As of: 29.04.2020 Version: 04

Packaging and delivery specifications for suppliers of Leybold companies worldwide

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1. Introduction

This regulation regulates the permissible forms of delivery to Leybold in order to optimally design all processes within the value-added chain - in line with all logistical aspects - to avoid deviations and at the same time act in an ecologically sustainable manner.

The aim is to deliver the goods to the customer in the manufactured quality as well as safe and simple handling during transport, storage and order picking with environmentally friendly procedures.

Special attention must be paid to the aspects:

- SHEQ (Safety, Health, Environment, Quality)
- Environmental compatibility of packaging material, use of sustainable materials
- Product protection (protection against damage, theft, contamination and environmental influences)
- Transportability (e.g. packaging design compatible with industrial trucks)
- Emplacement (trouble-free emplacement process)

Leybold actively supports every kind of reduction of environmental impacts.

For this reason use exclusively environmentally friendly and environmentally compatible packaging materials for deliveries to Leybold.

For purposes of definition we differentiate between permissible and impermissible packaging materials.

Along with the reduction and avoidance of non-recyclable or non-reusable material, this also secures the environmentally compatible disposal of the packaging material being used.

In addition to the present packaging and delivery regulations, product-specific specifications may apply, which will be sent to you with the contract basis.

Fundamentally, the supplier is responsible for safe and appropriate packaging.

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2. Permissible packing material

2.1 Packaging made of wood

If packaging has solid wood component parts (e.g. pieces of wooden boards, square timbers or frames) they must comply with the IPPC/ISPM 15 standard - i.e. be free of pests and bark. For this purpose, the wood that is used must have been heat treated by the certified manufacturer (HT-treated). For purposes of identification of the manufacturer, the packaging and its component parts made of wood must bear an HT stamp that refers to the country of origin and the manufacturer/processor certified for this. According to this regulation, packaging which exclusively comprises plywood or pressboard is exempted from wood treatment. For ecological reasons, the material or board thicknesses used must be adapted to the expected transport loads and product weight.



2.2 Wooden crates (solid wood and plywood boxes)

Lid-support members may be used as standard to stabilize the crate and additional compression members may be used to secure the cargo in the crate, which - unless they are made of plywood - must be heat-treated (see also 2.1).

Fastening with nails is not permitted; permissible are drywall and Torx screws.



2.3 Pallets

For deliveries on pallets, only exchangeable Euro pallets in accordance with EN 13681-1, dim.: 1200 x 800 x 144 mm (lxwxh) may be used.

For the purpose of the documentation of the manufacturer they must bear the relevant HT stamp. Exceptions to this are Euro pallets which are fabricated entirely from plywood.

Disposable pallets will not be accepted. Product-specific packaging, which must be coordinated with Leybold in advance, is exempted.

For ecological reasons or for reuse, the pallets must be in an undamaged, serviceable condition.



2.4 Pallet attachment frames

... are made of wooden boards that are connected with metal hinges.

Material deviations from this require approval from Leybold (Logistics Department).

If made of solid wood they must be heat treated as per IPPC/ISPM15 and marked with an HT stamp.





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2.5 Cartons and fillers

...made of corrugated cardboard or hardboard are classified as recyclable and are allowed to be used.

Please make sure that cardboard boxes are adapted to the product size and that as little, preferably even no filling material, is necessary.



2.6 Delivery specification for oils/greases

This specification contains the delivery conditions and technical data for lubricants and LEYBONOL products (special oil for vacuum pumps).

The LEYBONOL lubricant is purchased as "Private Label".

Recyclable packaging material should be used wherever possible.

2.6.1 Accompanying documents

- REACH registration is completed.
- Declaration of RoHS conformity (freedom from lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB) or polybrominated diphenyl ether (PBDE)).
 The applicability is limited to electronic and electrical goods.
- Declaration of compliance with the current GADSL list (http://www.gadsl.org/), GADSL: Global Automotive Declarable Substance List.
- Declaration of freedom from VOC (volatile organic compounds) in accordance with the Ordinance on the Incentive Tax on Volatile Organic Compounds VOCV.
- COA (Certificate of Analysis): Batch-related proof of the oil specification.

2.6.2 Duty to inform

All information must be treated as confidential!

A transfer to third parties is only permitted with the consent of Leybold GmbH.

