

MAHLE

Packaging Guideline

of

**MAHLE Industrial Thermal Systems
GmbH & Co. KG**



Preface

The basis for a successful cooperation in partnership between you, as the supplier, and MAHLE Industrial Thermal Systems Group (hereinafter referred to as MITS) is clear and binding communication.

To safeguard our production, these guidelines have the highest priority with respect to supply logistics. In order to ensure an efficient and smooth-running production process, functioning logistics within agreed rules are essential.

Appropriate and economical packaging for supplied parts of MITS is an important component of the logistics chain. The packaging must satisfy the various requirements for quality, production, storage, transportation and handling. The information required for this is summarized in the present Packaging Guidelines.

These guidelines are an integral part of our contractual relationship. We reserve the right to make changes to the guidelines, as necessary. They shall become valid with the posting of the new version on our Internet platform.

Processes are reviewed continuously in the interest of a cooperation in partnership. Through regular audits and process analyses with the supplier, we ensure continuous improvement. MITS reserves the right to request changes to the processes.

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1. General information about packaging

1.1. Purpose

In the present Packaging Guidelines, the basic requirements are defined for the packaging of purchased parts, which the supplier must fulfill. It must be observed for the development, design and planning of packaging.

These guidelines describe the requirements for packaging and reusable load carriers for delivery to MITS, a logistics partner of MITS or an external unloading site specified by MITS.

The Packaging Guidelines supplement the MITS Logistics Guidelines.

1.2. Scope

These guidelines are valid for all deliveries to the Kornwestheim, Vellberg, Reichenbach and Mylau factories of the company

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70806 Kornwestheim

Specific special regulations and individual agreements are documented separately.

German law applies.

2. General requirements

For packaging purchased parts of MITS, the following principle applies:

"As much packaging as necessary, as little packaging as possible"

As a general rule, the following points must be noted:

- Packaging must be movable using industrial trucks without any problems
- Applicable safety regulations for the work personnel must be complied with
- Packaging rule out risks of injury during transportation, opening and removal
- Avoidance of unnecessary packaging and packaging aids
- Avoidance of environmentally harmful substances
- Transport-optimized loading units to avoid emissions of pollutants
- Weight and volume reduction
- Use of reusable and recyclable packaging
- Packaging prevents the occurrence of damage to transported goods during the type of transportation specified or arranged by MITS
- Packaging enables effective storage or provision for production without repack-
ing

The individually agreed packaging regulations for the supplier apply in addition to the Packaging Guidelines. If the arranged packaging is not complied with, MITS reserves the right to charge the supplier for handling and repacking costs incurred.

Deviations, in justified cases, shall be subject to consultation in good time with the appropriate contact persons. A corresponding remark shall be entered in the delivery note.

Parts kits combine individual parts of a delivery unit into a logistical unit, i.e. the kit must be received under a single kit number. Kits must be packed in a single load carrier, mixing of different kits in one load carrier is not permitted. The statements about packing lists, labeling, delivery note etc. apply analogously here. Mixtures, i.e. different part numbers in joint outer packaging is not permitted.

2.1. General requirements for the packaging of welding assemblies and frame parts for cooling systems in the railway vehicle sector

The following criteria must be noted when selecting the load carrier:

- Dimensions must be chosen such that the overhang of the load carrier is a minimum of 10 cm on all sides
- The dynamic load capacity of the load carrier equates to at least the weight of the transported goods
- The load carrier must be designed such that a shipping route of at least 1500 km can be traveled, as well as at least 10 transshipment movements taking place with a forklift/crane, without damaging the load carrier or the shipped goods
- The transport lock must prevent the shipped goods from slipping, without damaging them
- The load carrier must be agreed with MITS and approved by MITS prior to starting use
- With appropriate numbers of units, reusable load carriers should be given preference

2.2. Load carrier use and quality

Generally:

- Load carriers should only be used for the ordered MITS product
- Load carriers should not be used for procuring and storage of raw materials, individual parts, semi-finished parts etc.

