

Packaging Guideline Europe

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1. INTRODUCTION

This packaging guideline is to ensure that projects are handled smoothly, on time and without any quality or logistics problems for both the supplier and Vibracoustic (VC).

The requirements of the individual VC sites for suppliers regarding the compliance with packaging standards are defined within this document. The requirements are set as minimum standard which are binding for all suppliers and have to be fulfilled with the commencement of series delivery (SOP) at the latest.

The suppliers are responsible for the implementation of these requirements and shall take adequate measures to ensure that the required packaging standards are met.

3	07.11.2016	Logistics / S. Nedvěd	12 13	5.8.2 Proceeding with incomplete SLC 5.9 Removal of old labels
2	10.02.2016	Logistics / S. Nedvěd	various	Packaging Definition Process; Pallets for SLC/KLT; Packaging Account Management
1	01.12.2015	Logistics / S. Nedvěd	various	complete revision - all changes in blue
Rev.	Date	Department/ Name	Page(s)	Modification notes

Producer / Department	Approver Management System	Approver Board of Directors	Date	Status*
F. Munoz / Logistics	-	-	09.11.2016	completed
	G. Staab / QM	-	11.11.2016	approved

* This document is valid without physical signatures.

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2. PURPOSE

The present packaging guideline defines the packaging requirements of VC 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 European 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 must 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 Notice
DAP	Delivered At Place
DIN	Deutsches Institut für Normung (German standard designation)
EDI	Electronical Data Interchange
EPAL	European Pallet Association
EXW	Ex Works
GP	Global Procedure
Ident.	Identification
IPPC	International Plant Protection Convention
ISPM	International Standards for Phytosanitary Measures
KLT	Kleinladungsträger (small load carrier)
LLC	Large Load Carrier
OEM	Original Equipment Manufacturer
PE	Polyethylen
PKP	Polskie Koleje Państwowe, Polish State Railroad
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 will be reused by the partners of the RESY association.
SLC	Small Load Carrier
Tbd.	To be defined
UIC	Union Internationale des Chemins de Fer (International Railway Association)
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 must be provided if there is any danger of damage from part to part contact within the packaging. Appropriate inserts must be used, e.g. corrugated cardboard of RESY quality. Empty spaces must be avoided in order to save the parts from damage during transport.

Irrespective of the chosen packaging type the following requirements must be 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 must be labeled
- The load has to be secured sufficiently during the transport
- Unloading of transport vehicles with ground conveyors must be secured
- Stackability
- Any variance from the packaging agreement must be 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 has to 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 must be fulfilled. The supplier is allowed to use alternate packaging only after authorization by VC logistics. Otherwise, VC reserves the right to charge costs for additional repacking work.

5.2 General Requirements regarding the Avoidance of Packaging Waste

Packaging has to 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 have to be given preference.
- Disposal → Environment-friendly disposal must be 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

Synthetic Packaging Materials	
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 labels 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

Paper and Paperboard	
Corrosion-resistant paper	- Must be free of substances harmful to paper production - Must be marked with the RESY symbol - Must be sealed with plastic or textile tapes - VCI paper must be certified to be recyclable with paper/paperboard - Not permitted are papers with water-insoluble coatings or adhesives, i.e. wax, paraffin, bitumen coated or oiled paper and self-adhesive paper tapes

Wooden Packaging	
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

The supplier will be charged in case of:

- Delivery in damaged packaging, which has to 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 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 will 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" 5.2.6 "Nonconformity with VC requirements".

All VC requirements regarding the packaging account management (5.11) have to be fulfilled.

5.6 Load Securing

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

5.7 Packaging Planning

Packaging planning is one basic principle of packaging management. The supplier has to provide the name of a responsible contact person, including telephone, fax number and e-mail address. VC must 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 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.

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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.

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

If alternate packaging has to be used, the costs will 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.
Total	Total packaging requirement in wd

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 above mentioned process under 5.7.1 has to be followed.

