

ABC Group	Supplier Packaging Guidelines	ID: 80QPP-D-040
		Rev.: 02 – 15APR14
		App. by: M.J.J. Quail
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1.0 INTRODUCTION

The purpose of this document is to describe the general packaging guidelines for all the suppliers of ABC Group. The general packaging guidelines are based on common automotive industry packaging practices. For North America, we suggest using AIAG guidelines as a reference document.

These are general guidelines to be followed. Individual ABC plants may have “specific requirements”. Such requirement supersedes this document. It is suggested to contact ABC receiving plant for any question or clarification.

2.0 SUPPLIER RESPONSIBILITIES AND GENERAL GUIDELINES

Assurance of container system performance and part integrity in actual use is the responsibility of the supplier.

Suppliers must focus on the most cost effective design but still ensuring high quality part protection and user compatibility. All packaging is to be designed to preserve part quality during transportation and in-plant handling. When selecting container & pallet size, please consider efficient utilization of trailer usable space.

Packaging Development Process:

- Propose & discuss packaging concept, obtain ABC plant approval
- Develop & review prototype, obtain ABC plant approval
- Validate the prototype, obtain ABC plant approval
- Supplier must have a packaging form approved by the ABC receiving plant before the start of part shipment.

3.0 PACKAGING DATA FORM

We require that suppliers complete the Supplier Packaging Approval Form (#80QPP-F-051) within 10 days of the component buyer approving the quotation.

4.0 EXPENDABLE PACKAGING

Suppliers are responsible for selecting the appropriate carton size, style and material strength that can deliver quality parts to our production line. Following is the criteria for carton design development & material consideration:

- Static load when stacked 200” high in the warehouse.
- Dynamic load when stacked in the trailer to withstand transportation vibration.
- Temperature variation from -30 to +150 degree F at 90% relative humidity.
- All packaging materials must be recyclable.

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- Preferred carton style: For bulk carton: Flanged tube or sleeve with top & bottom lid. For hand-held cartons: Half slotted carton (HSC) with a lid or common lid for a layer of cartons. Select regular slotted carton (RSC) for smaller part volume.
- Select carton/pallet size that maximizes space of transportation mode.
- Supports material handling system of ABC Group receiving plant.
- Where possible, we will prefer hand held cartons than a bulk container.
- All cartons must have a printed Certificate of Box Maker.
- The gross weight of a hand held cartons should not exceed 35 pounds.
- Cartons having gross weight of more than 25 pounds must have hand flaps on both ends of the carton.
- The supplier should try to eliminate or reduce any expendable packaging materials, and when not avoidable, should be of recycled and/or recyclable material.

Preferred bulk container dimensions are

For North America: (outside dimensions in inches including the pallet):

48 x 45 x 25.5 48 x 45 x 34 48 x 45 x 50

For Europe & Brazil: (outside dimensions in mm including the pallet):

1200 x 1000 x 500 1200 x 1000 x 667 1200 x 1000 x 1000

Overseas Packaging:

Overseas part suppliers should select adequate container material strength that can withstand the material handling & transit through the entire supply chain, upto the production line of ABC group plant. Packaging materials must comply with the government import requirement of receiving ABC plant. If sea container is part of the transit route, container & pallet size must be selected to efficiently cube the sea container.

5.0 SHIPPING IDENTIFICATION LABELS:

For label requirement please refer to appendix C-3-1.

6.0 DUNNAGE:

- Suppliers are responsible for designing the dunnage and selecting the material and style that can adequately protect the part from damage.
- Dissimilar dunnage materials must be either loose or mechanically fastened to help easy separation of materials for recycling.
- Dunnage should allow easy access to parts, and not hinder workability.
- Dunnage material must be recyclable.

7.0 WOOD PALLETS

All wood packaging sent to an ABC plant must be compliant to the country's government import rules.

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Standard pallet footprints are:

North America: 48" x 45" (4-way) and 32" x 30" (2-way)
Europe & Brazil: 1200 x 1000 (4-way)

If part size is longer, select pallet size that maximizes the trailer inside dimension.

All fork openings should be designed to accommodate forklift spread.
Pallet deck board thickness & the space in between must be adequate for transportation, material handling and warehousing.

