



NEDA

PUBLICATION

NEDA Guidelines for Packing and Dunnage of Electronic Components

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Industry Guidelines

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1.0 PURPOSE

The purpose of this document is to provide distributors and manufacturers with guidelines for the packing and dunnage of connectors, electromechanical devices, passive components, and commercial semiconductors.

2.0 SCOPE

Compliance with these guidelines is voluntary. These guidelines may be specified as a requirement by either the distributor or the customer. They are not intended to replace or supersede any military specifications, regulations of the Interstate Commerce commission, or other regulatory agency requirements.

3.0 REFERENCE DOCUMENT

* EIA 625: "Requirements for Handling Electrostatic Discharge Sensitive Devices"

4.0 DEFINITIONS

4.1 UNIT CONTAINER: The first container applied to a single or several components. For purposes of these guidelines, examples of unit containers are tubes, rails, trays, reels, or bags containing the components.

4.2 INTERMEDIATE CONTAINER: A wrap, box, bag, or bundle that contains one or more unit containers of identical items.

4.3 SHIPPING CONTAINER: A container intended for transportation of the product.

4.4 UNIT LOAD: A number of filled shipping containers or other items held together by one or more means such as a pallet, stretch wrap, shrink wrap or strapping.

5.0 PACKING

5.1 GENERAL REQUIREMENTS: All packing should provide protection for the product from, but not limited to:

- 5.1.1 bent leads
- 5.1.2 damage by abrasion
- 5.1.3 contamination
- 5.1.4 light amounts of moisture that could damage product
- 5.1.5 prevention of ancillary hardware loss during shipment
- 5.1.6 package bursting from inertia or weight
- 5.1.7 ESD, preferred

5.2. All packing should ensure safe handling, shipping, and storage of the product.

5.3. The unsupported bottom of a manually-handled container should be able to hold its contents.

5.4. Each manually-handled individual shipping container should not exceed thirty-five (35) pounds. Manually handled containers that exceed 35 pounds should be labeled to indicate that its weight exceeds 35 pounds. This label should be highly visible and located near the shipping label.

6.0 MATERIALS

6.1. Packing materials should be made of non-ozone depleting substances (CFC free).

6.2 The use of non-static generating packing materials is required* for ESD sensitive product unit containers, and encouraged for all other product.

6.3 When possible, packing and dunnage materials should be made of recycled materials. Every effort should be made to use materials for packing and dunnage that can be recycled.

6.4 All packing should be free of handling hazards such as protruding nails, staples, or non-secure banding.

6.5 Shipping containers should be sealed with adequate gummed tape or pressure sensitive tape. Use of staples, glue, or metal fasteners for container closure should be avoided.

*Reference EIA 625

6.6 Dunnage and void fill made of kraft paper, antistatic bubble wrap, or antistatic polypropylene or polyethylene foam are preferred. Use of sawdust, wood shavings, excelsior, shredded paper, shredded corrugated board, edible popcorn, newsprint, bagged (non-biodegradable) foam, and loose or free flow materials such as peanuts should be avoided.

When dunnage is needed for ESD (Electrostatic Discharge Sensitive) devices that are not within a protected barrier, static resistant bubble pack is preferred.

6.7 The preferred method to secure unit loads is stretch wrap. When banding is required, the use of metal banding should be avoided.

6.8. The preferred shipping carton is unbleached corrugated.

6.9 The preferred pallet sizes are 42" X 48" or 40" X 48", with a minimum clearance between the top and bottom decks of 3.5". The use of skids (no bottom deck) should be avoided. The preferred pallet materials are wood or corrugated.