

ANDREAS STIHL AG & Co. KG
Postfach 1771
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PACKAGING REGULATIONS FOR DELIVERIES

Version 2 - August 2023

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1 PREAMBLE

The “Packaging Regulations for Deliveries” apply for all suppliers to the plants 1, 2, 3, 4, 5, 6, 7 and 8 of ANDREAS STIHL AG & Co. KG (hereinafter referred to as STIHL) and for logistics suppliers who work for STIHL (e.g. DSV/ Munz) and should be seen as a supplement to the “Delivery Conditions” and the “STIHL Factory Standards” (SWN). It describes the basic principles on which the packaging definitions of STIHL are based and the requirements for the supplementary packaging application on the part of the supplier.

STIHL and their suppliers co-operate in the fulfillment of waste economy goals of environmental legislation according to the following ecological priorities:

1. Avoidance

Restriction to the absolutely necessary in weight and volume (conservation of resources and reduction of transport volume)

2. Reduction

Use and continuous improvement of recyclable packaging material

3. Material utilization

Use of environmentally-friendly, recyclable materials for all types of packaging, recycling as close to place of use as possible to avoid return delivery chain and associated transports

The packaging must be planned part-specifically according to the aspects of logistics, quality assurance, environmental compatibility, economic efficiency, customer needs and statutory regulations.

2 PROCESS OF PACKAGING DEFINITION

The packaging managers of the production and distribution logistics are responsible for the packaging definition at STIHL (see [annex 1](#)).

For each material number a packaging has to be defined. This has to be done before the first delivery of the material takes place. Before a delivery to STIHL the supplier has to check if he has a valid packaging instruction.

The defined packaging has to be used with all future orders and consignments will be checked in the goods receiving area of STIHL. If there are deviations, STIHL will file a complaint. Resulting corrective actions might be charged to the supplier.

In exceptional cases packaging deviations might be approved of by the packaging manager. The approval has then to be in writing and done before the delivery arrives at STIHL.

The supplier is obliged to support continuous improvements and changes of the packaging. Each packaging definition / change will be send to the supplier in written form (see [annex 2](#)). The packaging definition will take effect, if there is no negative reaction of the supplier within 10 working days.

When the supplier needs to change a packaging, he is obliged to discuss the new packaging with the packaging manager at STIHL in advance.

3 BASIC REQUIREMENTS FOR PACKAGING DESIGN

The packaging has always to fulfill the quality and technical requirements of the product. It may e.g. be necessary to secure the product from dust, UV-radiation, corrosion, vibrations, mechanical forces or electrical fields.

The packer/sender is liable for the delivery quality of the product unless otherwise agreed.

The packaging defined has to be useable at LCL transports (less-than-carload freight) and therewith has to withstand multiple material handling steps. For overseas transports, the packaging has to withstand these special surroundings and has to fit into sea containers.

If re-useable packaging, such as plastic KLT or grid boxes is used, the products transported must not soil this packaging. If necessary, e.g. for oiled parts, a PE-bag should be used.

Disposable packaging must be free from any contamination. It is necessary that it can be emptied completely.

Bags and cardboard boxes may, for safety reasons, not be closed with staples. Alternatively they can be sealed by welding or taping.

Each packaging should be easy to open, unpack and dispose to minimize the workforce needed.

Generally STIHL rejects the use of packaging materials made of foodstuff (e.g. packing chips made of corn).

A list of approved and in any case excluded material can be found in [annex 3](#).

If, for certain parts, „STIHL Factory Standards“(SWN) apply, the delivery has to be made according to these SWN.

3.1 Filling Capacity

The filling quantity should be adapted to the packaging and should be as high as possible, without restricting the quality of the components, exceeding the permissible total weights or the maximum dimensions of the packaging required by STIHL. Each change of filling quantities has to be discussed with and agreed to by the packaging manager production/distribution logistics of STIHL.

3.2 Stacking

In principle, the packaging should be chosen to be stackable. The stacking must be transport safe and it must ensure easy and safe handling. Stacking of pallets must be possible to ensure an optimal usage of sea-containers and truck transports.

Small load carriers are bound to the applicable guidelines mentioned in [annex 8-10](#) (stacking on pallets).

A stack has always to be made of complete layers. The number of layers stacked upon the pallet must not lead to deformations or damages of the packages. The package must bear an according label if, in special cases, no further stacking is allowed.

Stacks made of disposable cardboards must not be contrary to the requirements mentioned under '3.3 Loading'.

3.3 Loading

In order to avoid damage, the packed goods and the packing material must not exceed the outside perimeters of the pallet. Product specific deviations must be coordinated with the packaging manager of STIHL.

