

# ATTACHMENT A

## DEVELOPMENT OF PRESERVATION AND PACKING DATA FORMS

### A.1 Preservation and Packaging

A.1.1 *Unless otherwise specified*, the preservation and packing data developed by the Contractor shall include the following elements for each procurable Common, Selective, and Special Group item:

- a. item's nomenclature
- b. design activity code
- c. item weight
- d. item size (*length, width, and depth*)
- e. item's physical and chemical characteristics
- f. item's weight and fragility characteristics
- g. preservative code
- h. quantity per unit pack
- i. intermediate container quantity
- j. Commercial and Government Entity (CAGE) code
- k. item's part number
- l. prescribed preservation method
- m. cleaning procedure
- n. preservative material
- o. wrapping material
- p. cushioning material
- q. cushion thickness
- r. unit container
- s. intermediate container (if applicable)
- t. unit container level
- u. special marking code
- v. packing requirements code
- w. unit pack weight
- x. unit pack size (*length, width, and depth*)
- y. in-the-clear-instruction (Selective Group items only)

The Contractor shall select the applicable coded data from listing below and apply them into the development of the preservation and packing data:

A.1.2 Apply the *physical and chemical characteristic code* from Table I listed below. For all *hazardous materials* apply the code "ZZ". When *bare metal is combined with a non-metallic material*, package item to the requirements of the bare metal present, and use the applicable category code. When a *combination of two or more non-metallic materials* is present, package item to the requirements of the material most susceptible to severe degradation and use the applicable category code.

TABLE I. Chemical and physical characteristic

BARE METAL ITEMS

Composition or condition (see Note )	Contact Preser- vative Pro- hibite d	Has Critical Surfaces or Appli- cations	1st & 2nd Digit Category Code	Basic Metho d of Prese rvati on
Iron, Steel (Bare or Black Oxide coated) Includes all stainless varieties except those having minimum composition of 17Cr-7Ni		X	01	20
	X		03	40
	X	X	05	30
	X	X	07	50
Magnesium (bare or Chromated)			09	30
	X	X	11	50
	X		13	40
Aluminum, Babbit, Beryllium, Brass, Bronze, Cadmium, Cobalt, Copper, Copper Alloy, Lead, Monel, Zinc, Sintered Alloy, Nickel, Silver, Steel (17Cr-7Ni), Titanium, Tin	X		15	10
	X	X	16	30
		X	18	20
Ferrous and Non-ferrous combined	X	X	20	50
			21	30
None of the above			ZZ	

TABLE I. Chemical and physical characteristic -continued

PLATED COATED ITEMS

Composition or condition (see Note)	Contact Preser- vative Pro- hibited	Has Critical Surfaces or Appli- cations	1st & 2nd Digit Category Code	Basic Metho d of Prese rvati on
Ferrous metals fully plated with chromium, copper, nickel, silver, tin, gold, iridium, osmium, palladium, rhodium, ruthenium, zinc, cadmium or terne	X	X	22	30
	X		24	10
		X	25	20
Non-ferrous metals that have been plated	X		27	10
	X	X	28	30
		X	30	20
Iron or steel with phosphate coating, copper or brass with chromate or black oxide finish over entire surface	X		32	30
	X	X	33	30
		X	35	20
Anodized aluminum or magnesium; zinc or zinc- plated iron or steel alloy castings or alclad aluminum	X		37	10
	X	X	38	30
Anodized aluminum combined with passivated CRES	X		40	10
Metals that are painted, varnished, lacquered or enameled	X		41	10
Porous metal, oil impregnated			42	30
None of the above			ZZ	

TABLE I. Chemical and physical characteristic - continued

NONMETALS

Composition or condition (see Note)	Contact Preser- vative Pro- hibited	Has Critical Surfaces or Appli- cations	1st & 2nd Digit Category Code	Basic Metho d of Prese rvati on
Plastics or fiber	X		43	10
	X	X	44	30
Natural or synthetic rubber	X	X	45	30
	X		46	30
Leather	X		47	10
	X	X	48	30
Optical glass, quartz, mica and assemblies	X	X	49	40
Carbon, graphite, ceramics and glass (other than optical)	X		50	10
	X	X	51	30
Paper	X		52	30
	X	X	53	30
Wood or Cork	X		54	10
	X	X	55	30
Cordage and items made of cloth	X		56	10
	X	X	57	30
Textiles	X	X	58	30
None of the above			ZZ	

A.1.3 Apply the *weight and fragility code* as listed below for Common and Selective Group items. The item shall be considered a Special Group item if the item fragility is less than 110G.

Weight and fragility characteristics

CODE	ITEM WT(LB)	ITEM SIZE(IN)	FRAGILITY(G)
A	> 0.0 <=2.00	>0.00 X >0.00 X >0.00 <=24.00 <=24.00 <=2.00	>110
B	> 0.00 <=2.00	>2.00 X >2.00 X >2.00 <=24.00 <=24.00 <=24.00	>110
C	> 2.00 <=5.00	>0.00 X >0.00 X >0.00 <=24.00 <=24.00 <=24.00	>110
D	> 5.00 <=7.50	>0.00 X >0.00 X >0.00 <=24.00 <=24.00 <=24.00	>110
E	> 7.50 <=10.00	>0.00 X >0.00 X >0.00 <=24.00 <=24.00 <=24.00	>110

Z Any weight, size or fragility.

