26.0 x 37.0 (660 x 940)	27.0 x 37.0 (686 x 940)	24	56

Table 5-2.   Standard Pack Wraps, Bags, and Desiccant Units (As Required) - Continued

Container Size Code	Container Size ID (in) (mm)	Wrap (in) (mm) (NOTE 1)	Barrier Bag (in) (mm) (NOTE 2)	Barrier Bag (in) (mm) (NOTE 3)	Units of Desiccant w/Pres CODE 4	*Cell/Syn
69	24.0 x 16.0 x 12.0 (610 x 406 x 305)	50.0 x 34.0 (1270 x 864)	26.0 x 35.0 (660 x 889)	27.0 x 35.0 (686 x 889)	55	23
70	24.0 x 16.0 x 16.0 (610 x 406 x 406)	58.0 x 38.0 (1473 x 965)	30.0 x 39.0 (762 x 991)	31.0 x 39.0 (787 x 991)	71	30
71	24.0 x 18.0 x 18.0 (610 x 457 x 457)	66.0 x 40.0 (1676 x 1016)	34.0 x 41.0 (864 x 1041)	35.0 x 41.0 (889 x 1041)	85	35
72	24.0 x 20.0 x 16.0 (610 x 508 x 406)	66.0 x 38.0 (1676 x 965)	34.0 x 39.0 (864 x 991)	35.0 x 39.0 (889 x 991)	81	34
73	24.0 x 24.0 x 10.0 (610 x 610 x 254)	62.0 x 32.0 (1575 x 813)	34.0 x 33.0 (864 x 838)	35.0 x 33.0 (889 x 838)	65	28
74	24.0 x 24.0 x 12.0 (610 x 610 x 305)	66.0 x 34.0 (1676 x 864)	34.0 x 35.0 (864 x 889)	35.0 x 35.0 (889 x 889)	72	30
75	24.0 x 24.0 x 16.0 (610 x 610 x 406)	74.0 x 38.0 (1880 x 965)	38.0 x 39.0 (965 x 991)	39.0 x 39.0 (991 x 991)	90	37
76	24.0 x 24.0 x 20.0 (610 x 610 x 508)	82.0 x 42.0 (2083 x 1067)	42.0 x 43.0 (1067 x 1092)	43.0 x 43.0 (1092 x 1092)	110	45
77	24.0 x 24.0 x 24.0 (610 x 610 x 610)	90.0 x 46.0 (229 x 1168)	46.0 x 47.0 (1168 x 1194)	47.0 x 47.0 (1194 x 1194)	132	54
78	26.0 x 12.0 x 8.0 (660 x 305 x 203)	34.0 x 32.0 (864 x 813)	18.0 x 33.0 (457 x 838)	19.0 x 33.0 (483 x 838)	36	15
79	26.0 x 12.0 x 10.0 (660 x 305 x 254)	38.0 x 34.0 (965 x 864)	20.0 x 35.0 (508 x 889)	21.0 x 35.0 (533 x 889)	42	18
80	26.0 x 18.0 x 18.0 (660 x 457 x 457)	66.0 x 42.0 (1676 x 1067)	34.0 x 43.0 (864 x 1092)	35.0 x 43.0 (889 x 1092)	89	37
81	26.0 x 26.0 x 20.0 (660 x 660 x 508)	86.0 x 44.0 (2184 x 1118)	44.0 x 45.0 (1118 x 114)	45.0 x 45.0 (1143 x 1143)	121	50
82	29.0 x 14.0 x 14.0 (737 x 356 x 356)	50.0 x 41.0 (1270 x 1041)	26.0 x 42.0 (660 x 1067)	27.0 x 42.0 (686 x 1067)	66	28
83	30.0 x 12.0 x 6.0 (762 x 305 x 152)	30.0 x 34.0 (762 x 864)	16.0 x 35.0 (406 x 889)	17.0 x 35.0 (432 x 889)	34	15
84	30.0 x 12.0 x 12.0 (762 x 305 x 305)	42.0 x 40.0 (1067 x 1016)	22.0 x 41.0 (559 x 1041)	23.0 x 41.0 (584 x 1041)	55	23
85	30.0 x 16.0 x 16.0 (762 x 406 x 406)	58.0 x 44.0 (1473 x 1118)	30.0 x 45.0 (762 x 1143)	31.0 x 45.0 (787 x 1143)	82	34