The supplier is obliged to provide the following information:

- In the case of any changes to the product (e.g. ingredients, formulation, manufacturing process, technical data, containers and packaging, "Form and Function") Leybold must be informed at least 18 months in advance.
 - Leybold must give approval or release for each of these changes before they are introduced.
- Safety data sheets according to current legal requirements, at least required languages: German, English (UK).
- In case of changes, updated documents must be sent unsolicited.



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2.6.3 Packing containers

Container sizes and properties

Container size	Container colour	Colour cap	Leybold Material number oil
< 1 litre			L XXX 00
1 litre	Silver/Grey	Red	L XXX 01
5 litres	Silver/Grey	Red	L XXX 05
20 litres	Silver/Grey	Red	L XXX 20
200- 208 litres	Grey/Black	-	L XXX 99

UN-qualified containers must always be used.

Containers must be sealed with HEAT SEALING!

LEYBONOL products to be filled and packaged in glass bottles have a PTFE cap.

Exceptions are possible (only) by agreement, e.g. for pouring aids / filling spouts.

Quality control of the closures:

- Random leakage and torque tests as well as
- cap screwing per filling batch with 4 containers each per delivery

Containers should be repacked in neutral cartons (for glass bottles

with polystyrene, adhesive tape and arrow markings) and for "private label" products (see 2.6.4) the corresponding labels must be attached. In order to prevent transport stresses on the surrounding cardboard packaging from damaging the container, care must be taken to ensure that there is no direct contact with the cardboard (e.g. through cushioning material, see filling material 2.10).

Arrow markings are depicted on the cartons to indicate correct orientation (vertical positioning of the cartons) and to prevent leakage of containers.

The cartons are designed for transport on EURO pallets, strapped and secured with stretch film. Edge protection (preferably and for environmental reasons made of hardboard) should be used for strapping. The cartons must not exceed or project beyond the basic pallet dimensions.

Drums are fastened to Euro pallets and secured or strapped with stretch film.

They must be secured against external damage (wooden board, wooden or corrugated cardboard cover)

Further packaging examples:



Ready packed glass bottles on Euro pallet.



Bottles in Euro pallets carton



Example LVO 400: Packaging of a glass bottle in polystyrene and adhesive tape.



Pack the glass bottles (1 litre) in the box



Packaging example glass bottles



Packaging example glass bottles in cartons on Euro pallet.



Packaging example cartons on Euro pallet with stretch film and edge protection.



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2.6.4 Labelling "Private Label"

The private label sticker is provided by Leybold.

The **barcode** is provided by the supplier on the label (Front under the material number, see illustration) or printed / attached to the bottle.

For **containers**, the front of the label is attached so that the sealing cap is on the left.

For **containers**, the back of the label is attached so that the sealing cap is on the right.

For glass bottles, the round label is attached in the middle.

For **drums**, the front of the label attached to the drum cover; the back label on the side of the drum.



Left: Front label Right: Rear label



Drum side: Back label



Drum lid: Front label



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2.7 Materials handling equipment/returnable packaging/skeleton boxes

... have to adapted to the special characteristics of the product.

Possible packaging materials are outer packaging made of wood (boxes, inlays), plastic (boxes and pallets), metal (wire baskets) and corrugated board (cardboard boxes and inlays) with an inlay (e.g. contour parts) adapted to the product contour.

The products contained must be protected against impairment due to movement within the means of transport (e.g. bumping into each other, slipping and vertical movement) by means of fixing measures, e.g. by inlays.

The management of the materials handling (development, exchange, provision, etc.) is the responsibility of Leybold Logistics or - insofar as it is the property of the supplier - of the supplier or a commissioned service provider specialized in this field.

Where possible, we request that the most sustainable material be selected.

New concepts are planned for 2020.



2.8 Bags, front box lids, films

... are accepted in HDPE and LDPE quality (also VCI coated) and must be marked accordingly.



2.9 ESD packaging

Products that must be protected against static charge (e.g. electronic parts) must be packed in ESD-compatible foam packaging or in PE bags.

Insofar as there are conflicts in this respect with non-approved material or substances, product protection is the primary concern.

In such cases Leybold must be informed in advance.

Packaging methods deviating from this regulation

must be approved in writing by Leybold (Logistics Department).