8.0 UNITIZING:

Unit load height limitation (containers & pallet):

For North America: 52"

For Europe & Brazil: 1000 mm

Carton/Cartons must not overhang the pallet (+0-1").

Unit loads must be stackable.

Unit loads must be secured to the pallet. Bulk expendable cartons must be stapled to the pallet. Expendable hand-held cartons & returnable hand-held totes must be either stretch wrapped or if banded to the pallet, plastic straps (with plastic buckles), two bands on each side and in two directions to prevent load shifts during shipping and handling.

Ensure banding straps do not compromise forklift access to pallet base

While banding, ensure that carton edges are not damaged.

There will be only one part number per unit load. If sending a mixed load, all part numbers must be layered, one part number per layer (use mixed load label). Top carton layer must be levelled.

Unitloads must be inspected prior to shipment. Damaged containers must be replaced. Damaged containers are unsafe to handle and can cause part damage.

9.0 PACKAGING VALIDATION:

Supplier is responsible for ensuring part integrity during transportation and material handling. To accomplish this, suppliers are encouraged to arrange for pre-shipment testing or should develop methods to test the design under simulated conditions.

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Standard test include:

- transport vibration
- Drop test
- Side impact test (if railcar used)

To obtain the authorization of an expendable or returnable packaging, the supplier must send a “trial test pack” to our plant for evaluation of packaging and parts. The “trial test pack” label should be clearly marked on all four sides with fluorescent paper. The supplier must send details of the “trial test pack” to ABC Group plant before the shipment.

10.0 RETURNABLE PACKAGING

- Containers must be stackable and when feasible, nestable and/or collapsible.
- All returnable containers must be identified by supplier name, supplier code & city/state. Examples of preferred standard returnable containers (outside dimensions in inches) are listed below::

Hand Held Containers: We prefer straight wall containers. The gross weight of the container should not exceed 35 pounds.

For North America: The totes should fit on a standard 48” x 45” plastic pallet:

For Europe & Brazil: The tote should fit on a 1200 x 1000 or 1200 x 800 mm pallet.

Hand held containers must be palletized on a returnable pallet (top & bottom) set.

Bulk Collapsible Container: Two access doors, two label holders & four ID plates are required on bulk containers.

For North America: Preferred bulk container footprints are:
32” x 30” 48” x 45” 56” x 48” 62” x 48” 70” x 48”

For Europe: Preferred bulk container footprints are
1200mm x 1000mm 800mm x 600mm

For Brazil: Preferred bulk container footprints are:
32” x 30” 48” x 45” 48” x 40” 70” x 48”

Pallet/Sleeve Packs:

- For North America: For overall unitload height, please refer to bulk containers in 4.0 (page 2). Preferred pallet sizes are (outside dimensions in inches):
48 x 45 x 5 52 x 48 x 5 63 x 48 x 5

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Recommended material strength for corrugated sleeve is 1300 pounds triple wall with AAA or AAC flutes. If using corrugate plastic sleeve, material thickness should be equal or better than the combination of 8mm & 10mm.

For the development and selection of all other returnable container sizes, styles and dunnage, supplier must consult ABC Group packaging contact (purchasing@abcgrp.com)

Supplier is responsible for maintaining and cleaning the returnable containers.

For trace ability purposes, all returnable containers must be identified with a hot stamp or label on tote/pallets, ID Plates on bulk collapsible containers & stencilling on metal rack.

ABC SUPPLIED RETURNABLE PACKAGING:

- Must be stored indoor
- Supplier must maintain record of incoming & out-going containers
- Supplied containers can be used for storage & staging of finished ABC parts ready for regular part shipment
- Supplied containers cannot be used for work in process parts, building of part bank, part storage of other customers or storage of scrap parts.
- Do not ship parts in damaged containers
- Contact ABC plant if containers are damaged. Label & quarantine the damaged container & identify the nature of damage on the label.
- Contact ABC plant to arrange the return of containers after the program is completed.
- ABC has right to audit the containers at supplier's site/warehouse.

12.0 BACK-UP EXPENDABLE PACKAGING:

After establishing the returnable packaging, supplier must design & maintain a back-up expendable pack. The back-up expendable pack must: have the following:

- a. Overall container size should be equal or smaller than the returnable container
- b. Part density same as returnable container

Permission from ABC receiving plant is required before shipping parts in back-up expendable packaging