A.1.4 Apply the letter "Z" for the *preservative category code*.

A.1.5 Apply the *quantity per unit pack* based upon the unit of issue as determined at each Logistic Review.

A.1.6 Apply the numerical value listed below for the *intermediate container quantity (ICQ)*. An intermediate container is required if 1) the volume of the unit pack does not exceed .375 cubic feet and 2) the unit pack weight does not exceed ten pounds. Enter 000 to indicate that no intermediate container is required. The intermediate container quantity is determined from the table listed below. Either the unit pack weight or unit pack cube, whichever is the bottommost entry in it's respective column of the table, is the controlling factor in determining the number of unit packs per intermediate container (ICQ).

Intermediate Container Quantity	Unit Pack Weight (pounds)	Unit Pack Cube (cubic
feet)		
100	.4	
.0150		
96	.41	
.0156		
92	.43	
.0163		
88	.46	
.0170		
84	.47	
.0178		
80	.5	
.0187		
76	.52	
.0197		
72	.55	
.0208		
68	.59	
.0220		
64	.62	
.0234		
60	.66	
.0250		
56	.71	
.0267		
52	.77	
.0288		
48	.83	
.0312		
44	.91	
.0340		
40	1.0	
.0375		
36	1.11	
.0416		
32	1.25	
.0478		
28	1.43	

.0535		
24	1.66	
.0625		
20	2.0	
.0750		
16	2.5	
.0937		
12	3.33	.125
8	5.	.187
4	10.	.375

A.1.7 Apply the *Commercial and Government Entity (CAGE)* code. The CAGE code shall correspond with the item's part number generated from each Logistic Review.

A.1.8 Apply the appropriate *preservation method code* from the list annotated below. **NOTE: Unless otherwise specified, reference MIL-STD-2073-1D Paragraphs 5.2.3.3 through 5.2.3.7.5 for detailed description of preservation method codes.**

<u>CODE</u>	<u>METHOD DESCRIPTION</u>
10	Physical Protection
20	Preservative coating only with greaseproof wrap, as required.
31	Waterproof bag, sealed.
32	Container, waterproof bag, sealed.
33	Greaseproof-waterproof bag, sealed.
41	Watervaporproof bag, sealed.
42	Container, watervaporproof bag, sealed, container.
51	Watervaporproof bag, sealed with desiccant included.
52	Container, watervaporproof bag, sealed, container with desiccant include
GX	Preserve by Method 41 as follows: Items subject

to damage by electromagnetic and electrostatic field forces shall be initially wrapped in material conforming to MIL-PRF-81705, Type II or Type III, or cushioned in material conforming to A-A-59135, Class 1, Grade B, or PPP-C-1797, Type II, or A-A-3129, Type I, Grade B, or PPP-C-795, Class to prevent bag puncture, and unit packed in a heat-sealed bag conforming to MIL-B-117, Type I, Class F, Style 1. Reclosable cushioned pouches conforming to MIL-P-81997, Type I or II, may be used in lieu of initial wrap or cushioning. Lead or terminal configurations for all items shall be maintained as manufactured without causing loads or stresses capable of causing damage to the item. Materials used to maintain item position and lead or terminal configuration shall permit item removal without damage to the item. Item shall be placed into a PPP-B-1672 reusable container. Container closure shall be in accordance with the container specification. Electrostatic discharge (ESD) sensitive caution labels shall be applied in accordance with MIL-STD-129.

HM

**(FOR USE WITH SPECIAL GROUP ITEMS ONLY)**

Packaging and marking for hazardous material shall comply with applicable requirements for Performance Oriented Packaging contained in the International Civil Aviation Organization (ICAO) Technical Instructions or the International Maritime Dangerous Goods Code (IMDG) and with Code of Federal Regulations (CFR) Title 29, Title 40 and Title 49. All performance test requirements shall be supported by certificates and reports attesting to the date and the results obtained from performance oriented packaging testing. The Contractor, if not a self-certifier, shall be

responsible for assuring that third party sources providing performance testing services are, in fact, registered with the Department of Transportation. The Contractor's signed certification that the packaged configuration meets ICAO or IMDG requirements shall be incorporated on the DD Form 250, Material Inspection and Receiving Report, or other related acceptance document if the DD Form 250 is not used. All certificates and reports shall be available for inspection by authorized Government representatives for a period of three years after acceptance of last production vehicle.

JM Preserve Method 10 as follows: Unit container shall consist of one piece of 3/8 inch plywood and one piece of double wall fiberboard meeting the requirements of ASTM-D4727, each 4 inches longer and wider than the item dimensions. Place item on plywood, cover with fiberboard and staple fiberboard to plywood on sides and end. For items longer than 96 inches, frame panel in accordance with PPP-B-601 (used for backing boards and similar flat items).

