



# Packaging Guideline Asia-Pacific

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## 2. PURPOSE

The present packaging guideline defines the packaging requirements of Vibracoustic to suppliers. The following regulations shall provide for an efficient and failure-free flow of materials between the supplier and VC by means of:

- Optimal container and packaging design
- Standardized dimensions
- Agreed quantity per packaging

## 3. SCOPE

This packaging guideline applies to all packaging processes for production parts and material and for the parts and materials inbound to all VC sites located in the Asian operational region, including partner productions. It complements the terms and conditions of the respective product contracts as well as the specifications of individual purchasing orders.

Variations from this guideline shall be agreed upon in writing. This document may be translated into local languages however the content of this guideline in English is considered authoritative.

## 4. TERMS / DEFINITIONS / ABBREVIATIONS

ASN	Advanced Shipping Note
DAP	Delivered at place
EDI	Electronical Data Interchange
EXW	Ex Works
GP	Global procedure
Ident.	identification
PE	Polyethylen
PP	Polypropylen
RESY	RESY-organization for disposal of recyclable fraction is the licensor for the internationally well-known recycling symbol with three cycle arrows. If the RESY symbol is printed on a package, it guarantees that the package is recyclable and shall be reused by the partners of the RESY association.
SLC	Small Load Container
Tbd.	To be defined
VC	Vibracoustic
VCI	Volatile Corrosion Inhibitor



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## 5. Process / Method / Procedure

### 5.1 Packaging Requirements

The package design should be validated to ensure it is robust enough not only for shipment from the supplier to the VC plant but also for warehouse storage expecting normal handling within the warehouse. Inner packaging shall provided if there is any danger of damage from part to part contact within the packaging. Appropriate inserts shall used, e.g. corrugated cardboard of RESY quality. Empty spaces shall avoided in order to save the parts from damage during transport.

Irrespective of the chosen packaging type the following requirements shall met:

- Goods must arrive free from damage in transit
- Efficient master and handling units
- Optimal utilization of the master and handling unit
- Every master and handling unit shall labeled
- The load shall be secured sufficiently during the transport
- Unloading of transport vehicles with ground conveyors shall secured
- Stackability
- Any variance from the packaging agreement shall approved beforehand in writing
- Simple unloading of goods
- Recyclable materials
- One-way packaging material should be avoided
- Only one material number per master and/or handling unit is allowed
- If required by VC a pooling system for pallets and load carriers shall be used, e.g. CHEP system

The supplier is liable for quality impairment due to insufficient, wet or dirty packaging.

For detailed information please refer to the plant logistics manager of the VC plant you supply to.

Regarding size and weight of the packaging used, the packaging agreement shall fulfilled. The supplier is allowed to use alternate packaging only after authorisation by VC logistics. Otherwise, VC reserves the right to raise official supplier concerns for charge costs for additional repacking work.

### 5.2 General Requirements regarding the Avoidance of Packaging Waste

The packaging shall be designed under economic and ecological aspects. The economic aims of environmental legislation regarding waste imply the following, according to ecological priorities:

- **Avoidance** → Limited to the directly necessary extent.
- **Reduction** → Recycling by use of returnable packaging. In terms of the above named principle Returnable load carriers shall be given preference.
- **Disposal** → Environment-friendly disposal shall possible for reusable and one-way packaging.

Only environment-friendly materials may be used.

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## 5.3 Authorized and Non-authorized Packaging Materials

<b>Synthetic Packaging Materials</b>	
Protective and insulating caps	- Only PE, unless otherwise stipulated.
Loose fill	- Not permitted
Foamed plastics (disposable or reusable)	- Only PE or PP
Shrink wrapping film and stretch film	- Only PE marked with DIN 6120
Bags and sacks of plastic sheet/film	- Only PE marked with DIN 6120 - Only lables and adhesive strips of the same material - Max. 3% of the film area can be printed
Expanded Polystyrene (EPS)	- Can only be used after prior approval by VC

