


Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 1 of 21 <small>Scope</small>	

Packaging Guideline

Funktion/ <i>function</i>	Abteilung <i>/department</i>	Name / Unterschrift <i>name /signature</i>	Datum / <i>date</i>
Created	Technology Engineering	Ment Bastian, Fuerst Daniel	24.09.2019
Responsible/approved	Technology Engineering	Mangold Susanne	24.09.2019
Q-Management tested	Managementsystem / Qualitätsmethoden		

Revision overview

Revision number	Revision date	Change	Created by	Checked by	Released by
00	24.09.2019	Release	Ment B.	Mangold S.	



Packaging Guideline			
Released	24.09.2019	Page 2 of 21	
<small>Status</small>	<small>Date</small>	<small>Scope</small>	

Table of contents

- 1 Introduction..... 3**
 - 1.1 Confidentiality..... 3**
 - 1.2 Purpose of the document..... 3**
 - 1.3 Strategy 4**
 - 1.4 Definitions and Abbreviations 4**
 - 1.5 Contact persons..... 4**
- 2 General information..... 4**
- 3 Packaging handling 5**
 - 3.1 Structure of loading units..... 5**
 - 3.2 ISPM 15..... 6**
 - 3.3 Marking of packaging 7**
 - 3.4 Cleaning, storage and handling of packaging 8**
 - 3.4.1 Cleaning 8
 - 3.4.2 Storage of packaging..... 8
 - 3.4.3 Handling of packaging..... 8
 - 3.5 Securing of loads..... 8**
- 4 Packaging design..... 9**
 - 4.1 Regulatory compliance provisions..... 9**
 - 4.2 Packaging coordination, determination and approval 9**
 - 4.3 General construction specifications 9**
 - 4.4 General packaging requirements.....10**
 - 4.4.1 Basic packaging requirements 10
 - 4.4.2 Poka Yoke concept 11
 - 4.4.3 CAD System..... 11
 - 4.4.4 ESD protection 11
 - 4.5 Use of disposable / reusable packaging11**
 - 4.6 Packaging specification according to application and type of component....11**
 - 4.6.1 Packaging for truck transport..... 11
 - 4.6.2 Packaging for air freight / sea freight..... 12
 - 4.6.3 Recommendation table for packaging according to component groups..... 13
 - 4.6.4 Packaging standards 13
 - 4.6.5 Recommendation table for packaging materials disposable / reusable 15
 - 4.6.6 Service and alternative packaging for final products 16
 - 4.7 Label requirements.....17**
 - 4.7.1 Packaging label – for loading unit 17
 - 4.7.2 Packaging label – for handling unit..... 18
 - 4.7.3 Manufacturing label – for electronic components..... 18
 - 4.7.4 Manufacturing label – for printed circuit board..... 20

Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 3 of 21 <small>Scope</small>	

1 Introduction

1.1 Confidentiality

The confidentiality agreement is an obligation for any cooperation. External suppliers have to coordinate this agreement with the Preh acquisition department and submit a signature. Project specific data shall only be shared to persons, who directly involved in the project and may not be passed to third parties without permission.

1.2 Purpose of the document

The part supply process from the intact individual part of the supplier to the delivery of the final product, which fulfills the requirements, shall be guaranteed.

The variety of tasks is very complex due to the worldwide suppliers with their different production locations and the local conditions. Legal and country-specific regulations shall be observed. The standards to unify the packaging material and the degree of container filling have to be respected. Climate zones as well as requirements to truck, rail, sea and air freight shipments shall be part of the planning. The packaging developments have to satisfy the packaging requirements of the distribution ways.

The following detailed description of the delivery process is mandatory and has to be observed. Otherwise the whole process of supply chain parts is broken and significant refinishing operations are necessary or quality problems could arise.


The initiatives of the supplier is expected to optimize processes and reduce costs in general. Department in charge at the respective supplier is the sales management.

The packaging arrangements have to be fixed together. Sales management of parts and accessories shall ensure the further coordination or processing via qualified staff of the supplier.

The requirements listed here serve for technical base to create an appropriate packaging, for enquiry and proposal preparation.