2.10 Filling material

Permissible filling materials are cushions made of packing paper (preferably as cushions, e.g. Padpak/Ranpak) and polyethylene (PE) air bubble bags.

For ecological reasons, paper is preferable wherever possible. The cartons used should be adapted to the size of the product.



2.11 Structural packaging

is specially designed packaging made of foam, plastic or corrugated board, taking into account the special features of the product (usually as part of a packaging development including packaging testing), which ensures maximum transport and handling safety with minimum environmental impact.





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2.11.1 Structural packaging foam (e.g.: PE/PP)

... is accepted as recyclable packaging materials. More environmentally friendly packaging is preferred.



2.11.2 Structural packaging made of corrugated cardboard

... is also accepted as recyclable packaging materials.



2.12 Straps

...are permitted as steel bands (with seals) and non-metallic strapping (PE or PET).

For reasons of work safety (protection against cuts) and product protection (elasticity of the tape), plastic tape is preferable. Neutral tape without branding is to be used for merchandise. Unnecessary strapping is not allowed for environmental reasons.



2.13 Edge protection

... to prevent damages on crates or cartons while strapping packages preferably use brackets made of hardboard (Fig. 1) of made of PE (Fig. 2).

Edge protection angles made of hardboard are preferable;



Fig. 2

Fig. 1

2.14 Sealing tapes

(Environmentally friendly) wet adhesive tapes should be used for sealing cardboard boxes. Plastic tapes are also permissible.

If it involves a commercial product, use Leybold wet adhesive tapes. The adhesive tapes can be obtained in rolls from Leybold, Order Management Department in Cologne - with different imprints - (material numbers: 15703720, p15703730, p15703740).

These sealing tapes are used as evidence of initial opening according to the rules of the LBA (German Federal Office of Civil Aviation)!

For that reason, use them exclusively for deliveries to Leybold.

Obtaining and placing on the market any packaging with the Leybold logo or emblem (without prior consultation with and approval by Leybold) is strictly prohibited.

Type of use (e.g. double-T bonding) and scope

are to be implemented in accordance with the specifications and in an environmentally friendly manner!





2.15 Stretch foil

...may be used as recyclable packaging material made of PE to protect the packages against slipping and soiling as well as against moisture.

The film thickness must be at least 16 mu.

Adequate, pre-stretched qualities of lower film thickness are permissible.

Do not wrap more than 2-3 times.





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2.16 Stickers/Labels

All packages must be labelled with the internationally prescribed warning labels (e.g. arrow, glass, umbrella, centre of gravity, stacking instructions, etc.) -s.a. DIN EN ISO 780-.

If particular specifications go beyond that (e.g. as in the case of dangerous goods), in addition provide the packages with the warning information specified here.

Marking can be achieved by means of stickers or by applying paint.

Shipping damage as a result of incorrect handling due to missing or incorrect warnings will be borne by the supplier.





3. Impermissible packing material

3.1 Filling material

The use of chips (flakes) e.g. from maize starch, hardboard or polystyrene are impermissible.

The same applies to wood wool and shredder material (e.g. cartons or recycled paper).



3.2 Moulded parts made of polyethylene/polystyrene/polyurethane

Moulded parts made of polystyrene (PS, trade name: Styropor) are generally <u>not</u> accepted.

In agreement with Leybold, packaging materials made of polyethylene (PE), polystyrene (PS) or polyurethane (PU) - in the form of bags or moulded foam parts, which have no alternative for product protection (e.g. mechanical and electrical loads) and can be recycled as re-granulates (e.g. for containers) - are excluded from this.



3.3 Pallets

Press chip pallets (system "Inka"), plastic pallets as well as pallets ("Falkenhain" system) are not exchangeable and will not be accepted.

If - for example for clean or white room areas - plastic pallets are to be used, this requires prior coordination with Leybold (Logistics Dept.).



3.4 Foam materials

One-way packaging (e.g. foam pads) made of foamed polyurethane (PU) or polystyrene (PS) are impermissible since they have to be separately disposed of as hazardous waste.

The exception to this is returnable packaging (materials handling equipment).



3.5 Deep-drawn and blister packaging

... require the explicit release by Leybold (Logistics Dept.).

3.6 Exceptions/deviations

Exceptions or deviations from these packaging and delivery instructions are possible for reasons of product protection or better handling, but all require written approval from Leybold (Logistics Department) after consideration of environmental risks.



