

NOT APPLICABLE TO INTERPLANT SHIPMENTS (A)

SPECIAL PACKAGING INSTRUCTION(SPI) (A)						NATIONAL STOCK NUMBER 5935-01-384-9748	
NOMENCLATURE CONNECTOR, RECEPTACLE				UI EA	QUP 1	SPI NUMBER (PN) P442-314	
Cleaning & Drying shall be in accordance with MIL-STD-2073-1							
MILITARY PRESERVATION REQUIREMENT (MIL-STD-2073-1, Method 41)	STEPS	DRAWING OR SPECIFICATION	STYLE	TYPE	GRADE	CLASS	SIZE AND REMARKS (INCHES)
Blocking, Pad	(B) 1	A-A-59136		I	ANY	ANY	1 x 1 x 1/4
Barrier bag (inner)	(B) 2	MIL-DTL-117	2	III		B	4 x 6
Closure (D)(F)	(G) 3						Heat Seal
Cushioning	(C) 4	A-A-59135			ANY	ANY	6 x 10 x 1/2
Container (bag-outer)	(C) 5	MIL-DTL-117	1	I		E	8 x 8
Closure (D)(F)	(G) 6						Heat Seal
INTERMEDIATE PACKAGING AND PACKING (X) In accordance with MIL-STD-2073-1 (X) As specified hereon. SEE NOTE (E)				MARKING (X) In accordance with MIL-STD-129 () As specified hereon.			
QUALITY PERFORMANCE and TESTING REQUIREMENTS (X) In accordance with MIL-STD-2073-1 (X) As specified hereon. SEE NOTE (H)							
Specifications, standards, and drawings listed hereon of the issue in effect on date of invitation for bid form a part of this Instruction. Applicable general and referenced requirements of specification MIL-STD-2073-1 form part of this Instruction. Unless otherwise specified, materials will be minimum size IAW MIL-STD-2073-1. Tolerances shall be in accordance with material specifications.							
UNIT PACK LOGISTICS DATA (Approximate unit pack weight and size)							
WEIGHT (POUNDS) .34 lbs.		CUBE (CUBIC FEET) .123 cu. ft.		SIZE (EXTERIOR FEET) .73 X .70 X .24			
REMARKS/ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.							
<p>(A) – This SPI is not applicable for Interplant shipments. Packaging and marking for interplant shipment is for supplies and materials that do not directly enter the military supply system. Typical interplant shipments are shipments from a vendor to a subcontractor or a prime contractor, or between contractors and subcontractors, or from a vendor or contractor to a military arsenal, plant, or other activity for evaluation, immediate use, or further processing as specified in the applicable contract.</p> <p>(B) – Press blocking pad onto connector pins. Care should be taken not to bend pins. Place item with the blocking in place, into specified barrier bag and close in accordance with step 3.</p> <p>(C) – Wrap bagged item in specified material and secure wrap with ASTM D5486 tape, type V, size 1 x 4. Place wrapped item into specified container (bag-outer), step 5, and close step 6.</p> <p>(D) – Heat seal closure shall be accomplished in accordance with (IAW) the barrier bag or barrier material supplier's recommendations for dwell, pressure and temperature requirements for both the barrier bag and the unit pack bag. The volume of trapped air within the bag shall be kept to a minimum by</p>							
Original Preparer: William E. Smith Date:				Revised by: RPoole		Date: 26 AUG 2004	
ITEM DATA (APPROX)		RDECOM 81361					
ITEM CODE – Z16, Z47		AMSRD-ECB-ENA-P					
ITEM SIZE – 2 5/8 X 2 X 2 inches		PAGE NUMBER	NUMBER OF PAGES	RP	Z16-1584-001	D	18 JAN 2005
ITEM WEIGHT – .20 lbs.		1	5	LPK	S4C0708-0053	Z16-060 C	7 MAR 94
				APPROVAL	REVISION	DATE	

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compressing the bag around the contents, or carefully drawing a vacuum inside the bag, prior to final heat sealing. Caution shall be taken to prevent damage to the item or rupture of bag.

- (E) – Intermediate packaging shall be applied.
- (F) – **Unit pack container leakage.** The unit pack container assembly shall show no signs of leakage, as evidenced by a steady stream or recurring succession of bubbles from any surface or seam when tested IAW the packaging quality assurance provision (PQAP) of this SPI.
- (G) – **Heat-seal seam strength.** The heat seal seam of the unit pack container (bag), shall show no sign of heat-seal seam separation when tested IAW the PQAP of this SPI.
- (H) - **Packaging Quality Assurance Provisions (PQAP).**

PART I – APPLICABLE DOCUMENTSMilitary standards

MIL-STD-2073-1 – Standard Practice For Military Packaging

MIL-STD-3010 – Department of Defense Test Method Standard Test Procedures for Packaging Materials

PART II – QUALITY PROVISIONS.

1. First Article Inspection. The first article packaging sample shall consist of 3 connector, receptacle assemblies (drawing 442-314). The packaging samples shall be unit packed in accordance with the military preservation requirements as specified in this SPI. **Note: when the packaging sample and item are produced at the same time, the packaging sample shall be take from the item first article sample, except that the sample shall be packaged as specified herein.** In addition, 3 empty unit pack barrier bags shall be removed from the lot of bags and subjected to the following destructive test. The sample of empty bags shall be produced using the same methods, materials, and equipment as will be used during regular production. If required, special sampling, inspection and acceptance criteria are contained in Part III of this PQAP and inspected for compliance with any or all of the requirements of this SPI. The first article packaging sample shall be submitted for inspection and approval in accordance with the terms of the contract. As determined by the Government, the packaging samples may be subjected to any or all of the examinations and tests specified in this PQAP and be inspected for compliance with any or all of the requirements of this SPI

a. Acceptance Criteria. If any first article sample fails to comply with any of the requirements, the first article sample shall be rejected. The government reserves the right to terminate inspection upon any failure to comply with any of the requirements.