The content of this document have to be fulfilled. Variations and derivations shall be coordinated with the responsible Preh contact person.

Considerable packing changes have to be communicated in advance and coordinated carefully.

Packaging Guideline			
Released <i>Status</i>	24.09.2019 <i>Date</i>	Page 4 of 21 <i>Scope</i>	

1.3 Strategy

This guideline is mandatory for implementation of the following packaging strategy:

- Parts protection to ensure the required quality
- Efficient and undisturbed material flow from supplier to production, internal production and delivery to the final customers.
- Standardization of container types to reduce costs and to increase environmental awareness for the usage of packaging materials.

1.4 Definitions and Abbreviations

VP = Packaging

LH = requirement specifications

EPS = expanded polystyrene

EPP = expanded polypropylene

EMPB = initial sample inspection report

TDS = technical delivery conditions


QG3 = Quality Gate 3

1.5 Contact persons

Preh Plant	Technical contact	Logistical contact
Germany	Mr. Bastian Ment (bastian.ment@preh.de) Mr. Daniel Fürst (daniel.fuerst@preh.de)	Mr. Andreas Götz (andreas.goetz@preh.de)
Portugal	Mr. Bastian Ment (bastian.ment@preh.de) Mr. Daniel Fürst (daniel.fuerst@preh.de)	Mr. Nuno André Rocha (nuno.andre.rocha@preh.pt)
Romania	Mr. Bastian Ment (bastian.ment@preh.de) Mr. Daniel Fürst (daniel.fuerst@preh.de)	Mrs. Manuela Negruți (manuela.negruti@preh.ro)
Mexico	Mr. Bastian Ment (bastian.ment@preh.de) Mr. Daniel Fürst (daniel.fuerst@preh.de)	Mr. Abraham Salazar (abraham.salazar@preh.mx)
China	Mrs. Tina Yan (tian.yan@preh.cn)	Mr. Yanan Li (yanan.li@preh.cn)

2 General information

In case of discrepancy concerning of any different requirement among Preh plants, please contact your local responsible contact person, which is listed in capital 1.5 for approval.

Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 5 of 21 <small>Scope</small>	

3 Packaging handling

3.1 Structure of loading units

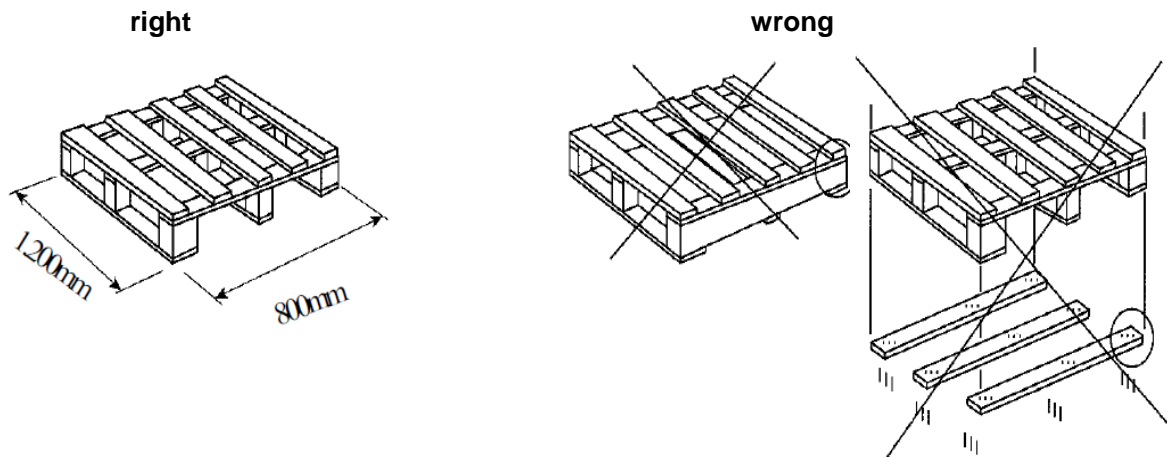
Basically the structure of loading units shall be realized by using the Euro pallet dimensions 1200 x 800 x 144 mm (DIN EN 13698-1). One-way plastic pallets cannot be used in any case due to bearing load limit and disposal fees. Upcoming disposal fees will be invoiced to the supplier.