The use of load carriers for pre-production is not generally permitted, deviations from this must be explicitly approved by MITS in written form (item number, load carrier type, number of load carriers, duration of the approved deviation). Sub-suppliers are not provided with load carriers, which have been directly or indirectly financed by MITS.

Damaged load carriers that are put into circulation are either rejected by MITS or the costs for repair/replacement purchase are passed on to the supplier. In the event that the supplier receives damaged empties from MITS, notification of the organizational unit at MITS is requested at once.

3. Packaging planning

Requirements:

For all MITS purchased parts, specific packaging requirements apply, in order to ensure an economical material flow and production process:

- Product protection
- Compliance with quality requirements
- Production-optimized delivery
- Compliance with work safety, cleanliness and tidiness
- Compliance with legal requirements
- Minimized packaging costs
- Standardization

These points must be observed without fail when planning the packaging.

Planning procedure:

- 1) Testing the geometry of the component, status, quantity and quality requirement
- 2) Definition of possible packaging systems
 - a. Packaging possible in Multipack?
 - b. Packaging possible in standard packaging?
 - c. Use of own container? (KLT system, IFCO, CHEP)
 - d. Specialist packaging required? (Special pallet, wooden box)
 - e. Separate internal packaging required? (Use, compartments etc.)
 - f. Corrosion protection required? (VCI, aluminum composite foil)
- 3) Selection and calculation of the packaging
- 4) Presentation of a packaging concept, including costs for MITS Purchasing and approval by MITS Purchasing

4. Packaging concepts

MITS prefers the use of reusable solutions.

As a general rule, the supplier to MITS bears the responsibility for the definition, design and procurement of the packaging. However, the choice of the packaging is limited to the packaging systems described below. Exceptions must be regulated separately and approved by MAHLE IT.

The following provisions apply to German suppliers, as well as suppliers from EU countries.

4.1. Overseas packaging

For overseas shipping, wooden boxes or wooden pallets with cartons should be used, which must satisfy the requirements regarding stackability, transport stress, import regulations for wooden packagings (IPPC standard) etc.



Fig. 1: Possibility for disposable packaging for international shipments

4.2. Standard packaging

MITS will provide its own empties to the supplier. The provision takes place in direct exchange or by separate delivery.

The supplier must ensure that all load carriers are maintained in an immaculate and clean condition, and that MITS is informed at once about racks that are damaged or require repair. The costs are borne according to the cause principle.

4.2.1. Packaging in the “Multipack” KLT system

The Multipack KLT system is a pool system operated by MAHLE BEHR GmbH & Co. KG. The container can be requested by any MITS supplier from MAHLE BEHR GmbH using a specific ordering process. The container is charged to MITS when delivering the goods in Multipack KLT. This procedure is described concretely in the Multipack Guidelines. You can find these guidelines on the Internet at

<http://www.mahle.com/de/purchasing/general-guidelines-for-suppliers>

The Multipack KLT system is the preferred disposable container system used by MITS.

Basically, the supplier should first check whether the parts to be delivered can be packed in a Multipack container.

The following points must be observed at all times:

- Compliance with the prescribed dynamic payloads and superimposed loads
- Compliance with the palletizing requirements (see factory-specific section)
- To minimize container contamination, appropriate PE bags should be used when delivering bulk materials and greasy or oily parts
- For parts with separate surface protection requirements, appropriate internal packaging, such as deep-draw inserts, compartments etc. made of plastic should preferably be used
- Parts with required corrosion protection must be packed in appropriate VCI bags or aluminum composite foil bags (concrete details about this are available in [Chapter 4.5. Corrosion protection](#))

4.2.2. DB pallet cage (EPAL/Europool)


The use of DB pallet cages should generally be avoided!