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4. Packaging technology/ Methods

4.1 Product protection

4.1.1 Protection against penetration

In order to avoid damage to products inside the packaging (mutual damage) or outside of the packaging (penetration), pad sharp edges (foam, tissue paper, end caps, corrugated paper caps).

Permissible materials see chapter 2 ff.



4.1.2 Protection against slipping

To avoid damaging the product in the packaging, it must be restrained in each package. Appropriate methods are moulded parts, containing the product envelop and using filler material (packaging paper, bubble foil, tensioning straps).

4.1.3 Protection of the surfaces

Surfaces must be protected against damage and soiling.

Depending on the sensitivity of the products you can do this with film, paper or spacers. Surface protection should preferably be provided with suitable papers (e.g. tissue paper or corrugated board in rolls)

If applicable, the respective specific purchase order text regulates further details.

4.1.4 Protection of seals

Pack the seals - just as with comparable materials- so that they can neither be damaged (bent, broken, crushed, torn) nor soiled. Possible options include packaging (in a PE bag) in a hardboard shipping bag or in suitable cardboard boxes.



4.1.5 Corrosion protection and methods

Preferred preservation methods are:

Desiccants (sealing of the goods in an evacuated PE bag with the addition of desiccant) and

VCI (as films, bags or trays).

Oils, greases, waxes, passivations, coatings etc. for preservation require the approval of Leybold Köln, (Logistics Department).

See also "4.1.6 Sea freight (seaworthy) packaging". For environmental reasons, avoid overdosing!



4.1.6 Sea freight (seaworthy) packaging

Pack sea freight consignments to avoid transport damage and corrosion during container shipping.

To accomplish that, evacuate and immediately seal the material to be packed in PE film (with the addition of desiccants and/or preservatives).

As an alternative method, VCI corrosion protection film, bags and pellets are accepted.

To extend the preservation period (> 6 months), the material can be evacuated and immediately sealed in aluminium compound foil (see Figure 6) in addition to or instead of the PE-foil (see Figure 5) for prolongation of the corrosion protection.



Fig. 5



Fig. 6

4.1.7 Overhangs and offsets

... are to be avoided as they impair transport and handling safety and product protection.

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4.2 Dimensions/weights/outer packaging/handling

4.2.1 Cost of the packaging and shipping

Select the package sizes in a way that avoids unnecessary volume ("do not pack air"). The consequences of overly bulky packaging are excessive packaging costs (size and price of the packaging material) and freight costs (keyword: volume weight) as well as environmental aspects.

The packaging materials used must be proportionate to the weight, sensitivity and value of the product. This means that both "underpacking" (product protection endangered) and "overpacking" (excessive handling and material costs, environment) must be avoided.

4.2.2 Package sizes

To be able to store and emplace the products compatibly with our warehouse concept - optimized use of space - we ask you to take our container concept into account.

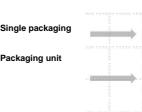
Please only use packaging material that can be accordingly stored (see figure on the right).

<u>Maximum external dimensions of the delivery</u> packaging:

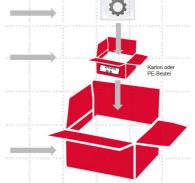
	max. size
Crate	[LxWxH] [mm]
KP0	133x88x67
KP1	190x125x110
KP2	292x181x185
KP3	445x275x185
KP4	564x366x167
KP5/KP7	564x366x187
KP6/KP8	564x366x247

^{* =} Small parts container made of plastic.

The total weight for small parts (in delivery packaging) must not weigh more than 28 kg!



Delivery packaging



4.2.3 Weight of packages/pallet use

For both handling and SHEQ (Security, Health, Environment, Quality) reasons, provide packages with a weight from 30 kg additionally a Euro pallet or a disposable pallet.

For ecological reasons or for reuse, the pallets must be made of wood and be in an intact, serviceable condition.



4.2.4 Material thicknesses of plywood boxes/hoods

The following <u>wall thicknesses</u> must be - depending on the packed weight and the receiving area - used:

10 mm < 300 kg,

12 mm > 300 - 10,000 kg,

15 mm > 10,000 kg.

Where possible, corrugated board (e.g. in "shielded cardboard" quality) can be used.





