

## **Secure, efficient plastic pail shipping**

Our goal is to provide reliable, safe transportation of your freight without additional cost or delay. In the case of plastic pail shipments, there are specific stacking, palletizing, and spacing on pallet requirements, as well as stretch wrap film tension and pail handle orientation specifications for successful shipping.

To ensure your plastic pail cargo effectively ships without delay, damage, or need for additional handling and corrective packaging, we've prepared this review to reinforce the necessary procedures for reliable transport. When unitized plastic pail loads are positioned and secured properly to a well-constructed pallet, they're considered structurally sound and safe for ocean transport.

However, if packaging, handling and stowage procedures outlined by pail manufacturers aren't followed, these loads may fail resulting in loss of product, damage to other freight and expensive cleanup operations.

To prevent these costly outcomes, CFS operators will make every attempt to inspect plastic pail cargo when they receive it and at subsequent intervals when pail loads are moved or handled. The following known packaging risks will be reviewed:

- Damaged or broken pallets
- Pallets with deck board spacing 3" or greater
- Pail bottoms that overhang pallet
- Pails stacked where they are not nested within the cover pocket of the container below
- Pails more than (3) high per pallet
- Excessive stretch wrap or other form of tension that may distort the packaging integrity

## **Questionable packaging - Course of action**

When CaroTrans and its CFS operator partner identify plastic pail shipments they believe are at risk, they will contact the shipper prior to any action being taken to review CaroTrans' steps for resolution.

**When re-palletizing consignments of plastic pails as authorized by CaroTrans, the CFS operator is to adhere to requirements as outlined below:**

Pallet – ISPM 15 stamped, Double-Faced pallet with top board spacing no wider than 2".

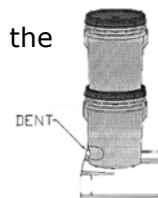
Pail Stacking - The bottoms of stacked pails must be fully located and centered in the cover pocket of the container below. The pails should be arranged in a pattern such that their weight is evenly distributed over the **entire** area of the pallet with none of the pail bottoms overhanging the edges of the pallet.

Handle Orientation – aligned in a manner where they are not protruding out or wedged into the side of adjacent pails.

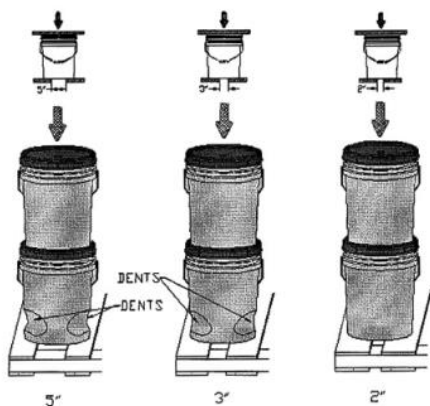
Unitizing Load with Proper Banding and Stretch Film Tension- applied with the minimum amount of tension necessary to unitize the load for over-the-road, rail and ocean transport making sure to secure pails to each other and the pallet.

### Definitions of packaging flaws described above

**Damaged or broken pallets:** Pallets should show no signs of warping under the weight of the pails as buckling can occur when pails are not set on a flat surface. This is referred to as deck board deflection and can result in a 40% reduction in weight bearing capacity of the packaging.



### Pallets with deck board spacing 3" or greater

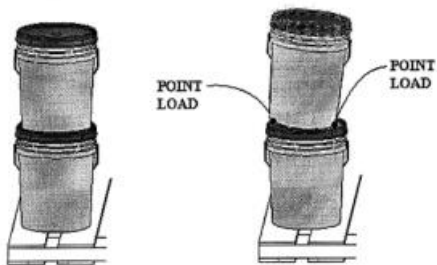


A "throw away" pallet with wide-spaced slats creates pressure points that weaken the bottom pails and can result in buckling and pail failure. A 3" spacing between deck boards has 18% less weight bearing capacity. 5" spacing has 31% less weight bearing capacity than a normal pail.

**Pail bottoms that overhang pallet:** Similar to deck board deflection seen in broken pallets, plastic pails that overhang a pallet by a half inch or more are severely compromised in their ability to bear weight. And by protruding past the pallet dimensions, they risk puncture and abrasion while stowed in the container during transit.



### **Pails stacked where they are not nested within the cover pocket of the container**



**below:** Plastic pails and their covers are designed to nest into one another for stacking, with the pocket in the center of the cover providing a clearance fit with the pail bottom. This clearance is designed to minimize lateral motion of the stacked pails and add structural strength to the unitized load. It is important that the

bottoms of stacked pails be fully located and centered in the cover pocket of the container below. Otherwise, point loading will occur that can result in pail or cover failure.

**Pails more than (3) high per pallet:** Configurations (2) high is recommended but not mandatory if the overall pallet composition is acceptable.

### **Excessive stretch wrap or other form of tension that may distort the packaging integrity**



If banded or wrapped too tightly, the banding and/or stretch film used to secure stacked pails onto pallets for shipment and storage can impart side loads onto the pails that decrease their effective load carrying ability. This can result in pail buckling and failure.



High banding and/or stretch wrap or banding tension can also distort the pail and cover in a manner that adversely affects the container's seal integrity, potentially leading to packaging failure. Pails located at the outermost corners of the pallet where the tension of the wrap is at its highest are most affected. Pails should be secured to each other and the pallet with the minimum amount of tension necessary to unitize the load for shipment and storage.

For further information, please contact your local CaroTrans branch office.

[www.carotrans.com](http://www.carotrans.com)

### **Sources:**

Plastic Shipping Container Institute: <http://www.pscionline.org/selectionusage/handling.html>

Midway Container Inc.: <http://midwaycontainer.com/open-head-pail-storage/>