The following points must be observed at all times:

- Compliance with the prescribed dynamic payloads and superimposed loads
- To minimize container contamination, appropriate PE sacks and side-fold covers should be used when delivering bulk materials and greasy or oily parts
- For parts with separate surface protection requirements, appropriate internal packaging, such as deep-draw inserts, compartments etc. made of plastic should preferably be used
- A pallet cage frame should be used, preferably made of plastic
- Parts with required corrosion protection must be packed in appropriate VCI bags or aluminum composite foil bags (concrete details about this are available in [Chapter 4.5. Corrosion protection](#))

Logistical processing:

Depending on the arranged Incoterms, a loaned packaging account should either be administered with the relevant freight forwarder or with the supplier directly.

Euro pallet cage	
MIT S item number	72282995
Name	Pallet cage pallet
Material	Steel
Color:	gray
Weight	85 kg
Stacking factor	5
Payload	915 kg
Inside dimensions	1180 x 780 x 780 mm
Outside dimensions	1240 x 835 x 970 mm


4.2.3. Flat pallet (EPAL/Europool)

The following points must be observed at all times:

- Compliance with the prescribed dynamic payloads and superimposed loads
- No damaged pallets may be used
- The packaged goods must not protrude beyond the pallet
- Parts with required corrosion protection must be packed in appropriate VCI bags or aluminum composite foil bags (concrete details about this are available in [Chapter 4.5. Corrosion protection](#))

Logistical processing:

Depending on the arranged Incoterms, a loaned packaging account should either be administered with the relevant freight forwarder or with the supplier directly. Furthermore, it is possible to use stacking frames and lids, in order to form closed packaging, if necessary.

Stacking frame and lids	
MIT S item number	72325767 + 72325768 (lid)
Dimensions	1200 x 800 x 200 mm / 1200 x 800 x 9 mm
Use	max. 4 stacking frames per packaging unit

Euro flat pallet	
MIT S item number:	72283017
Name:	Euro flat pallet UIC standard 435-2
Material:	Wood
Color:	natural
Weight:	20 kg
Payload:	1000 kg
Dimensions:	1200 x 800 x 144 mm


4.2.4. KTP


The following points must be observed at all times:

- Compliance with the prescribed dynamic payloads and superimposed loads
- To minimize container contamination, appropriate PE sacks and side-fold covers should be used when delivering bulk materials and greasy or oily parts.
- For parts with separate surface protection requirements, appropriate internal packaging, such as deep-draw inserts, compartments etc. made of plastic should preferably be used as a reusable solution.
- Parts with required corrosion protection must be packed in appropriate VCI bags or aluminum composite foil bags (concrete details about this are available in [Chapter 4.5. Corrosion protection](#))

Logistical processing:

A loaned packaging account is administered directly with the supplier.

KTP Super Quad Smart fix	
MITS item number	72459792
Name	KTP Super Quad Smart fix
Material	Plastic
Color:	gray
Weight	45 kg
Payload	500 kg
Inside dimensions	1195 x 795 x 780 mm
Outside dimensions	1230 x 830 x 980 mm

<p>KTP Vario 2000</p>	
<p>MITS item number</p>	<p>72471229</p>
<p>Name</p>	<p>KTP Vario 2000</p>
<p>Material</p>	<p>Plastics</p>
<p>Color</p>	<p>grey</p>
<p>Weight</p>	<p>42 kg</p>
<p>Payload</p>	<p>500 kg</p>
<p>Inside dimensions</p>	<p>1140 x 940 x 815 mm</p>
<p>Outside dimensions</p>	<p>1200 x 1000 x 990 mm</p>


4.2.5. Quickbox

The following points must be observed at all times:

- Compliance with the prescribed dynamic payloads and superimposed loads
- To minimize container contamination, appropriate PE sacks and side-fold covers should be used when delivering bulk materials and greasy or oily parts.
- For parts with separate surface protection requirements, appropriate internal packaging, such as deep-draw inserts, compartments etc. made of plastic should preferably be used as a reusable solution.
- Parts with required corrosion protection must be packed in appropriate VCI bags or aluminum composite foil bags (concrete details about this are available in [Chapter 4.5. Corrosion protection](#))

Logistical processing:

A loaned packaging account is administered directly with the supplier.