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4.2.5 Sealing boxes

To facilitate opening wooden crates and, if necessary, use them for direct forwarding to customers or from customer to customer, they should be closed for environmental reasons (reusability) using Torx (Fig. 3) or Spax screws (Fig. 4).

Fastening with nails is not permitted.

Permitted are also so-called plywood folding boxes (fixation of the cover with clinching eyelets and/or strapping of lid on the folding frame).





Fig. 3

Fig. 4

4.2.6 Sealing cartons

Close cartons with double-T-bonding.

For environmental reasons, so-called paper-based wet adhesive tapes are preferred as closure tapes; adhesive tapes with plastic backing material are also accepted.



4.2.7 Outer packaging

If multiple packages will be shipped, they can be wrapped together. The same regulations as for individual packages apply.

Marking and shipping documents are described in chapters 5+6.

4.3 Transport monitoring

4.3.1 Transport monitoring systems

Sensitive materials which could suffer damage even with solid outer packaging must be provided with a transport monitoring indicator in the interior of the packaging (E.g.: "Tiltwatch", "Shock Watch"). The indicators must correspond to the sensitivity of the packed product.

If products must not be tilted over a defined angle on their way to the customer (e.g. helium-filled pumps), tamper-proof tilt indicators (e.g. "Tipp-N-Tell" or "Tiltwatch") must be used.





4.4 Dangerous goods/special packaging/container shipping/release of blocked material

4.4.1 Dangerous goods packaging

Mark dangerous goods in accordance with the international rules (e.g. ADR, IATA regulations etc.).

Use solely specially approved packaging materials for packaging (e.g. with UN certification).

Duly mark the packages (e.g. with stickers/labels) (see also "2.15 Labels").



4.4.2 Special packaging

If there are further special features beyond the packaging and delivery instructions, these will be described separately in the purchase order text (as product specification) by Leybold (responsible: Procurement) and must be followed accordingly.



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4.4.3 Container shipping

When shipping in containers, the following should be taken into account, among other things (here are the most important points):

- Packages (boxes, cartons, pallets) must be secured against slipping and tipping in the container (e.g. by wooden dunnage in the container floor, stowage bags, ropes, belts, chains, lashing).
 Comply with the regulations on load restraints here!
- Arrange the packages inside the container with uniform weight distribution.
- Stacked packages must be secured against falling (e.g. by strapping, skinning).
- 4. Materials standing on the container floor must be secured on pallets or packed in boxes so that they can be unloaded without risk.
- Never exceed the highest (container) load-bearing capacity.
- 6. Do not fumigate the container.
- Containers must be sealed (preferably with numbered seals).
- 8. Goods in the container must be protected against moisture and corrosion (see also sea freight (seaworthy) packaging 4.1.6).

In all other respects the provisions of IMO (International Maritime Organization) apply!

4.4.4 Release of packaging material

Before the start of a regular delivery, have the intended packaging and packaging techniques approved by Leybold, Logistics Department.

For this purpose, send a packaging sample and/or drawing.

4.5 Contamination of products

4.5.1 Contaminated material

Used and/or contaminated products (e.g. pumps) must only be delivered to Leybold Dresden!!!

The risk of the escape of substances that are harmful to health or of radiation must be prevented prior to the unpacking process!

Contaminated material (chemically, biologically or radiatively contaminated) must only be delivered to the Leybold Service in Dresden!

If contaminated materials (e.g. pumps for repair/maintenance) are delivered, this must be <u>clearly visible</u> (contamination declaration) <u>before unpacking</u>.

The Leybold Service/Return Form (Declaration of Contamination) which is absolutely necessary for this purpose is available on the Leybold website and must be used!

https://www.leybold.com/en/downloads/download-documents/declaration-of-contamination/

The internationally valid warning markings as well as the contamination certificate to be requested (from Leybold prior to shipment) must be attached to the outside of the package <u>and</u> directly to the material.

Leybold reserves the right to hold the originator liable for any kind of impairment (affecting people, goods or the environment)!



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5. Special provisions for commercial goods

5.1 Shipping (ZEG)-capability

The product packaging must be suitable for the individual dispatch of the product (ZEG). I.e. forwarding must be possible without repackaging or additional outer packaging.

5.2 Markings, labels, etc.

The pure product packaging must not be covered or labelled with any additional markings such as shipping stickers.