<b>Paper and Paperboard</b>	
Corrosion-resistant paper	- Shall free of substances harmful to paper production - Shall marked wit the RESY symbol - Shall seald with plastic or textile tapes - VCI paper shall certified to be recyclable with paper/paperboard - Not permitted are papers with water-insoluble coatings or adhsives, i.e. wax, paraffin, bitumen coated or oiled paper and self-adhesive paper tapes

<b>Wooden Packaging</b>	
Wood crates and other packs	- wooden packaging requiring disassembly and mechanical tools to open should be avoided and require prior approval by VC

## 5.4 Coverage of Costs and Supplier Responsibilities

A formal supplier concern shall be raised and the supplier shall be charged in case of:

- Delivery in damaged packaging, which shall be replaced and fixed
- Loss or unapproved scrapping of VC-owned packaging
- Delivery in wet or dirty packaging
- Deviation from the packaging agreement

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The supplier is responsible for:

- Procurement costs of supplier-owned packaging
- Procurement of packaging for the supplier's internal demand
- Transport and development of packaging for sample parts
- Inform VC immediately in case of changes of the unloading point for empty packaging
- Storage of the VC owned packaging under dry and clean conditions (e.g. under a roof)
- 50% of the maintenance costs for packaging which is exchanged between VC and the supplier (based on the used volume of a packaging type)

In case the packaging does not meet the requirements mentioned above, VC shall raise a supplier concern and reserves the right to return the goods to the supplier and charge all related costs.

## 5.5 Logistical Supplier Evaluation

In case the supplier does not fulfill the packaging agreement, this shall be considered within the supplier evaluation and result in a logistical complaint. For further details refer to GP-01-7.4-0009 "Logistics Requirements for Suppliers" chapter 5.2.6 "Nonconformity with VC requirements".

All VC requirements regarding the packaging account management (chapter 5.11) shall be fulfilled.

## 5.6 Load Securing

Load securing shall take place according to national and international regulations. The delivery of goods at the VC plant without any quality impairment shall be ensured. The fulfillment of special and carrier-specific regulations for handling dangerous goods is obligatory.

## 5.7 Packaging Planning

Packaging planning is one basic principle of packaging management. The supplier shall provide the name of a responsible contact person, including telephone, fax number and e-mail address. VC shall be informed in writing prior to any modification.

### 5.7.1 Packaging Definition Process

1. The packaging agreement template FO\_01\_7.4\_0044 should be downloaded by the supplier from the VC website.
2. The signed packaging agreement proposal from the supplier including alternate packaging is returned to the responsible VC project buyer.
3. The packaging agreement proposal is forwarded by the project buyer to the logistics department of the receiving VC plant.
4. VC (logistics, container management, quality, process engineering and production) checks and reviews the packaging proposal and provides the supplier with the approved packaging agreement.
5. The result of the packaging agreement is sent to the project buyer, and to be included as part of the PPAP package to the receiving plant.

### 5.7.2 Packaging Agreement

VC uses the packaging agreement FO-01-7.4-0044 for documentation of the packaging specification. All relevant packaging data is managed per part number, plant and supplier.

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After the final approval of the packaging agreement, the supplier shall agree with the receiving VC plant on the date from which the agreed packaging shall be applied. The project buyer shall be informed about the agreed date by VC Logistics.

The supplier is allowed to use alternate packaging only after a written authorisation by VC Logistics. If alternate packaging shall be used the costs shall be allocated to the party which caused the issue.

### 5.7.3 Planning and determinations of requirements for returnable packaging

The supply requirement is calculated for each returnable packaging type. The calculation takes into account the agreed packaging with its filling capacity, the current requirement for the specific goods, the scheduled delivery frequency for empties and the duration of transportation between the VC plant and the supplier site.

#### **Calculation of returnable packaging requirement:**

Parts requirement per working day (wd) = required annual part qty. / wd per year

**Required containers per wd** = required parts per wd / packaging capacity

Description	packaging requirement in wd
Packaging requirement supplier	tbd.
Packaging requirement VC	tbd.
Transport time for goods	tbd.
Transport time for empties	tbd.
<b>Total</b>	<b>Total packaging requirement in wd</b>

**Packaging requirement = total container requirement in wd x required packaging per wd**

### 5.7.4 Packaging Modifications

In case the supplier or VC wants to change the agreed packaging, the mentioned process under 5.7.1 shall be followed.