Expendable flat pallets are only accepted if the entry dimensions according to DIN EN 13698-1 are guaranteed.

- Maximum height loading unit: 1000 mm
- Maximum height packaging unit: 400 mm
- Trays, cartons, etc. in footprint [LxW]:
- ½ Euro pallet = 800 x 600 mm
- ¼ Euro pallet = 600 x 400 mm
- ⅛ Euro pallet = 400 x 300 mm
- Maximum weight single packaging unit: 12kg (10 kg for Mexico)

Exceptions from this concept can only be made in cooperation with the Preh plants.

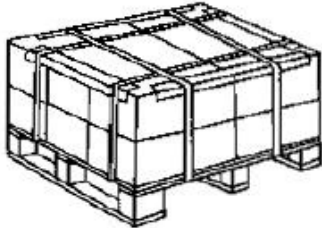
Totally closed pallets or pallets with polydirectional planks below are not allowed:



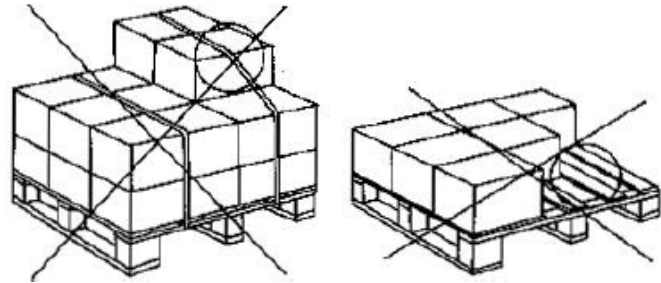
Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 6 of 21 <small>Scope</small>	

Complete layers shall always be build; the delivery quantities shall be adapted accordingly:

right



wrong

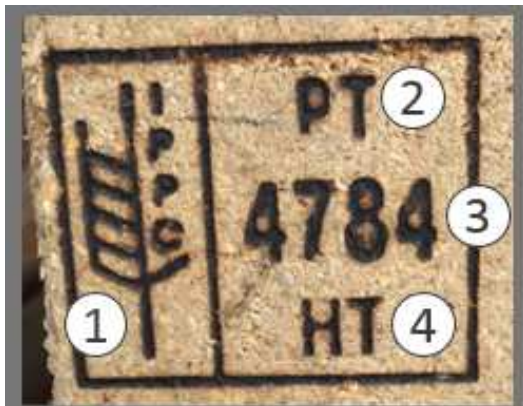



3.2 ISPM 15

ISPM 15 is a common standard for the wooden packaging material in international trade. This standard shall be hold by Preh supplier for international delivery. The wooden packaging shall contain an IPPC (International Plant Protection Convention) branding.

Requirements of IPPC Branding:

- IPPC Logo (1)
- Country of origin (2)
- Manufacturer Code (3)
- Way of Treatment (HT / MB) (4)
- Clear Readable, not hand drawn
- On at least two sides on the packaging



Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 7 of 21 <small>Scope</small>	

The ISPM-15 Standard excludes following points:

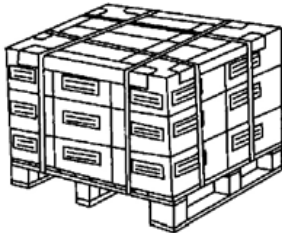
- Shipping within the EU
- Wood packaging made of thin wood material (less than 6mm thickness)
- Wood packaging made of derived timber products like plywood, laminated wood, OSB fiberboard or veneer that is manufactured using glue, heat or pressure or a combination thereof
- Sawdust, wood chips, wood wool
- Wooden components that are permanently connected with containers or other means of transport

3.3 Marking of packaging

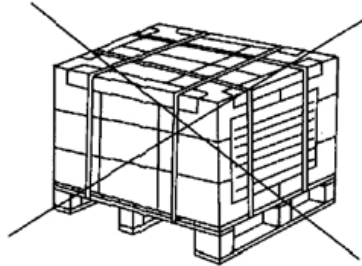
All deliveries shall be marked, that the identification of all products is clear at any time.


