
SPECIAL PACKAGE FOR TRANSMISSION LINES

1.0 SCOPE

This standard provides a method for the individual packaging of delicate, irregular shaped tubular parts, e.g., transmission lines, wave guides, antennas, etc., which will not tolerate any contamination or any change in dimension/shape.

2.0 REFERENCES

- 2.1 Lockheed Packaging Standard LPS 40-001
- 2.2 Lockheed Packaging Standard P-201, "Thermal Control" Labels
- 2.3 NAS Packaging Standard 3423

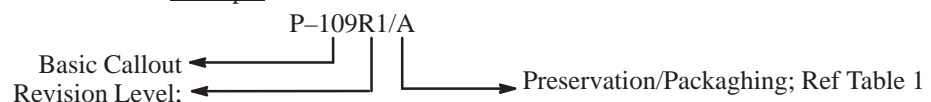
3.0 REQUIREMENTS

3.1 GENERAL

- 3.1.1 The quantity per unit package shall be one (1) each.
- 3.1.2 Items shall be clean and free of foreign matter.
- 3.1.3 Any loose item(s) required per part shall be enclosed in a separate plastic bag or vial and placed within unit container.
- 3.1.4 Exposed silver or silver-plated parts shall be protected with tarnish-inhibitor material. Minimum surface area of the tarnish inhibitor shall be twice the area of the silver surface of the item.
NOTE: The treated side of the inhibitor material must be facing the item.
CAUTION: ITEMS HAVING ANY SURFACES INCOMPATIBLE WITH THE TARNISH INHIBITOR SHALL BE COMPLETELY WRAPPED WITH A NEUTRAL PRIOR TO APPLICATION.
- 3.1.5 Tarnish inhibitor may be adjacent to but shall not be allowed to come in contact with chemically finished surfaces such as anodize, iridite, chromate coatings and other nonferrous metals (e.g., cadmium, copper and brass).
- 3.1.6 Assemblies with open ports, exposed threads, projecting pins, connectors, fittings, etc., shall be properly sealed or capped with proper size and style of protective caps, plugs, closures (Paragraph 5.0).
- 3.1.7 The operational integrity of the item(s) shall be protected against damage during shipment from supplier to destination. Critical areas/surfaces of the item(s) shall be protected from abrasion or other degradation by wrapping, blocking, cushioning, etc.
- 3.1.8 Unsupported items susceptible to permanent deformation shall be supported with a suitable stiffener/strong back.
- 3.1.9 Provide sufficient heat sealable material to permit two additional reseals.
- 3.1.10 Containers shall meet carrier regulations. Size shall be kept to minimum dimensions commensurate with the size/configuration of the item.
- 3.1.11 The method of preservation/packaging shall be as specified by the Lockheed Packaging Standard (LPS) callout in contractual document.

- 1. The basic callout (P-109R1) identifies the general packaging requirements. The suffix letter(s) following the basic callout, e.g., P-109R1/A identifies specific elements of the packaging requirement (specific preservation /packaging method).

- 2. **Example** – Callout breakdown:



3.2 UNIT PACKAGING

- 3.2.1 Package each item in accordance with the designated packaging callout specified in the contractual document.
- 3.2.2 Avoid placing excessive strain on the assembly.
- 3.2.3 Completely surround the packaged item within a corrugated container with sufficient free-flow type material (or equivalent) to protect the item during handling/shipment.
- 3.2.4 Close and seal container as required.

3.3 INTERMEDIATE PACKAGING (Consolidation of unit packages, when applicable)

- 3.3.1 Unit packages consisting of a barrier bag (Ref Figure 2) require overpacking in an exterior container for shipment.
- 3.3.2 Unless otherwise specified, the number of unit packages per intermediate container (containing identical parts) shall be limited to the dimensions and gross weight provisions of the container specification (Ref Carrier Regulations).

3.4 PACKING (Shipping Container)

- 3.4.1 Pack appropriate number of intermediate containers uniformly into each shipping container.
- 3.4.2 Shipping containers as packed, shall protect the item from damage during ordinary handling/shipping and shall meet the minimum requirements of common carriers for safe transportation at the lowest rate to the point of delivery.
- 3.4.3 Unit or intermediate containers which meet the requirements of Paragraph 3.4.2 may be used as shipping containers.
- 3.4.4 Enclose or attach a copy of packing slip to the shipping container.

3.5 MARKING

- 3.5.1 Unit Package Marking – Label or mark each package to show at least the part number per contracting document, supplier identity, Thermal Control Labels, Method II warning marks “PACKAGED WITH DESICCANT – DO NOT OPEN UNTIL READY FOR USE OR INSPECTION,” when applicable. Additional markings may be specified in the item detail specification or drawing.
- 3.5.2 Intermediate Packaging Marking – Label or mark each container to show at least part number per contracting document, supplier and quantity of parts. Apply Thermal Control, Method II Labels, when applicable.
- 3.5.3 Shipping Container Marking – Label or mark each container to show part number per contracting document, the LMSC contracting document number, supplier, destination and quantity of parts.
- 3.5.4 Special, precautionary and handling markings shall be applied as required.

