

Voluntary Guidelines for

**FLOOR-READY
MERCHANDISE**

9.0 Shipment Packaging

2nd Edition

Latest Revision: September 15, 2006



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Revision Summary

Date	Section	Page	Revision
15-Sep-06	All	All	2nd Edition published.

9.0 Shipment Packaging

9.1 Introduction

9.1.1 Objective

This section is designed to stimulate discussion between trading partners about critical elements of shipment packaging that impact Floor-Ready Merchandise and to encourage consideration of environmental concerns.

9.1.2 Overview

Shipment packaging is the unit load or transport package and incorporates the consumer packaging only when the shipping unit is also the selling unit. Successful implementation of effective shipment packaging requires dialogue between trading partners to identify mutually beneficial opportunities. Environmental considerations are consistent with the long-term objectives of shipment packaging: reduction of material waste, increased reuse of packaging and ease of handling.

9.1.3 Important Considerations

The issues of recycling, degradability and disposal of waste materials should be considered. Legislation, which will directly affect packaging, is being written, proposed, and enacted in every part of the United States and in many countries throughout the world. This legislation varies from area to area and, therefore, must be carefully considered in conjunction with the proposed distribution of the product/package.

9.1.4 Benefits

Discussion between trading partners regarding shipment packaging may result in these benefits:

- ◆ Improved flow of merchandise through automated receiving and cross docking,
- ◆ Reduced packaging material inventories,
- ◆ Reduced overall packaging costs, and
- ◆ Reduced retail storage and disposal space.

9.2 Prerequisites

A thorough understanding of the retail industry conventions pertaining to the movement of merchandise is fundamental. These conventions are presented in the *GS1 General Specification Guideline*, the *GS1 US Business Process Guidelines for Electronic Data Interchange*, the *VICS EDI 856 Ship Notice/Manifest Guideline*, and the *VICS Retail Industry Conventions and Implementation Guidelines for Electronic Data Interchange*.

9.3 Requirements

The key to a successful trading partnership is a thorough understanding of each partner's expectations, capabilities, and baseline requirements. Partners should develop their own checklist, which includes all topics related to shipment packaging.

9.4 Methods of Communicating

Trading partners should discuss and agree upon shipment packaging requirements. Once defined, requirements should be documented and distributed to appropriate personnel within each partner's organization.

9.5 Trading Partner Discussion Checklist

Shipment packaging is product-specific. A balance between material costs, product protection and handling considerations must be reached. The discussion points in the checklist may be used as a guideline for the development of a checklist, which is appropriate to the product category under discussion. This list is not intended to be inclusive or exhaustive; it will serve as a starting point for the development of your own set of discussion points.

9.5.1 Handling Considerations

Handling considerations are those topics relative to the shipment packaging used in transporting merchandise from point-of-origin to final commercial destination, possibly through intermediary points such as carriers, consolidators, and distribution centers. Topics include, but are not limited to, unitization of product, floor loading, conveyability of packages, safety, and transportation costs.

9.5.1.1 Unitization

- ◆ Determine if unitization is appropriate.
- ◆ Determine type of unitized packaging: pallets, slipsheets, master cartons, stretch/shrink-wrapped, strapping multiple cartons, or other methods.
 - ◆ Pallets or Slipsheets
 - ◆ Pallet/Slipsheet Size
 - ◆ Deck Utilization (Stacking Method)
 - ◆ Product Overhang on Pallet
 - ◆ Stretch/Shrink Wrapping
 - ◆ Master Cartons (Example: Smaller cartons packed into larger cartons.)
 - ◆ Strapping Multiple Cartons (Examples: Same SKU, Different SKU)
 - ◆ Other Unitization Methods
- ◆ Verify that unitized package handling equipment is available at all points in the chosen transport chain.

- ◆ Analyze all costs associated with unitization: materials, labor, equipment, and transportation.
- ◆ Determine disposition of the unitization materials such as: re-use, re-cycle, incinerate, compact, and landfill.