In case of component engineering change, which require a modification of series packaging, the expected costs for the packaging modification (tools, carriers etc.) shall be offered to the VC project buyer.

## 5.8 Criteria for returnable packaging

Returnable packaging is provided either by VC or by the supplier, depending on the agreement.

To avoid returnable packaging loss (due to improper use) or the acceptance of fakes, and to limit accident risks, the exchangeability is checked during the receipt and shipping processes of goods.

Damaged returnable packaging shall be repaired.




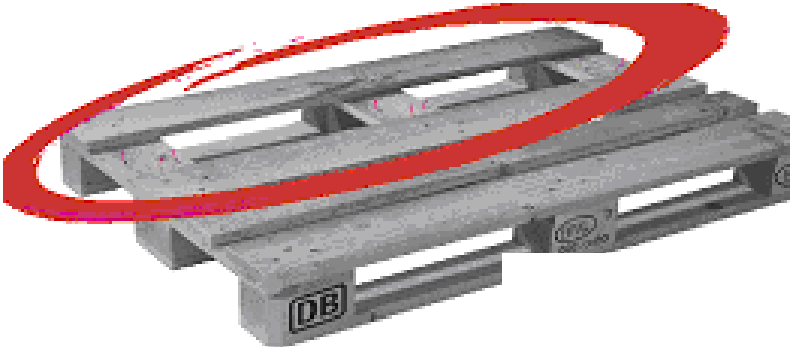


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The delivery of non-exchangeable packaging excludes the right of exchange. In such cases, VC reserves the right to charge the supplier the costs for cleaning, maintenance or scrapping.

Flat pallets shall repaired, respectively are not exchangeable, if:

	<p>more than a nail or screw shaft is visible due to chipped bottom rim or cover edge board</p>
	<p>more than a nail is visible due to a missing or chipped block</p>
	<p>a board is broken</p>
	<p>a board is missing</p>

More criteria are:

- The maximum load is no longer guaranteed (e.g. the pallet is brittle and rotten, heavy chipping).
- Dirt and/ or contamination of the pallet can harm the goods.
- Several blocks are chipped.
- Obviously improper components of the pallet (e.g. too thin boards, too small blocks).

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## 5.8.1 Small Load Carriers (SLC / KLT) System

Small load carriers (SLC) shall be used, where required by VC.

The master unit shall consider in the preferred case, a plastic pallet sized 1.200 mm x 800 mm in order to achieve the maximum utilization in VC's warehouse and to assure a stable tara of the packaging. The pallet should be covered with a plastic lid, which shall be fixed with a twin-track strapping to secure the load.

The usage of wooden pallets and pallets with other sizes shall be approved by the receiving VC Plant Logistics in the packaging agreement.

In the exceptional case that the supplier cannot provide all SLC with the agreed complete quantity (e.g. different production lots are not allowed to be mixed up on one pallet), VC Logistics has to be informed in written and approve this before the shipment. The incomplete SLC has to be packed on the top level of the pallet and on the side, on which the master label is fixed. A note with the dimensions of the SLC label has to be put inside of the incomplete SLC on top of the parts stating "incomplete" legible for the VC warehouse staff.

*example:*



*incomplete SLC on top level*



*view on top of incomplete SLC*

Incomplete levels have to be filled up with empty SLCs to assure the stability of the pallet and to prevent any damage of the lid during transport and manipulation.

## 5.8.2 Large Load Carriers (LLC) / Foldable and collapsible containers

Large load carriers shall be used where required by VC. If VC provides LLC to the supplier, Incoterms are, if not otherwise defined, ex works. The supplier bears responsibility for design, procurement and costs of all kinds of inlays, partitions or further intermediate layers, which are necessary to protect the goods during transport and storing.