4.0 QUALITY ASSURANCE

- 4.1 Packaging shall be accomplished in such a manner as to prevent physical damage to, or degradation of, the packaged items during delivery to the using activity. It shall be the prerogative of LMSC to return damaged items, at supplier’s expense, when such damage is attributable to improper or inadequate protection.

5.0 NOTES

5.1 The following information is intended as a guide or aid to suppliers in meeting requirements of this specification:

5.1.1 Material Specifications

<u>Commodity</u>	<u>Military/Commercial Specifications</u>
Barrier, Water Vaporproof	MIL-B-22191, Type I
Box, Fiberboard	PPP-B-636
Cellulosic Material, Tubular Free Flow	MIL-C-23734
Film, Plastic	L-P-378
Desiccant, Active Bagged	MIL-D-3464 (See MIL-P-116 for Dessicant Formula)
Indicator, Humidity 3-Spot	MS 20003-3
Paper, Wrapping, Neutral	MIL-P-17667
Protective Caps	MS 25177, 25178, MS 90376; NAS 813, 820

Table 1	
LPS Suffix	Method of Preservation/Packaging
A	Package item in accordance with Paragraph 3.0 and Figure 1Figure 1.
B	Package item in accordance with Paragraph 3.0, Figure 1Figure 1, except omit desiccant, humidity indicator and Method II Label.
C	Package item in accordance with Paragraph 3.0 and Figure 2.
D	Package item in accordance with Paragraph 3.0, Figure 2, except omit desiccant, humidity indicator and Method II Label.
E	Package item in accordance with Paragraph 3.0 and Figure 3.
F	Package item in accordance with Paragraph 3.0, Figure 3, except omit desiccant, humidity indicator and Method II Label.
G	Heat seal item in a plastic bag; comply with Paragraph 3.0, as applicable.
H	Package the item in accordance with supplier's qualified method, providing that all applicable requirements of this standard and the item specification/drawing are met.

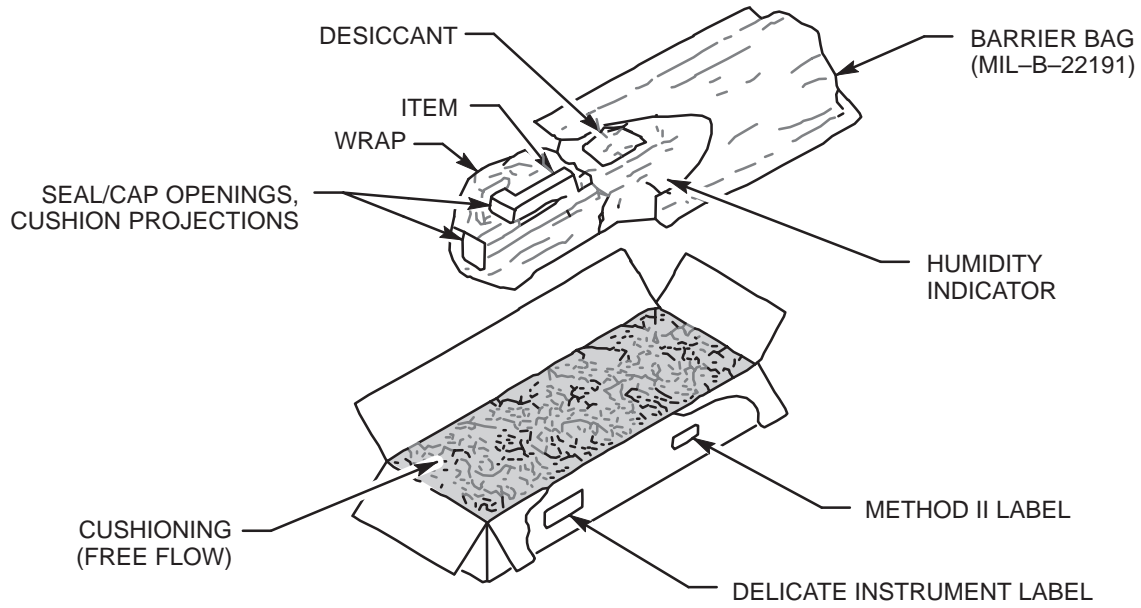


Figure 1. Cushioned Item within Bag (Heat Sealed)