Table 5-2. Standard Pack Wraps, Bags, and Desiccant Units (As Required) - Continued

Container Size Code	Container Size ID (in) (mm)	Wrap (in) (mm) (NOTE 1)	Barrier Bag (in) (mm) (NOTE 2)	Barrier Bag (in) (mm) (NOTE 3)	Units of Desiccant w/Pres CODE 4 *Cell/Syn	
86	30.0 x 20.0 x 12.0 (762 x 508 x 305)	58.0 x 40.0 (1473 x 1016)	30.0 x 41.0 (762 x 1041)	31.0 x 41.0 (787 x 1041)	75	31
87	30.0 x 20.0 x 20.0 (762 x 508 x 508)	74.0 x 48.0 (1880 x 1219)	38.0 x 49.0 (965 x 1245)	39.0 x 49.0 (991 x 1245)	113	47
88	30.0 x 26.0 x 20.0 (762 x 660 x 508)	86.0 x 48.0 (2184 x 1219)	44.0 x 49.0 (1118 x 1245)	45.0 x 49.0 (1143 x 1245)	131	54
89	32.0 x 26.0 x 16.0 (813 x 660 x 406)	78.0 x 46.0 (1981 x 1168)	40.0 x 47.0 (1016 x 1194)	41.0 x 47.0 (1041 x 1194)	115	47
90	32.0 x 26.0 x 26.0 (813 x 660 x 660)	98.0 x 56.0 (2489 x 1422)	50.0 x 57.0 (1270 x 1448)	51.0 x 57.0 (1295 x 1448)	174	71
91	34.0 x 14.0 x 10.0 (864 x 356 x 254)	42.0 x 42.0 (1067 x 1067)	22.0 x 43.0 (559 x 1092)	23.0 x 43.0 (584 x 1092)	57	24
92	34.0 x 20.0 x 15.0 (864 x 508 x 381)	64.0 x 47.0 (1626 x 1194)	33.0 x 48.0 (838 x 1219)	34.0 x 48.0 (864 x 1219)	96	40
93	34.0 x 20.0 x 20.0 (864 x 508 x 508)	74.0 x 52.0 (1880 x 1321)	38.0 x 53.0 (965 x 136)	39.0 x 53.0 (991 x 1346)	123	51
94	36.0 x 12.0 x 12.0 (914 x 305 x 305)	42.0 x 46.0 (1067 x 1168)	22.0 x 47.0 (559 x 1194)	23.0 x 47.0 (584 x 1194)	63	27
95	36.0 x 14.0 x 14.0 (914 x 356 x 356)	50.0 x 48.0 (1270 x 1219)	26.0 x 49.0 (660 x 1245)	27.0 x 49.0 (686 x 1245)	77	32
96	36.0 x 24.0 x 22.0 (914 x 610 x 559)	86.0 x 56.0 (2184 x 1422)	44.0 x 57.0 (1118 x 1448)	45.0 x 57.0 (1143 x 1448)	152	63
97	36.0 x 26.0 x 18.0 (914 x 660 x 457)	82.0 x 52.0 (2083 x 1321)	42.0 x 53.0 (1067 x 1346)	43.0 x 53.0 (1092 x 1346)	136	56
98	40.0 x 14.0 x 14.0 (1016 x 356 x 356)	50.0 x 52.0 (1270 x 1321)	26.0 x 53.0 (660 x 1346)	27.0 x 53.0 (686 x 1345)	84	35

NOTE 1: A-A-3174, MIL-PRF-121, A-A-3129, PPP-C-795 with Preservative Codes 1 through 7, and A-A-3129 (Type III), or MIL-PRF-81705 (Type III) with Preservative Code 9.

NOTE 2: MIL-PRF-121 (Grade A, Class 1) with Preservative Codes 2 or 6..

NOTE 3: MIL-PRF-131 with Preservative Codes 3, 4, or 7, and MIL-PRF-81705 (Type 1) with Preservative Code 9.