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

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5.8 Criteria for Returnable Packaging

5.8.1 EUR Flat Pallets and EUR Box Pallets

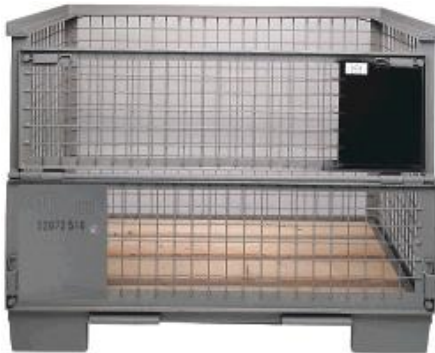
EUR box pallets (according to UIC 435-3) and EUR flat pallets (according to UIC 435-2) are provided either by VC or by the supplier, depending on the agreement.

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

Damaged pallets have to be fixed according to UIC 435-4.

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

5.8.1.1 Exchange Criteria for EUR Box Pallets according to EPAL



The following features will be checked:



The quality-tested EUR box pallet contains a tablet with the following inscription on the left lower front side.

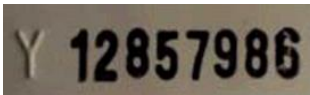
The trademark-protected EUR symbol is placed in the oval shape.



Symbols of the authorizing railway or the EPAL symbol in the oval. For example: DB in the oval or the trademark-protected EPAL symbol.

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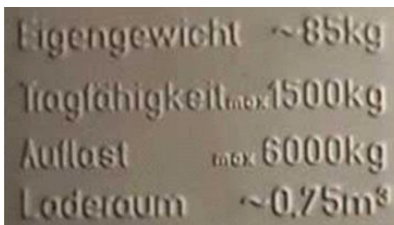
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The code letter "Y", followed by the unique registration number which is defined by EPAL.



Only quality-tested EUR box pallets are awarded the forgery-safe test badge; it is fixed on the right hand side, right next to the registration number.



Other important inscriptions:
net weight ~ 85 kg
maximum load 1.500 kg
stacking load maximum 6.000 kg
loading volume ~ 0,75 m³



The EPAL symbol guarantees the quality of EUR box pallets and the adherence to the design specification.



Name and place of manufacturer or its code number including the production year.



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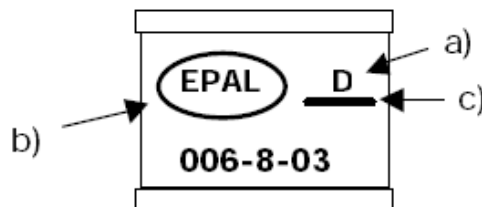
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5.8.1.2 Exchange Criteria for EUR Flat Pallets according to EPAL



The following criteria are tested (compare also to EPAL's country-specific labeling):



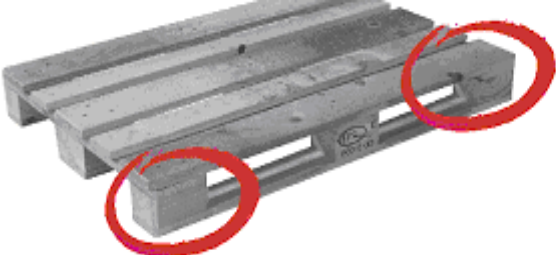


On the left corner block	On the middle block	On the right corner block
<p>The brand of an authorising railway, e.g. DB</p>	<p>See diagram below:</p> <ul style="list-style-type: none"> a) The letters D, PL, etc. and the producer code 006 can be obtained from the list of producers registered with EPAL. Production date: 8-03 means March 1998 b) The brand-mark of the European Pallet Association, the EPAL symbol c) the EPAL test clip  	<p>Brand-mark</p> 



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EUR box pallets must be 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>the identification mark EUR on the right hand side as well as the railway symbol are missing.</p>
	<p>a board is broken.</p>
	<p>a board is missing.</p>

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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).