9.5.1.2 Floor Loading

- ◆ Loading Sequence Requirements
- ◆ Load Stabilization Method
- ◆ Load Locks (Examples: Air Bags, Plywood, Lumber)
- ◆ Stair-stepping Cartons
- ◆ Dunnage (Examples: Cardboard, Fiberboard, Kraft Paper)

9.5.1.3 Storage/Shipping for Unitization/Floor Loading

- ◆ Consider the environmental exposure for storage and transport:
 - ◆ Humidity
 - ◆ Temperature
 - ◆ Optimizing shipment packaging performance
- ◆ Weight per carton
- ◆ Load support created by product or lack of support due to product
- ◆ Stacking pattern (cross tie or column stack)
- ◆ Number of cartons per layer, layers per pallet, or number of pallets high
- ◆ Length of time in storage
- ◆ Distribution environment (from manufacturer to selling floor)
 - ◆ Handling within a manufacturer
 - ◆ Transport method
 - ◆ Number of times handled
 - ◆ Reshipment of cartons

9.5.1.4 Conveyability

- ◆ Determine if mechanical conveyances are used at any point in the transport chain.
- ◆ Evaluate the style, type, and composition of packages and/or unitized loads for compatibility with various conveyor systems. Over filling or under filling of cartons should be avoided.
- ◆ Check limitations of conveyor systems:
 - ◆ Minimum/maximum weight
 - ◆ Minimum/maximum dimensions

The recommended minimum and maximum carton dimensions and weights are listed below:

	Length	Width	Height	Weight
Minimum	9"	9"	3"	5 lbs.
Maximum	36"	27"	30"	50 lbs.

Discussion between trading partners should consider the following when arriving at a mutual consensus of minimum/maximum carton dimensions and weights:

Minimum

- ◆ The relationship of footprint (length and width of carton) to weight is very important to the successful "ride" of the carton on the conveyor.
- ◆ Minimum order quantities for replenishment often conflict with the minimum dimensions and weights for conveyability. When these conditions exist, discussions between trading partners is essential and necessary and consequences must be understood by both parties.

Maximum

- ◆ Maximum weight as shown on the chart above relates to maximum weight of conveyable cartons without regard to the handling process of loading the cartons on the conveyor.
- ◆ Confirm that package closure method will not interfere with conveyor systems.
- ◆ Consider durability of packages on conveyor systems:
 - ◆ Mullen bursting strength
 - ◆ Edge crush test
 - ◆ Plastic bag film thickness and puncture resistance

9.5.1.5 Non-Conveyables

- ◆ Non-conveyables are those products whose dimensions or weights fall outside of the conveyable limits as shown in the Minimum/Maximum table above.

9.5.1.6 Safety

- ◆ Consider safety guidelines followed by trading partners.
- ◆ Comply with hazardous materials handling, labeling, and documentation.
- ◆ Provide material safety data sheets (MSDS) if required.

9.5.2 Evaluation of Shipment Packaging

Packaging materials should be evaluated for both function and disposition. Packing should minimize potential damage to the product while optimizing pipeline handling. Consideration should be given to packaging which minimizes the use of materials and energy sources.

9.5.2.1 Simplification and Source Reduction

- ◆ Eliminate excess packing components:
 - ◆ Supply in bulk or without any packaging
 - ◆ Eliminate package layers or components
 - ◆ Redesign packaging to use less material without compromising the product
 - ◆ Replace many small packages with a single, larger, more efficient package size.
- ◆ Reduce packaging surface areas by changing the packaging geometry or structural design.
- ◆ Reduce packaging volume by using different packaging container forms.
- ◆ Reduce overall packaging by increases in secondary or tertiary packaging, if these can be offset by decreases in primary packaging.
- ◆ Determine if the primary packaging can be re-used in distribution, shipping, or manufacturing processes.