<p>Quickbox</p>	
<p>Material</p>	<p>Wood, cardboard, plastic</p>
<p>Color:</p>	<p>brown</p>
<p>MITS item number</p>	<p>72459807</p>
<p>Name</p>	<p>Quickbox 1</p>
<p>Weight</p>	<p>25 kg</p>
<p>Payload</p>	<p>1000 kg</p>
<p>Inside dimensions</p>	<p>735 x 735 x 497 mm</p>
<p>Outside dimensions</p>	<p>800 x 800 x 637 mm</p>
<p>MITS item number</p>	<p>72459804</p>
<p>Name</p>	<p>Quickbox 2</p>
<p>Weight</p>	<p>35 kg</p>
<p>Payload</p>	<p>1000 kg</p>
<p>Inside dimensions</p>	<p>1135 x 735 x 497 mm</p>
<p>Outside dimensions</p>	<p>1200 x 800 x 637 mm</p>
<p>MITS item number</p>	<p>72459805</p>
<p>Name</p>	<p>Quickbox 3</p>
<p>Weight</p>	<p>45 kg</p>
<p>Payload</p>	<p>1000 kg</p>
<p>Inside dimensions</p>	<p>1135 x 735 x 710 mm</p>
<p>Outside dimensions</p>	<p>1200 x 800 x 850 mm</p>
<p>MITS item number</p>	<p>72459808</p>
<p>Name</p>	<p>Quickbox 4</p>
<p>Weight</p>	<p>55 kg</p>
<p>Payload</p>	<p>1000 kg</p>
<p>Inside dimensions</p>	<p>1430 x 1065 x 710 mm</p>
<p>Outside dimensions</p>	<p>1495 x 1130 x 850 mm</p>


4.2.6. Flexbox

The following points must be observed at all times:

- Compliance with the prescribed dynamic payloads and superimposed loads
- To minimize container contamination, appropriate PE sacks and side-fold covers should be used when delivering bulk materials and greasy or oily parts.
- For parts with separate surface protection requirements, appropriate internal packaging, such as deep-draw inserts, compartments etc. made of plastic should preferably be used as a reusable solution.
- Parts with required corrosion protection must be packed in appropriate VCI bags or aluminum composite foil bags (concrete details about this are available in [Chapter 4.5. Corrosion protection](#))

Logistical processing:

A loaned packaging account is administered directly with the supplier.

Flexbox	
Material	Wood
Color:	brown
MITS item number	72352223
Name	Flexbox 1
Weight	25 kg
Payload	1000 kg
Inside dimensions	1070 x 687 x 255 mm
Outside dimensions	1130 x 747 x 430 mm
MITS item number	72352222
Name	Flexbox 2
Weight	30 kg
Payload	1000 kg
Inside dimensions	1070 x 687 x 467 mm
Outside dimensions	1130 x 747 x 642 mm

MITS item number	72352221
Name	Flexbox 3
Weight	35 kg
Payload	1000 kg
Inside dimensions	1070 x 687 x 663 mm
Outside dimensions	1130 x 747 x 838 mm
MITS item number	72352219
Name	Flexbox 5
Weight	50 kg
Payload	1000 kg
Inside dimensions	1435 x 1070 x 467 mm
Outside dimensions	1495 x 1130 x 642 mm
MITS item number	72352217
Name	Flexbox 7
Weight	110 kg
Payload	700 kg
Inside dimensions	2200 x 1435 x 451 mm
Outside dimensions	2260 x 1495 x 642 mm
MITS item number	72352216
Name	Flexbox 8
Weight	120 kg
Payload	700 kg
Inside dimensions	2200 x 1435 x 647 mm
Outside dimensions	2260 x 1495 x 838 mm

4.2.7. Large load carriers of CHEP

The following points must be observed at all times:

- Compliance with the prescribed dynamic payloads and superimposed loads
- To minimize container contamination, appropriate PE sacks and side-fold covers should be used when delivering bulk materials and greasy or oily parts.
- For parts with separate surface protection requirements, appropriate internal packaging, such as deep-draw inserts, compartments etc. made of plastic should preferably be used as a reusable solution.
- Parts with required corrosion protection must be packed in appropriate VCI bags or aluminum composite foil bags (concrete details about this are available in [Chapter 4.5. Corrosion protection](#))

Logistical processing:

A loaned packaging account is administered directly with the supplier.