A.1.9 Apply the *cleaning procedure code* of "1". This coding procedure is *not required* for Special Group Items.

A.1.10 Apply the *preservative material code* from the list annotated below. This coding procedure is *not required* for Special Group Items.

<u>CODE</u>	<u>PRESERVATIVE MATERIAL</u>
00	No requirement
07	MIL-PRF-3150, Medium preservative oil, cold application.
09	VV-L-800, Very light preservative oil, water displacing, cold application.

13 MIL-PRF-10924, Grease, automotive and  
artillery.

19 MIL-PRF-16173, Grade 4, Corrosion preventive,  
solvent cutback cold application, transparent, non-  
tacky.

57 MIL-PRF-21260, Grade 10, Light viscosity  
preservative and break-in lubricating oil, internal  
combustion engine.

79 MIL-B-46176, Brake fluid, silicone,  
automotive, operational and preservative.

89 Preserve with normal operating lubricant.

ZZ Special Requirements. See specific  
instructions or drawings provided.

A.1.11 Apply the *wrapping material code* from the list  
annotated below. This coding procedure is *not required* for  
Special Group Items.

<u>CODE</u>	<u>WRAPPING MATERIAL</u>
00	No requirement
EC	MIL-P-17667, Type II, neutral wrapping paper, creped.
GH	MIL-B-121, Grade A, Type II, medium duty, greaseproof, waterproof barrier.
MB treated	MIL-PRF-3420, Volatile corrosion inhibitor material.
N9	MIL-PRF-81705, Type III, transparent, electrostatic protective, static shielding barrier material.
ZZ or	Special Requirement. See specific instructions drawings.

A.1.12 Apply the *cushioning material code* from the list annotated below. This coding procedure is not required for Special Group Items.

<u>CODE</u>	<u>CUSHIONING MATERIAL</u>
DA	A-A-1051, paperboard cushioning
GA	A-A-59136, polyethylene foam cushioning
GT	PPP-C-1797, polypropylene foam cushioning
HB on both	A-A-1507, chipboard sheet used as a stiffener sides of item
JB ASTM item.	Domestic fiberboard meeting the requirements of D4727 used as a stiffener on both sides of item.
JC ASTM sleeves.	Domestic fiberboard meeting the requirements of D4727 used as pads, cells, die cuts or sleeves.
LE polyurethane	MIL-PRF-26514, Type I, Class 2, flexible foam used as corner pads.
NS requirements die cuts or material conforming to polyurethane foam conforming to MIL-	Weather resistant fiberboard meeting the of ASTM D4727 used as pads, cells, sleeves; or plastic molding MIL-P-19644; or PRF-26514.
P4 protective, transparent.	MIL-P-81997, cushioned pouch, electrostatic
ZZ or	Special Requirements. See specific instructions drawings provided.

A.1.13 Apply the *cushioning thickness code* of "O" (not applicable) or "Z" (Special Requirements. See specific instructions or drawings provided). This coding procedure

is not required for Special Group Items.

A.1.14 Apply the unit container code from the list annotated below. This coding procedure is not required for Special Group Items.

<u>CODE</u>	<u>UNIT CONTAINER</u>
OO	No Requirement
BL duty,	MIL-B-117, Type I, Class B, Style 2, heavy waterproof, transparent bag.
BS duty, bag.	MIL-B-117, Type I, Class E, Style 1, heavy watervaporproof, greaseproof, opaque bag.
D1	PPP-B-566 or PPP-B-676, Folding or Setup box.
ED corrugated fiberboard box	ASTM D 5118, Type CF, Class weather resistant,
NS cushioning in	PPP-B-1672, Type II, Folding convoluted reusable box.
ZZ or	Special Requirement. See specific instructions drawings.

A.1.15 The intermediate container code is limited to either the letters "OO" (not required) or the letters "ED" (use ASTM D 5118, Type CF, Class weather resistant, corrugated fiberboard box as an intermediate container).

A.1.16 Apply the unit container level code as applicable:  
a. "O" if unit container is not an acceptable shipping

container.

b. "A" if unit container provides packing protection against the most severe worldwide shipment, handling, and storage conditions including direct exposure to extremes of climate, terrain, and operational transportation environments.

c. "B" if unit container provides packing protection against moderate worldwide shipment, handling, and storage conditions that will include extremes of climate, terrain, and operational transportation environments.

d. "D" if no unit container is required

e. "M" if unit container provides minimal packing protection

f. "Z" if unit container requires special consideration.

A.1.17 Apply the *special marking* code of "ZZ" if special requirements are required, or "39" if ESD sensitive electronic device requirements of MIL-STD-129 apply, or "00" if special markings are not required.

A.1.18 For *packing requirements code*, apply "2AU" for all Common and Selective Group items only. For all Special Group items apply "ZZU".

A.1.19 If applicable, the Contractor will provide *in-the-clear-narrative instructions* to supplement coded preservation requirements for assembling the prescribed preservation application for Selective Group items only.