- The delivery Note shall be enclosed for each delivery.
- Each loading unit, each container and each individual packing piece shall be marked with a goods label according to VDA 4902.
- By attaching the goods label it shall be guaranteed that any existing old goods label is removed previously.
- For identification of the external packaging, respectively the pallet, a VDA-master label shall be used.
- The goods label shall be attached clearly visible from the outside and shall not exceed the dimensions of the packaging.
- The goods label shall be placed on both short sides of the packaging unit at least.
- The smallest packaging unit shall contain homogeneous parts and of one batch number only.

right



wrong



Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 8 of 21 <small>Scope</small>	

3.4 Cleaning, storage and handling of packaging

3.4.1 Cleaning

Supplier shall deliver parts only in clean and functional load carriers. Preh reserves the right to charge for incurred expenses to the supplier, if polluted load carriers are delivered.

3.4.2 Storage of packaging

During Storage it is necessary to take care of the packaging and to keep it away from damaging environmental influences such as:

- Moisture
- Strong solar radiation
- Dust

In addition, condensation by rapid and large temperature changes shall be avoided.

3.4.3 Handling of packaging

The packaging shall be provided ready for usage in the production. Assembly operations shall be done in advance outside the production.

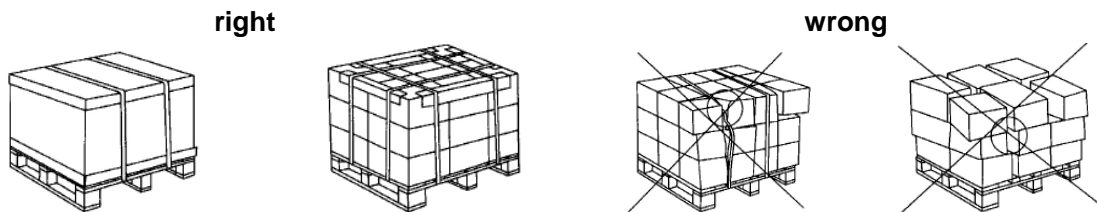
3.5 Securing of loads


Loading units shall be banded with plastic bands at least twice.

The banding stripes shall not cut in the cardboard boxes and containers or damage them. If necessary, edge reinforcements shall be installed.

Metal bands are only allowed to secure heavy weight goods, like tools.

Shrink hoods and stretch films are admissible in consultation with Preh.



Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 9 of 21 <small>Scope</small>	

4 Packaging design

4.1 Regulatory compliance provisions

The packaging shall be created according to the current valid regulatory provisions in the producer and recipient country. The laws, standards, regulations and generally accepted rules of technology as well as the customer requirements take priority and have to be observed, even if there is no individual arrangement. If single provisions of this contract are or become ineffective or unfeasible, the remaining provisions of this contract keep unaffected. The parties commit themselves to replace ineffective and unfeasible provisions by effective and feasible regulations that come as close as possible to the commercial intention of the parties by conclusion of the contract. The same applies in case of vacancies in this contract.

4.2 Packaging coordination, determination and approval


To determine the packaging for individual parts and final products, the packaging concept is defined by Preh-development team.

The approval is done by PPAP / PPA or other specific regulations (e.g. packaging data sheet).

4.3 General construction specifications

The following points shall be observed at the packaging construction:

- Sharp edges shall be generally avoided
- Provide insertion bevels to facilitate the insertion
- Contour related nesting adjustment increases the transport protection
- Optical aids facilitate faster recognition of the position of single components
- Torsion protection shall be considered as far as possible
- Providing sufficient material for wall thicknesses
- For easy removal allow handholds or such like when designing
- Stackability shall be guaranteed
- Abrasion of packaging material by vibration, assembling or removal is not allowed
- Minimum distance of the component's top edge to the bottom of the overlying next layer shall as small as possible but as large as necessary
- Marking of material number
- Marking of material description / -identification
- Marking of date-clock, for example if the ESD-protection can expire
- Marking of ESD-identification
- Usage of recyclable materials
- Consider humidity protection
- If an own packaging tool is necessary, this shall be declared with a Preh-equipment number and –drawing number.