Please refer to the separate supplier information for details about the CHEP pool system. You can find these guidelines on the Internet at <http://www.mahle.com/de/purchasing/general-guidelines-for-suppliers>

4.2.8. Long goods box

Logistical processing:

A loaned packaging account is administered directly with the supplier.

For semi-finished goods with a maximum length of 1200 mm, the following long goods boxes may be used:

Con Pearl long goods box	
Material	CP / material
Color	Gray
MIT S item number	72385290
Name	Long goods box
Weight	2 kg
Payload	90 kg
Inside dimensions	1180 x 135 x 150 mm
Outside dimensions	1200 x 160 x 160 mm
MIT S item number	72453090
Name	Long goods box
Weight	5 kg
Inside dimensions	1400 x 300 x 350 mm
Outside dimensions	1440 x 340 x 354 mm
MIT S item number	72385295
Name	Long goods box
Weight	7 kg
Payload	90 kg
Inside dimensions	1600 x 300 x 350 mm
Outside dimensions	1640 x 340 x 354 mm
MIT S item number	72453096
Name	Long goods box
Weight	10 kg
Payload	90 kg
Inside dimensions	2000 x 300 x 350 mm
Outside dimensions	2040 x 340 x 354 mm

4.2.9. Supplier's own returnable packaging

For purchased parts that cannot be delivered in standardized containers, a packaging suggestion must be requested from the supplier. If the supplier operates a different container system, delivery is generally possible in one of these containers. However, the provisions regarding surface protection and corrosion protection must be complied with. The use of these containers requires approval by MITS.

The following are accepted:

- All KLT systems
- Universal and special load carriers made of steel / plastic
- Standard load carriers made of steel / plastic, such as post pallets/racks, trolleys etc.
- Plastic and steel pallets
- Wooden boxes (reusable)

The logistical provisions for delivery in the supplier's own returnable packaging must be regulated in a separate agreement.

4.2.10. Returnable packaging processing and empties account management

Unless specified otherwise, a reconciliation of the account balances and postings of the respective loaned packaging account will take place once per month, depending on the Incoterms, with the respective freight forwarder or directly with the supplier.

If no objection is raised by the respective exchange partner, the documented book balances shall be deemed as accepted. Correction information shall be submitted in written form to the responsible MITS factory. Corresponding booking documents, such as copies of the delivery notes, corrected remote data transmission logs, delivery notes, etc. shall be enclosed.







Unless otherwise specified, the supplier shall take responsibility for the organization and costs of returning the empties.







The exchange criteria for Euro-Pool pallet cages and Euro flat pallets can be viewed at <http://www.gpal.de>.

4.3. Special packaging

If a material requires special packaging, due to its size, geometry or other part-specific requirements, the following regulations apply:

- The use of special packaging generally requires a separate technical approval by MITS Central Logistics
- The logistical and commercial terms and conditions are regulated separately
- Special packaging must be designed as reusable packaging, in consideration of the economic viability
- Tool costs and plate costs shall be offered separately

Example	Positive example	Negative example
Special pallets made of wood		
Rack for mounting housing parts made of metal		
Rack for mounting frame parts		

<p>Plastic box with insert</p>	 A black plastic box containing three blue valve components. A green checkmark is placed over the central valve.	 A cardboard box filled with crumpled white paper, crossed out with a large red 'X'.
<p>Plastic box for corrugated hoses</p>	 A white plastic box with a lid, containing several coiled white corrugated hoses. A green checkmark is placed over the hoses.	 A cardboard box containing hoses and papers, crossed out with a large red 'X'.
<p>Wooden boxes and plastic boxes with special inserts</p>	 A long wooden box containing several metal components held in place by black plastic inserts. A green checkmark is placed over the inserts.	 A cardboard box filled with crumpled brown paper, crossed out with a large red 'X'.