## 5.8.3 Packaging and Labeling requirements by plant

The individual packaging and labeling requirements for each VC plant in the region Asia-Pacific can be found in appendix 1, 2 and 3.

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## 5.8.4 Special packaging

In case special quality requirements shall be met and cannot be fulfilled by using the standard packaging, the supplier makes a proposal for special packaging, including samples, and provides the packaging agreement FO\_01\_7.4\_0044 to the VC packaging responsible, the process for release shall follow Section 5.7.1.

## 5.8.5 Supplier-owned packaging

In accordance with VC, the supplier may use his own or returnable packaging. A premise for this is the proof of packaging ownership. If the packaging is used permanently by the supplier a VC identification number for packaging monitoring and account management shall be requested.

The supplier can request returns of no more than the maximum number of ownership-proven packaging. The basis for this are movements on the packaging accounts, which are consolidated regularly.

If the supplier uses supplier owned standard packaging, it shall be marked as his property.

At the end of a project or the change of packaging the supplier shall pick up his packaging at his own costs at the VC plant, if nothing else is agreed. If he does not meet this obligation, VC may dispose of the packaging at the expense of the supplier or charge a usual storage fee.

## 5.8.6 Wooden Packaging

The special regulations and requirements of the "GUIDELINES FOR REGULATING WOOD PACKAGING MATERIAL IN INTERNATIONAL TRADE", publication no. 15, dated March 2002, issued by the "Secretariat of the International Plant Protection Convention Food and Agriculture Organization of the United Nations", shall respected and applied. Wood shall be heat-treated or fumigated accordingly (IPPC 15 respectively ISPM 15). Costs, which occur due to the non-observance of these regulations, shall be charged to the supplier.

## 5.9 Labeling

VC requires the supplier to label each handling and master unit. **All old labels of previous deliveries must be removed. All internal labels and internal control notes of the supplier must be removed. Only the aligned quality control labels are allowed when VC SQA (Supplier Quality Assurance) or VC Quality Management is requesting them.**

Concerning the label location, please refer to appendix 1, 2 and 3.

Extensive surface bonding of the label is not allowed. VC shall charge the supplier for removing any surface bonded labels. Self-adhesive small stickers shall be used instead.

Modifications to the standard requirements defined in this packaging guideline can only be an exception, shall be in written form and agreed between the supplier and the VC Packaging Management.

The master label shall be fixed on the upper corner of the small side of the packaging unit. Handling units (e.g. SLCs/KLTs) shall be labeled on the side, which is visible when loaded on the master unit.

Other fixing points shall agreed upon between the supplier and VC.

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The labels may not hide the container identification number.

The label shall be fixed with four self-adhesive stickers. All information must remain visible when using self-adhesive stickers.



## 5.10 Content of delivery documents and ASN

For packaging consisting of several reusable components (pallet, container, lids, etc.) master units are created. The delivery documents and ASN shall include all packaging components, identified with the VC material number.

## 5.11 Packaging Account Management

Account management provides the basis for the control of packaging movements. All returnable packaging received and shipped shall be recorded. For this purpose, the supplier shall indicate the responsible contact person, including telephone and fax numbers as well as an e-mail address. VC shall be informed about any contact changes in written.

VC reserves the right to use an external service provider to handle the container management. In this case, the supplier shall be informed accordingly.

Furthermore, VC reserves the right to charge a compensation fee for the provision of returnable packaging in the future of which the supplier shall be informed in advance.

### 5.11.1 Opening of a Packaging Account

Packaging accounts are established for each supplier, who delivers in returnable packaging to VC. Therefore returnable packaging always receives a unique identification number from VC. The supplier receives an account for each container packaging type used. The respective supplier number is integrated in this account. The packaging accounts include a stock and movement overview of the respective packaging.

The packaging accounts are consolidated regularly between VC and the supplier.

Missing or damaged packaging are taken into consideration and the packaging accounts are adjusted accordingly with a clear reference.

Packaging accounts are exclusively managed for the supplier and VC, not with supplier's forwarding agents or freight forwarders.











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