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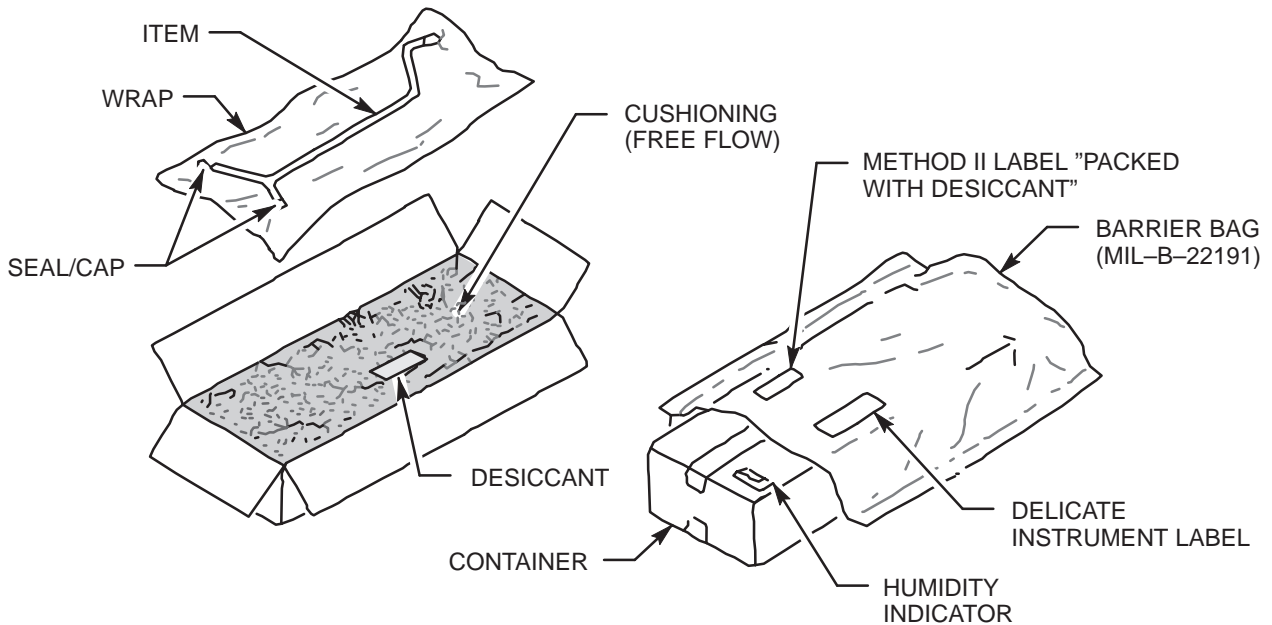


Figure 2. Container, Barrier (Heat Sealed)

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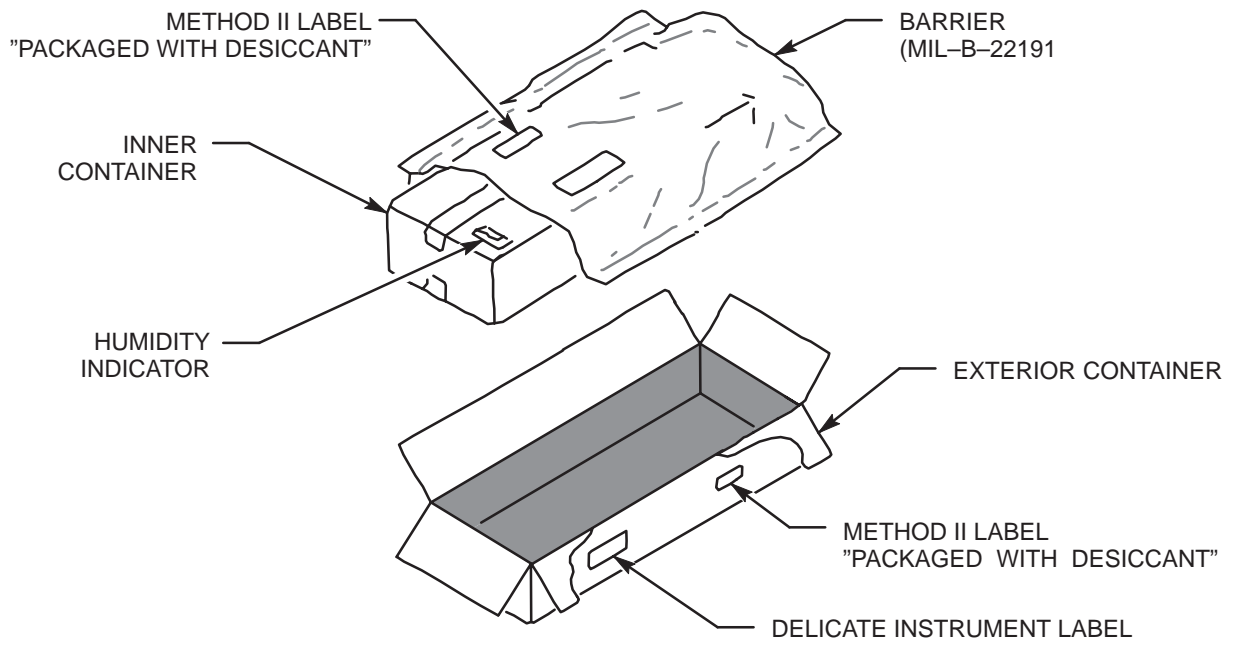


Figure 3. Container, Barrier (Heat Sealed), Container