4.3.1. Special load carrier, packaging material

Suppliers are responsible for the development and financing of special load carriers. MITS provides the suppliers with the technical specifications for this (e.g. fire protection requirements, transportation and production technology requirements) and quality requirements for material and execution.

Each new special load carrier and any change to a special load carrier must be agreed with and approved by MITS. The supplier bears the costs for development. The necessary investments and their depreciation, the servicing, cleaning and maintenance of the special load carriers are arranged in written form according to a coordinated refinancing model. The exact contract structuring for the financing of special load carriers is formulated individually when concluding the contract. The resulting costs are charged on according to the agreements with MITS.

The calculation for this must be disclosed in any case. Jointly defined, range-based and needs-based container management planning must be an integral part of this calculation. The supplier is responsible for the container being procured in time for the start of production.





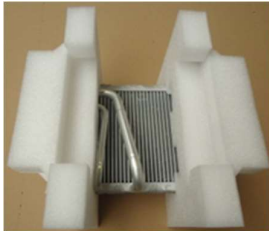
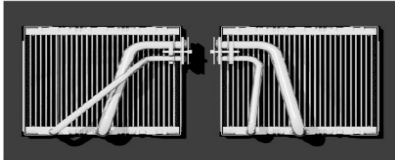
Disposable packaging as protection for parts is developed and paid for by the supplier without exception. Universal load carriers with reusable special inserts are regarded as special load carriers. As a rule, the development and financing of these universal load carriers with special inserts are therefore the supplier's responsibility - the exact contract structuring must be formulated individually in each case.

4.4. Internal packagings

If separate internal packagings/load carriers are required for load securing/surface protection, the following rules apply:

- Internal packaging/load carriers are to be executed as a reusable solution, in consideration of economic aspects
- Appropriate concepts must be technically approved by MITS Central Logistics
- Tool costs and plate costs shall be offered separately

Examples of internal packaging / load carriers:

Compartments (disposable / re-usable)		
Deep-drawn trays		
Foam inserts		

4.5. Corrosion protection

The corrosion protection (unless specifically prescribed otherwise in the drawings or specifications/quality standards) must be defined by the supplier in accordance with the sensitivity of its product, which it is aware of. The chosen protection method may not impair the functionality and use of the products. Protection agents that are used must be free from residues and be capable of being removed and disposed of in an economically viable manner.

VCI resources can be used, if it is ensured that the protection exists beyond the prescribed service life and parts thereof or individual materials are not inadmissibly influenced.

For parts that require special protection from corrosion, the following packaging must additionally be used:

- VCI bags, if necessary, with the addition of VCI emitters
- Alternative VCI sacks or side-fold covers for large-scale containers, with the addition of VCI emitters, where necessary
- Vacuum packaging in aluminum composite foil, with the addition of drying agents and/or VCI emitters (e.g. VCI paper), where necessary

The packaging materials referred to may be freely selected according to requirements/economic viability.

Other anti-corrosion packaging will not be accepted by MITS!

Anti-corrosion packaging should generally be used for sea transport!

Examples of anti-corrosion packaging:



4.6. Disposable packaging

For economic reasons, it is necessary to use disposable packaging, that must be designed according to the following specifications. The use of disposable packaging generally requires the technical approval of MITS / Central Logistics and commercial approval by MITS Purchasing.

Packing materials	Europe	Overseas	Not permitted
Corrugated cardboard boxes	Minimum quality 2.4 BC or higher	Minimum of 2.7 BC or higher, moisture-resistant glued	Single-wall corrugated boxes, coated boxes, bonded films
Crates	Generally treated according to IPPC standard ISPM 15, solid/full wood, plywood, OSB	Generally treated according to IPPC standard ISPM 15, solid/full wood, plywood, OSB	Materials without IPPC standard, painted or coated wood
Filling materials, padding material	Air cushion films, air cushions, foam packaging (Instapak, molded parts), cardboard padding	Air cushion films, air cushions, foam packaging (Instapak, molded parts), cardboard padding	Loose-fill material, paper pads, foam films, wood shavings, styrofoam chips
Bags / films	PC bags, VCI bags, PE and VCI side-fold covers and box covers, aluminum composite foil bags, PE film, VCI film, aluminum composite foil, stretch film	PC bags, VCI bags, PE and VCI side-fold covers and box covers, aluminum composite foil bags, PE film, VCI film, aluminum composite foil, stretch foil	Intercept films
Packing and adhesive tapes	PP or PE	PP or PE	Textile or fiber-reinforced adhesive tapes
Strapping	PP	PP	Steel strapping
Pallets	Generally treated according to IPPC Standard ISPM 15	Generally treated according to IPPC Standard ISPM 15	Pallets without IPPC Standard