5.3 Secure the products within the packaging

Products or parts must be restrained in the packaging so that they are fixed and secured against movement (s. also 4.1 Product protection).

5.4 Stackability of packed products

Packed products must be stackable.

Avoid curved surfaces.

The maximum stacking height for our rack systems is (maximum):

In Köln: 110 cm

in Dresden: 120 cm

in Valence (France): 200 cm

in Tianjin (China): 110 cm

5.5 Sealing packages

The product packaging must be sealed with adhesive tape and be protected against manipulation (s. 4.2.5+4.2.6).

5.6 Product marking

On the face of the product packaging (top right) (as per the gluing instruction), the product must clearly bear the Leybold standard label (see 5.6.1).



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5.6.1 Double labels (Mat.no: 15703801)

All packages must be supplied with double labels as per the following provisions. Your responsible purchaser will provide you with information regarding the branding! The labels can be obtained role-wise (1,500 pieces/role) from Leybold, Order Management Department in Köln.

5.6.1.1 Printed label without serial number ("Arial" font)

Header Leybold logo (38 x 9 mm): Production date (height: 3 mm)

Note on single shipment (ZEG) (height: 5 mm), if the package is suitable for individual shipment and is stipulated by Leybold.

Line 1 Material no. of the product (in plain text) (height: 5 mm).

Line 2 Material no. of the product (in plain text) (height: 3 mm).

Line 3-5 Part number (Part No.) in barcode type 128 (height: 5 mm) and in plain text (height: 2 mm).

Attention!

The label has two perforations (after Line 3 and Line 4). Please always glue only the top part of the label to the product packaging.

The two lower parts must be enclosed with the product remaining on the carrier material of the label and are required for further processing at Leybold.

Leybold

27.04.2020

ZEG

EK110003002

Shaft feedthrough kit WH2500

Mat. No.

Mat. No.

Mat. No.

5.6.1.2 Printed label with serial number ("Arial" font)

Header Leybold logo (38 x 9 mm): Production date (height: 3 mm)

Note on single shipment (ZEG) (height: 5 mm),

if the package is suitable for individual shipment and is stipulated by Leybold.

Line 1 Material no. of the product (in plain text) (height: 5 mm).

Line 2 Material text of the product (in plain text) (height: 3 mm).

Line 3-8 Part number (Part No.) in barcode type 128 (height: 5 mm)

and in plain text (height: 2 mm) each left-aligned! Serial number (S/N) number (Part No.) in barcode type 128 (height: 5 mm) and in plain text (height: 2 mm) each right-aligned!

Attention!

The label has two perforations (after Line 3 and Line 4). Please always glue only the top part of the label to the product packaging.

The two lower parts must be enclosed with the product remaining on the carrier material of the label and are required for further processing at Leybold.

Leybold

27.04.2020

ZEG

800160V1017V

TW 400 - 300 - 25; CARTRIDGE with

Mat. No.

Serial No 31991321171

Serial No 31001321171

6. Marking/accompanying documents (accompanying documents)

Mark the packages in accordance with DIN 55402.

The required documents and their contents are defined below.



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6.1 Delivery note

One delivery note per package/pallet/order outside (in a delivery note pocket) must be present on the (outer)packaging and inside the packaging.

It shall contain the following information:

- a) Address of Leybold, with place of unloading where applicable and, if known, consignee
- b) Delivery date/times, if applicable
- c) Leybold order number and position
- d) Leybold material number and name (if known)
- e) Delivery quantity/material incl. unit of measure
- f) Delivery quantity of the PU (if agreed)
- g) Serial number (in plain text and barcode 128), (for products requiring serial numbers); (also possible as separate sheet)
- h) For goods with a limited shelf life: expiry date
- i) If there are several packages within one outer packaging, these must also be provided with a delivery note (outside and inside) for each order number.

For environmental reasons, cellophane-based delivery note pockets are preferred.

6.2 Packing List (for deliveries with multiple items)

If a delivery comprises several packages, for reasons of a completeness check a packing list with information on the package number and the total number of packages ("Package n of nn") must be enclosed.