Pallets with PKP brand-mark

In spring 2004, the International Union of Railways (UIC) revoked the license of the Polish State Railway (PKP) for the production of Euro flat pallets. Thus, all pallets marked with PKP after 1st May 2004 are considered to be fakes and are no longer exchangeable. Since then no more pallets have been produced by order of PKP.

5.8.2 Small Load Carriers (SLC/KLT) System as per VDA 4500

Small load carriers (SLC) according to VDA 4500 have to be used, where required by VC.

The master unit has to 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 has to be fixed with a twin-track strapping to secure the load.

The usage of wooden pallets and pallets with other sizes has to 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.

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5.8.3 Large Load Carriers (LLC) / Foldable and Collapsible Containers

Large load carriers have to 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.

5.8.4 Special Packaging

In case special quality requirements have to 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, who has to approve and release it.

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 has to 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 standard packaging, it has to be marked as his property.

At the end of a project or the change of packaging the supplier has to pick up his packaging on 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", must be respected and applied. Wood has to be heat-treated or fumigated accordingly (IPPC 15 respectively ISPM 15). Costs, which occur due to the non-observance of these regulations, will be charged to the supplier.

5.9 Labeling

VC requires the supplier to label each handling and master unit according to VDA 4902, Version 4.

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.

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Extensive surface bonding of the label is not allowed. VC will 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, have to be in written form and agreed between the supplier and the VC Packaging Management.

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

Other fixing points must be agreed upon between the supplier and VC.

The labels may not hide the container identification number.

The label has to 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 have to 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 will be recorded. For this purpose, the supplier has to indicate the responsible contact person, including telephone, fax numbers and e-mail address. VC must 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 will 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 will be informed in advance.

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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.

5.11.2 Exchange of Packaging

If the supplier delivers in own packaging, VC will return or make the packaging available to the supplier, depending on contractual agreements (Incoterms), once the adequate transportation volume is reached. In case of deliveries into consignment stock, which exceed orders for at least 1 week of stock, VC will return or make the packaging available for pick-up, depending on contractual agreements, after withdrawal of the goods.

In cases where VC owns the packaging, in which the supplier delivers the goods, the supplier will be provided with the quantity of packaging according to the defined packaging requirement (refer to 5.7.3).

The supplier needs to ensure, that there is always enough packaging for deliveries to VC. If the supplier needs additional packaging, it must be ordered on time at the corresponding VC plant.

The Incoterm agreed for the certain material applies also to the transport of empty packaging for the material, e.g. in case of the agreed Incoterm DAP, the supplier pays for the transport, in case of EXW VC pays, if nothing else is agreed.

5.11.3 Reconciliation of Packaging Account

The reconciliation of the suppliers' packaging accounts is carried out by the individual VC plants. The reconciled dynamic packaging inventory is the basis for the supply of empties. Each supplier receives a monthly statement for each packaging identification number, including all movements and the inventories of the preceding month. The account statement is transmitted via EDI, e-mail, fax or mail. The respective account statement must be checked by the supplier within 14 days after receipt. Possible differences must be verified with respective delivery notes and delivery receipts. The logistics/container management of VC must be informed accordingly and accounts will be adjusted in justified cases. If VC does not receive any feedback from the supplier, all reported inventories are accepted.

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In case of packaging loss caused by the supplier, VC will charge the supplier with the replacement costs.

Once a year an annual physical inventory will be conducted for each item of returnable packaging. The inventory indicated by VC is accepted by the supplier, if no written objection including the proving documentation is given within 14 days.

An overview submitted of all VC packaging at the supplier's site serves as the basis of the inventory. Any additional packaging at the supplier's site must also be listed. If the supplier does not provide the packaging physical inventory at the date requested by VC, the inventory indicated by VC is used as the book balance. In the event of huge account differences, VC reserves the right to repeat the physical inventory at the supplier's site.