Packaging Guideline			
Released <i>Status</i>	24.09.2019 <i>Date</i>	Page 10 of 21 <i>Scope</i>	

4.4 General packaging requirements

4.4.1 Basic packaging requirements

In spite of the packaging type, the following basic requirements shall be fulfilled:

- Part protection of the products during packaging shall be guaranteed.
- Optimal packing density of the used packaging units
- The products shall be packaged in the same position and direction, or assembly specific
- Stackability to build compact loading units
- Compliance with the specified standard dimensions
- Consideration of the ESD protection
- Problem-free unloading of transport vehicles by industrial trucks
- Handling compliant structure for efficient assembly and removal of parts
- Use of appropriate and demand orientated transport locks
- Use of recyclable materials
- Before use of packaging units the capability (for example ESD protection) and the level of cleanness shall be checked
- When using reusable packaging an easy cleaning shall be respected
- The stability of packaging has to be guaranteed for the dedicated product group, the transport and warehouse handling
- Damaged packaging is not allowed to use

Packaging symbols:



Keep
Dry!



fragile
asset



up



Store away
from heat!



fragile electronic
components



centre of
gravity



Hook here!




maximum
stacking load



hand hoes
forbidden



Do not damage
barrier!

Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 11 of 21 <small>Scope</small>	

4.4.2 Poka Yoke concept

By simple constructive methods or measurements the interchangeability of components and assemblies shall be prevented so that a false installation is excluded from the beginning as well as the loss of individual components. The relevant measures shall be described in detail.

4.4.3 CAD System

3D-Data for packaging construction is provided on the FTP-server. Access to it shall be requested timely.

4.4.4 ESD protection

Observation of the requirement of the ESD guideline DIN / IEC 61340-5-1 and DIN / IEC 61340-5-2 shall be done.

The verification of the observance of the ESD guidelines is done on random check of delivered packaging by the ESD responsible person of Preh.

Within ESD areas, cardboard packaging is not allowed for the handling of individual components. With the exception of ESD cardboard (a cardboard coated with an ESD capable material); these ones may also be used for individual components within the ESD area. For final products which require a cardboard packaging, the handling of cardboard within the ESD areas is admissible, too.

As described in the following chapters the assembly of cardboard and dividers within the ESD areas is prohibited.

4.5 Use of disposable / reusable packaging


Disposable packaging is generally designed for one-way use. Refilling and / or reusing is not allowed.

Reusable packaging is generally designed for using several times. Disposable packaging shall be preferred, if it is realizable in a rational, cost-optimized and ecological packaging concept.

4.6 Packaging specification according to application and type of component

4.6.1 Packaging for truck transport

Only during the truck transportation (road transport on land) a reduction of moisture is realizable. Therefore a VCI-film is not necessary.

Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 12 of 21 <small>Scope</small>	

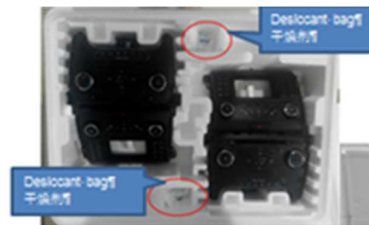
4.6.2 Packaging for air freight / sea freight


For sea and air freight, a special part protection against moisture and humidity is necessary. Therefore it is recommended, to use VCI-films and desiccant bags. A desiccant bag shall be selected, which permanently binds liquids and does not emit them back again. The amount of desiccant bags shall be calculated for the packaging volume sufficiently.

Carton with VCI-film



Desiccant bags in packaging



Packaging Guideline			
Released <i>Status</i>	24.09.2019 <i>Date</i>	Page 13 of 21 <i>Scope</i>	

4.6.3 Recommendation table for packaging according to component groups

For product groups which are listed in the following table, experience has shown that certain packing concepts shall be used preferably.


The requirements of chapter **packaging for air freight / sea freight** are additional valid for the concepts listed below.

The determination of the final packing is done for each final product in direct consultation with the customer. Therefore it can be deviated from the recommendation table.