6.3 Delivery on pallets

If delivery is made on several pallets (e.g. oil containers), the following points are mandatory must be heeded:

- a) Never more than one material number per pallet, that is, no different materials per pallet
- b) A delivery note stating the quantity of this material number per pallet (pallet quantity)

6.4 Packing Units (PU's)

Leybold specific packaging units (PU) must be clearly identifiable and marked with the following data:

- a) Delivery quantity of the PU
- b) Leybold order no. and order line
- c) Leybold material no.
- d) Serial number (in plain text and barcode 128)
- e) Expiry date for goods with a limited shelf life

Compliance with the packing units agreed in the order text is mandatory!

6.5 Delivery provisions

Individual consignments with a max. weight < 30.0 kg can be delivered <u>without Euro pallets</u>. They should be provided with a hazard warning (sticker/label) regarding the weight. Packages \geq 30.0 kg must be delivered on (Euro)pallets.

Technical data: EURO Pallet
Dimensions: 1.200 x 800 mm
Max. packing height: 1.100 mm
Max. weight: 1.200 kg

For ecological reasons or for reuse, the pallets must be in an undamaged, serviceable condition. Deliveries on damaged pallets will be rejected.

6.5.1 Delivery on Euro pallets and in wire mesh baskets

Pallet accounts are undesirable, however there is pallet or skeleton box exchange during deliveries.

6.5.2 Delivery in Leybold means of transport

Always deliver transportation equipment boxes (TM) provided Leybold provided complete - i.e. including covers and inserts-.

Empty transportation equipment is available from in-company transport (Logistics Department).



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6.6 Single layers

Individual layers within a packaging unit must have identical quantities; only the top layer may differ in quantity.



7. Imports

In case of import shipments, likewise only IPPC/ISPM15-treated wood packaging is permitted for use! To be able to prepare the delivery of imports in advance, you must transmit the following documents (simultaneously) to our "Forwarding Operations" (Logistics Dept.):

7.1 Customs invoice

It must contain the following information:

- · Any possible preference information,
- The description of the material incl. goods tariff number and country of origin (for country of origin Germany: country of origin + region of origin!)
- The Leybold order number and (if known)
- The Leybold material number

7.2 Freight bill (waybill)

It must be possible to infer the following details:

- Leybold order number
- · Flight data or tracking number and
- the executing carrier



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8. Rules to be respected

8.1 VerpackG (Packaging Act) (2019/2020)

Use exclusively <u>transport packaging</u> in the sense of the Packaging Act (VerpackG) in the version of 01.02.2020.

Accordingly, the supplier does not have any obligation to take it back.

This contrasts with so-called <u>sales packaging</u>, which is intended to achieve a sales-promoting effect e.g. through advertising messages/imprints. Here the supplier does have an <u>obligation to take it back</u> (e.g. by organising the collection of the packaging at the customer).

8.2 HPE policies

In the case of packaging made of wood are the recommendations of the "Federal Association of wood packaging, pallet, export packaging e.V.", in collaboration with the BFSV Hamburg has been developed to take into account.

The relevant information can be found - also in English - on the HPE homepage: http://www.hpe.de.

8.3 IATA (International Air Transport Association)

For airfreight shipments the IATA regulations must be adhered to (especially for dangerous goods)!

8.4 IPPC (International Plant Protection Convention)

The related rules regulate for instance the treatment of solid wood (IPPC/ISPM15).

8.5 DIN standards

Attach warning signs (mark e.g. dangerous goods).

8.6 IMO (International Maritime Organisation

Rules on container shipping.

8.7 CEN (Comité Européen de Normalisation, s. Europ. Committee for Standardisation)

Rules etc. for securing cargo.

8.8 Legal Significance and Sanctions

These rules and regulations have a status equal to our "General Terms and Conditions" and are an integral part of the contracts with the Leybold suppliers.

Non-compliance with these guidelines can lead to a financial burden for the supplier or to a return of the goods shipment or refusal of acceptance.

8.9 ISTA (packaging tests)

If packaging tests are required, these must be carried out in accordance with the internationally applicable ISTA standard.

Packaging tests in accordance with deviating standards (e.g. UPS) must be agreed in advance with Leybold (Logistics).

9. Entry into force and validity

These packing and delivery instructions replace the delivery and packing instructions of 22.03.2017, (Edition 03), come into force with immediate effect and are valid until further notice.

10. Transitional regulation

These regulations first apply upon transmission to the respective supplier, i.e. with the subsequent order from Leybold.

Deliveries and contracts running until then are based on the known, previous delivery regulations.