5. Palletization

5.1. Load securing

The following packaging aids are permitted for load securing:

- Strapping made of plastic
- Cover plates
- Load end plates
- Stretch or shrink wrap films

5.2. Standard dimensions

The standard dimensions of 1200 x 800 x 1050 mm should generally not be exceeded. With oversized components, however, this may be exceeded.

5.3. Stackability

Loading units should at least be dynamically stackable twice, provided that the size and geometry of the component allow this.

6. Import packaging

6.1. Import outer packaging

For all import packaging, the following outer packaging should be chosen:

- Wooden crate with 4-way base according to IPPC Standard, with access underneath
- Corrugated cardboard - folded carton FEFCO 0201, minimum quality 2.7 BC, moisture-resistently bonded with 4-way pallet according to IPPC Standard

The dimensions should be chosen such that they are container-optimized (20" or 40" containers).

All outer packaging must be closed.

These regulations apply to sea and air freight, as well as truck transport from non-EU countries.


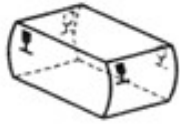

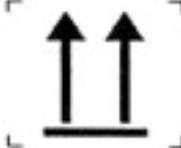
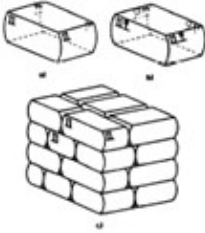
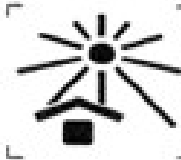
6.2. Internal packaging









For all import packages, the following internal packaging should be chosen:


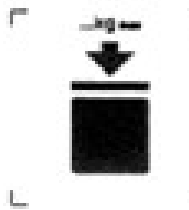
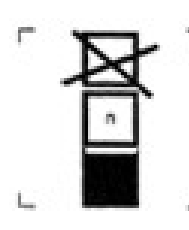
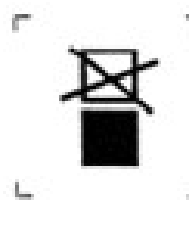
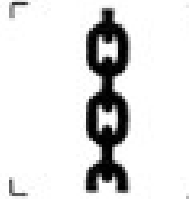
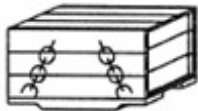

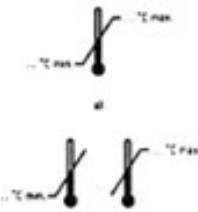
- VCI – Lining of the outer packaging or depending on the size of the component, individual packaging in a VCI bag
- Internal compartments made of corrugated cardboard, minimum quality 2.4 BC
- Alternative internal compartments with plastic or wood with IPPC standard

7. Labeling and marking

If appropriate, the following marking symbols should be used:

No.	Meaning of the picture symbol	Picture symbol	Function	Comments
1	Fragile		The content of the package is fragile and must therefore be handled with care	
2	Do not use a hook		Hooks are banned for handling the package	ISO 7000 No. 0 622
3	Top		Shows the correct upright position of the package	ISO 7000 No. 0 623 
4	Protect from heat		The package must be protected from heat	ISO 7000 No. 0 624