Component group	Recommended packaging concept
Control units and final products without design area	Small load carrier (KLT) with Thermo-Tray-Inlay Carton with carton-dividers/Inlay
Control units (HMI) with design area	EPP-Tray EPS-Tray
Printed circuit board without housing	Small load carrier (KLT) with Thermo-Tray-Inlay EPP-Tray EPS-Tray
Individual components with design area (for instance chrome rings, moldings, film parts...)	Thermo-Tray EPS-Tray
Individual components with design area (injection molded plastic parts, screws...)	PE-bag + carton/KLT
Individual components which have been rated critical (detent spring, contact plates, ...)	Thermo-Tray EPS-Tray
Printed circuit board	Thermo-Tray EPS-Tray

4.6.4 Packaging standards

To facilitate and to shorten the process of coordination regarding the packaging transport, there are standard packaging or packaging concepts. The following table contains the requirements for the shipment of constant recurring component groups. The shipment of components, which are not listed here, shall be coordinated separately with the contact person responsible for packaging of the respective plant. Basically all parts shall be packaged protected from pollution, damage and moisture absorption. An assembly compliant removal shall be guaranteed. A component shall not damage another one during transportation. If

Packaging Guideline			
Released <i>Status</i>	24.09.2019 <i>Date</i>	Page 14 of 21 <i>Scope</i>	

necessary, a special packaging shall be developed according to the requirements. Additionally before release, it is necessary to present the concept to Preh.

Plastic and design parts:


Component group	Recommended packaging concept
Housing without design area	ESD PE bag and box (small components) ESD box (large components)
Functional parts (insensitive)	ESD PE bag and box (small components) ESD box (large components)
Functional parts (sensitive)	ESD Divider/Blister in box Special tray
Design parts	ESD Divider/Blister in box Special tray
Populated system carriers (individual)	Stacked in ESD boxes Special tray
Populated system carriers (in compound)	Wrapped on pallet

Electronic components:

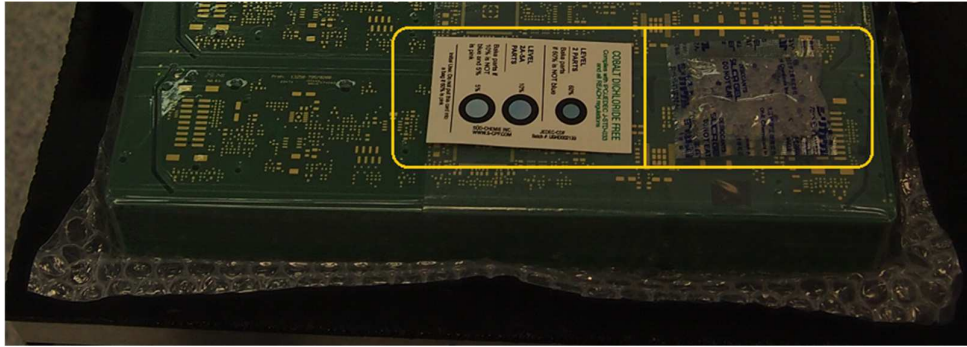
Component group	Recommended packaging concept
Standard SMD components	On roll ($\varnothing_{\max} \leq 330$ mm) Plastic roll bodies are preferred. Paper containing rolls are regarded as special packaging!
Raw controllers for external programming	As straight length products
Cable, pressure sensitive mat, plugs (not for SMD assembly)	PE-bag
Populated electronic utility	EPS-Box

Printed circuit boards:

- Welded in protective film, impervious to moisture
- Minimum 5 utilities per welding film, maximum of 50 pieces
- If a PCB has many breakthroughs, the stack has to be protected from breaking below and above by a transparent plastic plate when vacuuming
- For welding, an air bubble film shall be used because it can be easily removed without knives
- The packaging shall not influence the solderability. Intermediate layers (like silk papers) shall not be used within a stack.
- The printed circuit boards shall not stick together

Packaging Guideline			
Released	24.09.2019	Page 15 of 21	
<i>Status</i>	<i>Date</i>	<i>Scope</i>	

- When transporting by sea, a moisture indication card shall be added. Additional desiccant bags and bags MBB (moisture barrier bag) shall be used.



4.6.5 Recommendation table for packaging materials disposable / reusable

The production of high-quality mechatronic Preh control elements and sensor systems mostly takes place in air-conditioned and ESD protected production areas.