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11. Other

11.1 Delivery times (all times local)

All deliveries of goods are accepted

at the Cologne plant: Monday to Friday from 6:45 to 14:30 h at the Dresden plant: Monday to Friday from 8:00 to 16:00 h at the Valence plant: Monday till Friday, 7:30h to 16:00h

at Tianjin plant*: 9 a.m. and 5 p.m. on workdays *SCM CN670-warehouse"

11.2 Questions:

If you have any questions regarding the packaging and delivery regulations, please contact

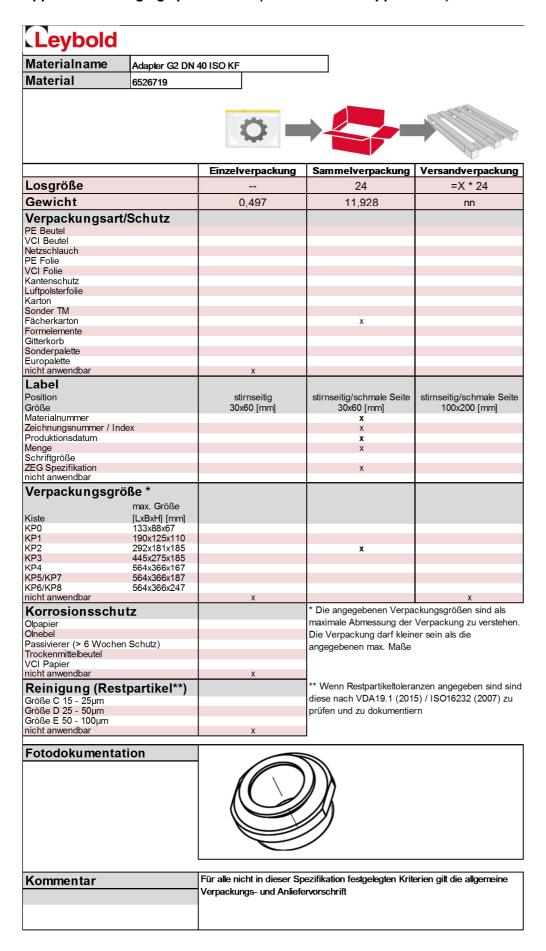
your responsible buyer.

Photos: Leybold Köln and - courtesy of - the company Ratioform Verpackungen, Köln.



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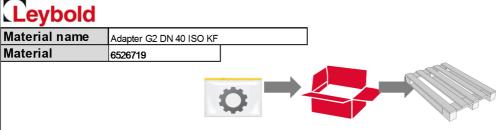
Appendix: Packaging specification (customer and supplier side) D





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Appendix: Packaging specification (customer and supplier side) E



		single packing	collective packing	shipping packaging	
batch size			24	=X * 24	
weight		0,497	11,928	nn	
packing/prot	ection				
PE bag					
VCI bag					
net tube					
PE foil					
VCI foil					
edge portection					
bubble warp					
carton					
special TM					
carton with compar	tmonte		X		
moulding elements	urierits		^		
mesh basket					
special pallet					
euro pallet					
not applicable		X			
label		^			
		1.21	1		
position		end side	end side/narrow side	end side/narrow side	
size		30x60 [mm]	30x60 [mm]	100x200 [mm]	
material number			X		
drawing number/ind	dex		X		
production date			х		
amount			X		
font size					
ZEG specification			X		
not applicable					
size of packi	ng*				
	max. size				
Box	[LxWxH] [mm]				
KP0	133x88x67				
KP1	190x125x110				
KP2	292x181x185		х		
KP3	445x275x185				
KP4	564x366x167				
KP5/KP7	564x366x187				
KP6/KP8	564x366x247				
not applicable		X		X	
corrosion pr	otection			* The given size of packing is meant to be as maximum size of the packing. The size is allowed to	
Oilpaper					
Oil dispersion			be smaler than the max. va	alue	
Passivate (Protection> 6 weeks)					
Desiccant bags					
VCI paper					
not applicable		X			
cleaniness /	particles **			** If tolerances for cleaniness / particles are given	
Size C 15 - 25µm			-	they have to be checked and documented as in	
Size D 25 - 50µm			VDA19.1 (2015) / ISO162	32 (2007)	
Size E 50 - 100µm				•	
not applicable		X			

Photo documentation For all not in this spec. defined criterias the general packing and delivery regulations