5	Protect from radioactivity		The content of the package may deteriorate or become unusable as a result of radioactivity	ISO 7000 No. 2 401
6	Protect from moisture		The package must be kept in a dry environment	ISO 7000 No. 0 626
7	Center of gravity		Shows the package's center of gravity, which is handled as a single unit	ISO 7000 No. 0 627 
8	Do not roll		The package must not be rolled	ISO 7000 No. 2 405
9	Do not use a hand truck here		Hand trucks must not be used on this side for handling the package	ISO 7000 No. 0 629
10	Do not use a forklift truck		The package should not be handled with forklift trucks	ISO 7000 No. 2 406
11	Clamps in the direction of the arrow		The clamps must be applied on the side shown for handling the package	ISO 7000 No. 0 631

12	No clamps in the direction of the arrow		The package should not be handled with clamps on the sides shown	ISO 7000 No. 2 404
13	Limit of the stacking load mass		Indicates the limit of the stacking load mass of packages	ISO 7000 No. 0 630
14	Stack limit		Largest number of identical packages, which may be stacked, whereby n stands for the number of permitted packages	ISO 7000 No. 2 403
15	Do not stack		The stacking of the packages is not allowed and no load should be placed on the package	ISO 7000 No. 2 402
16	Attach here		Slings must be placed as shown for lifting the package	ISO 7000 No. 0 625 
17	Permitted temperature range		Indicates the temperature range, in which the package must be stored and handled	ISO 7000 No. 0 632 

8. Forms of delivery

Material group	Example parts	Container
Semi-finished goods	Pipes, profiles	KLT, Chep-GLT , disposable packaging, long goods box for parts up to a maximum length of 1200 mm
	Metal plates Straps	Disposable pallet, pallet cage trolley, KLT, Chep
Cast	Aluminum, iron, non-ferrous metal	Pallet cage, KTP, Multipack, disposable packaging, Europallet with stacking frame , Chep
Turned parts	Steel, aluminum, automatic lathe-turned parts, flange shafts	Pallet cage, KTP, Multipack* , Chep
Norm and catalog parts	Screws, nuts, pins, safety devices	Multipack* , disposable packaging
Sheet metal molded parts	Die-cut parts, drawn parts, pressure parts	Multipack* , reusable wooden crates, long goods racks
Signs, metal parts	Pressure springs, flat springs, bending parts, safety parts, signs	Depending on size, Multipack* Europallet with stacking frame
Hydraulics	Expansion valves, pumps, engines	Multipack*, Europallet with stacking frame
Electric engines, fan		Pallet cage, Chep, Europallet with stacking frame , disposable packaging
Electric lines	Cables, sensors	Multipack*, KTP , approved supplier packaging
Granulate	Various	Approved supplier packaging
Auxiliary materials and supplies	Various	Approved supplier packaging
Merchandise	Various	SLT, standard packaging, approved supplier packaging

unless agreed otherwise, the highlighted standard packaging should be used
**for deliveries in Multipacks on Europallets, the following maximum heights apply to the Reichenbach delivery address:*

MU4: 2 layers @ 4 units; MU5: 3 layers @ 4 units; MU6: 3 layers @ 8 units; CP3: 2 layers @ 3 units

9. Contact

9.1. MITS Plants

9.1.1. MITS Kornwestheim, Schmitt Logistics

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9.1.2. MITS Reichenbach, Mylau

Responsibility	Name	Phone	E-mail
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10. Change documentation

Version	Date	Editor	Description
V 1.0	05.21.2015	Eckstein/ PTL2	Authorization
V 1.1	01.27.2016	Eckstein/ PTL2	Change of maximum height for Multipack delivery on EUP in Reichenbach
V 1.2	01.01.2018	M. Bea/ PTHA1	Amendment of empties processing and empties account management, amendments to special packagings, dissolution of Reichenbach company, reference to KLT Multipack System Guidelines, reference to Large Load Carrier Guidelines, addition of KTP, Flexbox and Quickbox
V 1.3	02.05.2022	Eckstein/PTOL1	MAHLE Logo replaced, Multipack process updated, Contact persons and addresses updated
V 1.4	22.11.2022	Deigendesch/PTOL1	General updates & fomattting