Due to this fact, it is mandatory to use packaging materials, which observe the demanded ESD guidelines and do not emit additional dust.

Material	Disposable packaging	Reusable packaging
Plastics in general	PE, PP, PS	PE, PP, PS, ABS
Cardboard boxes and paper	<ul style="list-style-type: none"> • Identification and administration according to RESY • VCI-papers have to be marked with the RESY - Symbol 	---
Packaging chips	Only after separate agreement	Only after separate agreement
foams	LPE, Synergy, EPS	LPE, Synergy, EPP
Shrink and stretch film	PE	---
Bags and sacks made of film	PE	---

4.6.6 Service and alternative packaging for final products


Service packaging means packaging, which is used for supply to the customer's spare parts warehouse. In most cases, the customer requests to pack the parts individually for the spare parts market.

Service packaging shall be designed as a disposable packaging.

Alternative packaging can be understood as an emergency packaging which is used when the demands of the final products temporary increase to a value for which the number of circulation containers were not planned or when the cycle is temporary disturbed by unexpected events. Disposable packaging is construed as a kind of alternative packaging.

The following table shows a list of the recommended service/ alternative packaging concepts for different product groups.

Product category	Recommended VP concept for service packaging	Recommended packaging concept for alternative packaging
Control units and final products without design area	Foam bag + folding box	Carton-Inlay/divider
Control units (HMI) with design area	EPS-Tray Foam bag + folding box	EPS-Tray
Printed circuit board without housing	Folding box with nap foam	EPS-Tray
Individual components with design area (for instance button upper parts, chrome rings, moldings, film parts, ...)	PE-bag, foam bag	EPS-Tray

Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 17 of 21 <small>Scope</small>	

4.7 Label requirements

Any content from supplier label shall comply with the delivered goods and the attended documents.


4.7.1 Packaging label – for loading unit

(1) Receiver WANNENWERKE AG		(2) Dock - Gate A5-L31	
(3) Advice Note No (N) 2581752		(4) Supplier Address [REDACTED]	
		(5) Net weight 345	(6) Gross weight 450
		(7) No Boxes 01	
(8) Part No (P) 765-HGD89-123			
			
(9) Quantity (Q) 140		(10) Description GEBLAESE	
		(11) Supplier Part No (303) 0-123B10-0	
(12) Supplier (V) 4638141			
		(13) Date D 910226	(14) Eng. Change A43-275 XL
(15) Serial No (S) 2581752 01		(16) Batch No (H) C 123	
			
<small>(17) CSS, POSTFACH 456, 6750 KAISERSLAUTERN</small>		<small>Warenanhänger VDA 4902, Version 4</small>	

In general, one loading unit (e.g. one pallet) shall contain only one part number. If there are different part numbers on the same loading unit, a mix-load label shall be used to identify the different parts.

The content of Mix-load label shall contain at least the following information:

- Mark of “mix-load”
- Part number Preh
- Quantity of each Part number

Packaging Guideline			
Released	24.09.2019	Page 18 of 21	
<i>Status</i>	<i>Date</i>	<i>Scope</i>	

4.7.2 Packaging label – for handling unit

Each handling unit (e.g. carton box) needs to have a label as marking of packaging. The label shall comply with the current version of VDA 4902, according to small load carrier. A label example is shown below:

(1) Warenempfänger-Kurzadresse [REDACTED]	(2) Abblöseteile - Lagerort - Verwendungsschlüssel ABLAD - LAGER - M	(3) Lieferschein-Nr. (N) 2581752
(8) Sach-Nr. Kunde (P) 765-HGD89-1234567		
(9) Füllmenge (Q) 140	ST	(10) Bezeichnung Lieferung, Leistung ELEKTR.STEUERGERAET
(12) Lieferanten-Nr. (V) 1234546789	(11) Sach-Nr. Lieferant (SIS) 00123B1070	(13) Datum D940407
(15) Packstück-Nr. (S) 2481752 01	(14) Änderungsstand Konstruktion AENDERUNGSSTAND	(16) Chargen-Nr. (H) C12345678