* Cellulose/Synthetic

Table 5-3.   Standard Pack Materials

Specification Number	Description	National Stock Number
ASTM D 5486, Type I (formerly PPP-T-60)	Tape, pressure-sensitive, waterproof, 2 inches (50 mm) wide	
Class 1	Colored (Tan)	7510-00-079-7906
Class 2	Clear	7510-00-266-6715
MIL-PRF-121	Barrier, greaseproof, waterproof, flexible, heat-sealable	8135-00-233-3871
MIL-P-130	Paper, wrapping, laminated and creped Heavy duty Medium duty Light duty	 8135-00-664-0028 8135-00-680-2777
MIL-PRF-131	Barrier, water vapor proof, flexible, heat-sealable,	
Class 1	Plastic backing (general use)	8135-00-282-0565
Class 2	Kraft backing (for small packages under 10 lb and under 40 cu in volume)	8135-00-812-9023
A-A-3174 (formerly L-P-378)	Film, polyolefin, transparent, 0.0004 inch (0.01016 mm) thick	8135-00-068-9466
PPP-C-795	Film, cellular plastic, heat-sealable, 0.1875 inch (4.763 mm) thick	8135-00-142-9016
PPP-C-1797	Film, cellular plastic, heat-sealable, 0.5 in (13 mm) thick	8135-00-926-8991
MIL-PRF-32033 (formerly VV-L-800)	P-9, Very light preservative oil, water-displacing (cold application) 1.0 qt (0.946 L)	9150-00-231-9062
PPP-C-1120	Cushioning, bound fiber, water-resistant, 1 inch (25 mm) thick	
	Cushioning, bound fiber, water-resistant, 2 inches (50 mm) thick	
A-A-59135, Class 2 (formerly PPP-C-1752)	Cushioning, unicellular polypropylene foam, flexible, 0.25 inch (6 mm)	8135-00-300-4905
	Cushioning, unicellular polypropylene foam, flexible, 0.5 inch (13 mm)	8135-00-180-5922
A-A-3129 (formerly PPP-C-1842)	Cushioning material, plastic, open cell	8135-01-087-3599
MIL-D-3464	Desiccant 4 Unit (paper bag)	6840-00-264-6574
	Desiccant 8 Unit (cloth bag)	6840-00-264-6571
	Desiccant 16 Unit (cloth bag)	6840-00-264-6572
MIL-PRF-16173	P-2, Thin, soft film preservative (cold application) Grade III	8030-00-837-6557
MIL-DTL-17667	Paper, wrapping, chemically neutral, flat stretchable, creped	8135-00-558-1242 8135-00-558-1245
MIL-PRF-22191	Barrier, transparent, flexible, heat-sealable, Type I	8135-00-079-2415
MIL-P-26514 Type I	Cushioning, polyeurathane foam, flexible, Roll, 1.0 inch (25 mm) thick	8135-00-116-1443
	Sheet, 3.0 inch (76 mm) thick	8135-00-052-9077
MIL-DTL-81997	Pouches, cushioned, flexible, electrostatic free, reclosable, transparent, 10.0 x 10.0 inch (25 x 25 mm)	8105-01-197-2966

Table 5-3.   Standard Pack Materials - Continued

Specification Number	Description	National Stock Number
MIL-PRF-81705	Barrier material, flexible, electrostatic free, heat-sealable	
	Type I	8135-00-092-3220
	Type II	9330-00-113-9438

APPENDIX A
LIST OF ACRONYMS

A.1   ACRONYMS.

Listed below are the acronyms which pertain to this T.O.

AFMC	Air Force Materiel Command
AFPTEF	Air Force Packaging Technology & Engineering Facility
ALC	Air Logistic Complex
cm	Centimeter
CFR	Code of Federal Regulations
ERRC	Expendability - Recoverability - Repairability Category
ESD	Electrostatic Discharge
ESDS	ESD Sensitive
IAW	in accordance with
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
in.	inch
kg	kilogram
L	liter
mm	millimeter
NIIN	National Item Identification Number
NSN	national stock number
lb	Pound
PCN	Product Control Number
RIC	Routing Identifier Code
SPI	special packaging instructions
SPS	Spares Packaging Standardization
TO	technical order
TRC	Technology Repair Center