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2. Conformance Inspection.

a. Lotting. A lot shall consist of the items and packaging produced by one manufacturer, at one plant, from the same materials, under essentially the same manufacturing conditions, and shall not exceed one week's production. **However; when the packaging sample is produced at the same time as the item sample, lotting shall be as specified for the item, except that the items shall be packaged as specified herein.**

b. Sampling. Sampling shall be selected at random. Sampling shall be conducted in accordance with table I using the levels specified in Part III of this PQAP. If required, special sampling, inspection, and acceptance criteria are contained in Part III of this PQAP.

c. Inspection. Inspection shall consist of examination and test of all the characteristics contained in Part III and Part IV of this PQAP.

TABLE I. Sampling

Lot size	Inspection levels and sample sizes										
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
2 to 8	*	*	*	*	*	*	*	*	5	3	2
9 to 15	*	*	*	*	*	*	13	8	5	3	2
16 to 25	*	*	*	*	*	20	13	8	5	3	3
26 to 50	*	*	*	*	32	20	13	8	5	5	5
51 to 90	*	*	*	50	32	20	13	8	7	6	5
91 to 150	*	*	125	50	32	20	13	12	11	7	6
151 to 280	*	*	125	50	32	20	20	19	13	10	7
281 to 500	*	315	125	50	48	47	29	21	16	11	9
501 to 1200	*	315	125	75	73	47	34	27	19	15	11
1201 to 3200	1250	315	125	116	73	53	42	35	23	18	13
3201 to 10000	1250	315	192	116	86	68	50	38	29	22	15
10001 to 35000	1250	315	294	135	108	77	60	46	35	29	15
35001 to 150000	1250	490	294	170	123	96	74	56	40	29	15
150001 to 500000	1250	715	345	200	156	119	90	64	40	29	15
500001 and over	1250	715	435	244	189	143	102	64	40	29	15

*Indicates one hundred percent inspection. If sample size exceeds lot size, perform one hundred percent inspection.
Accept the lot represented on zero nonconforming characteristics and reject the lot represented on one or more nonconforming characteristics for all inspection levels.

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- 3. Inspection equipment coding.**
 CE – Commercial inspection equipment
 VI – Visual inspection

PART III – INSPECTION REQUIREMENTS.**PACKAGING CHARACTERISTICS**

<u>Category</u>	<u>Characteristic</u>	<u>Sampling and acceptance criteria</u>	<u>Inspection method</u>
Major:	None defined		
Minor:			
201	Item completely clean and dry prior to unit packaging	Table I, level VIII	VI
202	Blocking evident and correct.	Table I, level VIII	VI and CE
203	Barrier bag (inner) evident and correct..	Table I, level VIII	VI and CE
204	Barrier bag (inner) closure evident and correct. Table I, level VIII	VI and CE	
205	Cushioning evident and correct.	Table I, level VIII	VI and CE
206	Unit pack container evident and correct.	Table I, level VIII	VI and CE
207	Unit pack container closure evident and correct. Table I, level VIII	VI and CE	
208	Unit pack container marking evident, correct and legible.	Table I, level VIII	VI and CE
209	Intermediate container evident and correct. Table I, level VIII	VI and CE	
210	Intermediate container closure evident and correct.	Table I, level VIII	VI and CE
211	Intermediate container marking evident and correct and legible.	Table I, level VIII	VI and CE
212	Unit pack container(bag-outer)leakage	Part III, 301	Part V, 501
213	Unit pack container bag heat-seal seam strength.	Part III, 302	Part V, 502

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P442-314**SPECIAL SAMPLING, INSPECTION, AND ACCEPTANCE CRITERIA**

301 Unit pack container leakage. Three unit pack containers and their contents, unit packed for shipment, shall be selected from each lot and tested in accordance with Part V, 501. Failure of any sample to meet the leakage requirement shall be cause for rejection of the lot from which the sample was drawn.

302 Unit pack container heat-seal seam strength test (destructive test). Three empty unit pack containers shall be selected at random from those being used for each lot of items and tested IAW Part V, 502. Failure of any sample to meet the seam requirement shall be cause for rejection of the lot from which the sample was drawn.

PART IV – CERTIFICATION REQUIREMENTS

Certification shall be required for each characteristic specified below and shall include actual examination and test results when required herein. Results of examinations and tests shall be on file at the contractor's facility and shall be available to the Government for review.

<u>Number</u>	<u>Characteristic</u>	<u>To comply with</u>
401	Packaging material	Applicable specification or standard specified in this SPI.

PART V – TEST METHODS AND PROCEDURES.

501 Unit pack assembly container (bag) leakage. Each unit pack container (both barrier bags) and their contents shall not leak when tested IAW MIL-STD-2073-1, appendix G (hot water technique), except that FED-STD-101 is replaced by MIL-STD-3010.

502 Heat-seal seam strength test. Unit pack container heat-seal seam strength. Prepare the closure seam of the empty unit pack container under the same conditions used for unit pack assemblies. The closure seam of the empty unit pack container shall show no evidence of seam separation when tested in accordance with method 2024 of MIL-STD-3010, except that the static load shall be 50 (+2 / -2) ounces and a 5 percent reduction in the static load shall be permitted when the room temperature exceeds 90 degrees F in the test area. Heat seal shall not separate during the final 3 minutes of the test. Partial separation in the area of partial fusion adjacent to the actual seal is acceptable within the first 2 minutes of the test.