The following data are the minimum requirement with plain text:


- Part number Preh - with additional barcode
- Quantity - with additional barcode
- Part description
- Production date

The following typical data are required for particular product:

- Expiration date, in case of perishable goods e.g. soldering paste, painting
- Batch No., in case of special material group e.g. resin material, painting material


4.7.3 Manufacturing label – for electronic components

In case of traceability component (exclusive electronic parts), a manufacturing label on the smallest packaging unit (e.g. each reel) is needed to ensure the identification of material and goods receipt process. The label is requested to comply with VDA 4992 MAT Label, version 1.0. A label example is shown below:

	Part.No.: 9800131640
	Quantity: 200
	Index: AA
	Add. Info: 5003020
	Exp.-Date: 20080218
	Date Code: 20070430 MS-Level: 5
	1. Batch: 04567890123456789
	2. Batch: 12345678901234567
	Purchase: ABCXYZ
	Shipping Note: 122584
	Man. Loc.: GER-Hannove2
Part Name: 10KOhm 5%	
Supplier-ID: 815 Package-ID: S000000017785	
Ord. Code: SC44127 CFNR2	
Man. Part No: SL105103MAA-S	
Supplier-Data: Customer01	
Suppl.: Supplier Sample & Co.	

4.7.3.1 Barcode type and label size

The barcode type shall comply with **MAT PDF417 label** or **MAT Datamatrix label**. The recommended label size is 60 (L) x 40 (H) mm.

Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 19 of 21 <small>Scope</small>	


4.7.3.2 Information content

The following data are minimum requirement:

- Customer Part Number
- Quantity
- Manufacturer Part Number
- Date of Manufacturing
- Batch-No.
- Brightness class – for LED
- Color class – for LED
- Moisture level – if applicable
- Date of expiration – if applicable
- Distributor part No. – if applicable

Definition of data identifier, length and format:

Data field	Data identifier	Length (digit)	Format	Example
Purchase Order Number	(K)	10	XXXXXXXXXX	0004408792
Customer Part Number	(P)	14	XXXXX-XXX/XXXX	05516-057/0000
Shipping Note	(2S)	Supplier-defined	---	103791161
Quantity	(Q)	7	XXXXXXX	0005000
Manufacturer Part Number	(1P)	Supplier-defined	---	SL105103MAA-S
Date of Manufacturing	(6D)	6	YYYYMMDD	20151031
Batch-No.	(1T)	Supplier-defined	---	045678912456789
Moisture Level	(Z)	1	X	3
Date of Expiration	(14D)	6	YYYYMMDD	20151031
Package ID	(3S)	Supplier-defined	---	106123456789
Brightness class	(20P)	2	XX	L1
Color class	(2T)	2	XX	2E
Distributor Part No.	(31P)	Supplier-defined	--	SL105103MAA-S

Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 20 of 21 <small>Scope</small>	

4.7.4 Manufacturing label – for printed circuit board

For printed circuit board (PCB), a manufacturing label on the smallest packaging unit (e.g. on vacuum packaging) is needed to ensure the identification of material and production process.

4.7.4.1 Information content


All PCB manufacturing labels shall contain the following mandatory information with **plain text** and **Barcode**.

- Preh Part No.
- Date code
- Quantity
- Trace Code






Date code is the week and year when the PCB has been produced. Trace Code is the supplier internal code which enables the traceability for each PCB. PCB supplier is allowed to define the trace code concerning the content and format.

4.7.4.2 Data length

Data field	Length (digit)	Format	Example
Preh Part No.	14	XXXXX- XXX/XXXX	13248-014/2000
Date code	6	WWYYYY	302016
Quantity	5	XXXXX	04000
Trace Code	5	Supplier-defined	Supplier-defined

Packaging Guideline			
Released <small>Status</small>	24.09.2019 <small>Date</small>	Page 21 of 21 <small>Scope</small>	

A label example is shown below:

<u>Sample supplier Co.,Ltd.</u>	
Part No. 13250-795/0000 	Vendor: 20474 
Date Code: 2914 	Project: PCB IHKA Basis 
Quantity: 125 PCS 	Trace Code: PIWB70010 