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## SPECIAL PACKAGE FOR ALUMINA SUBSTRATES

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### 1.0 SCOPE

This standard provides for the multiple packaging of alumina substrates.

### 2.0 REFERENCES

- 2.1 Lockheed Packaging Standard, LPS 40-001
- 2.2 Materials Specification XWS 14405

### 3.0 REQUIREMENTS

#### 3.1 GENERAL

- 3.1.1 The substrates shall be clean and free from fingerprints, dust and other visible contamination.
- 3.1.2 Substrates shall be packaged and packed in approved environmental control areas.
- 3.1.3 Packages containing substrates shall be opened only in approved micro-electronics environmental control areas.
- 3.1.4 Substrates which are received improperly packaged, damaged or otherwise packaged contrary to this standard shall be subject to rejection.

#### 3.2 UNIT PACKAGE

- 3.2.1 Substrates of different sizes or lot numbers shall not be included in the same unit container.
- 3.2.2 Pack up to one hundred (100) individual substrates in a covered plastic or metal box, fitted with slots to separate and hold substrates vertically (Figure 1). Place cover on box and secure with tape or mechanical closure.
- 3.2.3 Double wrap unit container in neutral paper or plastic sheet.

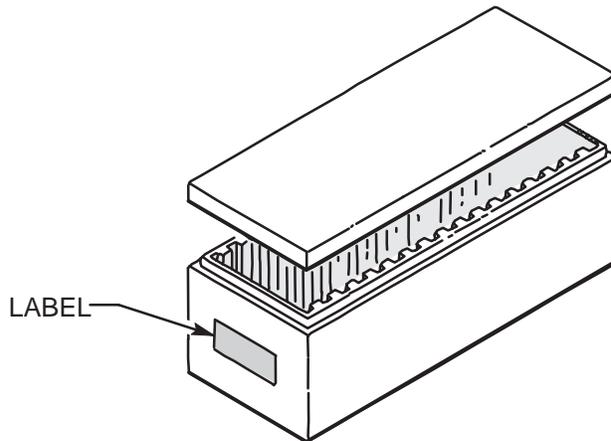


Figure 1. Unit Container with Slots to Hold Bagged Substrates

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#### 3.3 PACKING

- 3.3.1 Pack unit containers uniformly into each shipping container.
- 3.3.2 Fill all voids with cushioning/dunnage as required to prevent movement and damage during handling and shipment.
- 3.3.3 Shipping containers as packed shall meet minimum requirements of the common carriers for acceptance for safe transportation at the lowest rate to the point of delivery.
- 3.3.4 Enclose or attach a copy of packing slip to the shipping container.

3.4 MARKING

3.4.1 Unit Package Marking

3.4.1.1 In addition to any special marking required by contract or order, the following marking is required on the unit container and the outer wrap. **DIRECT MARKING ON PART IS PROHIBITED.**

- a. Part number, description per Purchase Order.
- b. Specification number and revision letter, if applicable.
- c. Quantity and size.
- d. Supplier identity and lot number.
- e. Purchase Order number.

The unit container's inner wrap shall be labeled or marked "MICROELECTRONICS – OPEN ONLY IN MICROELECTRONICS CLEAN ROOM."

3.4.2 Shipping Container Marking

3.4.2.1 Label or mark each exterior shipping container as follows:

- a. Part number/description per Purchase Order.
- b. Quantity in each shipping container.
- c. Supplier identity.
- d. Purchase Order number.
- e. Precautionary storage/handling restrictions as applicable.

**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 the 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 the requirements of this standard.

5.2 MATERIALS SPECIFICATIONS

<u>Material</u>	<u>Specification</u>
Box, Fiberboard	PPP-B-636
Cushioning, Cellulosic	PPP-C-843
Cushioning, Cellulosic (Free Flow)	MIL-C-23734
Cushioning, Plastic (Cellular)	MIL-C-795
Cushioning, Polyurethane (Flexible)	MIL-P-26514
Paper, Neutral	MIL-P-17667
Slotted Box, Metal or Plastic	Commercial