Strapping used for load security purposes has to be made out of plastic. Metal straps or metal closing clips are not allowed. Horizontal edge protection must be used to prevent the packaging from damage. Alternatively to the use of strapping, the load can be secured by stretching or shrinking with PE film. The film should not cover the free space for the forks of the forklift trucks (see [annex 6](#)).

Horizontal edge protection can be replaced by the use of cover A 1208 for KLT pallets.

Non-slip paper between the layers is not allowed for pallets with small load carrier (plastic KLT or small cardboard boxes). There must also be no paper between the base pallet and the load. Furthermore, no additional plastic straps may be used for KLT and small cardboard boxes.

Special attention must be paid to the filling of KLTs and pallet cages. If internal foils are used, they must not protrude beyond the load carrier.

3.4 Delivery of foamed plastic

Products or packaging material that contains foamed plastic (e.g. Foams, Styrofoam), must be delivered with cardboard sheets from all sides. This can be done as follows:

- Delivery in a from all sides closed pallet carton
- Delivery in a single cardboard box on pallet
- Delivery in grid box, whereby this is to be lined from all sides with cardboard and must also be closed from above with cardboard

If in doubt, STIHL specifies what constitutes a foamed plastic. If you have any questions, please contact your packaging manager.

3.5 Delivery of small quantities by courier

Small deliveries (max. 6 packages or 50 kg per delivery) can be delivered by courier. Consignments exceeding this weight or the number of packages must be delivered by (area) forwarder on the agreed pallets. Exceptions are air freight or time-critical shipments. The individual packaging unit must not weigh more than 25 kg.

Exceptions are only permitted in prior consultation with the responsible packaging manager.

The use of plastic straps around each small load carrier (returnable load carrier) is permitted in this case.

3.6 Identification

Each single package (pallet, carton, bag, etc.) must have a clearly visible tag or sticker. We prefer a space on the side of the package.

Labels are needed on all four sides, both small and both long sides, with big load carriers. Exceptions are grid boxes, foldable boxes (GP03) and pallets with small load carriers: for which labelling on two sides, one small and one long side, is sufficient.

The package has to be labeled according VDA Standard 4902 (see [annex 4](#)). There may be exceptions from this rule, when special reasons occur. As an absolute minimum requirement the tag or sticker must contain the following information: STIHL part number, STIHL part name and quantity. Suppliers sending shipments according to EDI VDA 4913 to STIHL are obliged to mark their packages in correspondence to VDA Standard 4902.

The language on the labels should be German, alternatively they may be in English.

Paper or cardboard must be used for goods tags/labels. It should be noted that the paper thickness for marking small load carriers is min. 170g/m². They must not be taped onto the packaging, if reusable packaging is used. Exceptional textile label dots can be used. Holders should be used for the goods tags/labels, where provided.

Self-adhesive goods labels must be used for disposable packaging or it must be ensured that they do not protrude (see [annex 11a](#)).

All disposable packaging must be labeled clearly and visibly with standardized (image and abbreviation according to DIN 6120) symbols or symbols recognized by the waste disposal industry. The labeling should not impair the recyclability.

All non-compliant goods tags and attachments must be removed. The application of additional or replacing tags is only permitted after release has been granted.

If a package is not filled with the target quantity, in case of delivery of remaining quantities, there has to be a label with „Rest“ or „Restmenge“ on the particular package. Per delivery there should be only one package with a remaining quantity. In general, the delivery has to be agreed to by the responsible material planner.

Multiple parts pallets, with different material numbers on one pallet / grid box; need to have a packing list with them. Material numbers and quantities have to be listed in the packing list. These kinds of pallets need to be marked clearly as “multiple parts pallets”. For each delivery, an article may only be packed on one multiple parts pallet.

The mixing of different items on collection and mixing pallets must be prevented. This can be done by using individual cartons (sorted by type), intermediate layers or similar.

Delivery notes have to be added to the delivered goods. E.g. plastic bags or envelopes can be used. In addition to that, also the driver of the truck has to have a delivery note.

4 INCOMING GOODS PROCESS / 8D-REPORT

Quantity and condition of the packaging units will be checked at the incoming goods department regularly. Packaging materials will only be accepted if they are in perfect condition.

We reserve the right to return shipments, if they do not comply with our valid agreements. Should this lead to disproportionally high problems regarding the due-date, the goods may have to be repacked. This will be discussed between STIHL and the supplier. The resulting costs will be charged to the supplier.

If deviations to the 'delivery conditions' or 'packaging regulations for deliveries', a quality notification is created and STIHL will file a complaint to the supplier.

The complaint processing is handled with the software 'Jaggaer' when the supplier is enabled for the software. The complaint must be processed within the specified period.

Suppliers who are not affiliated to Jaggaer will receive any complaints by e-mail. STIHL requests an 8D report. For feedback of packaging complaints, you can use your own 8D report or the VDA blank template (more information at www.vda.de).

5 PACKAGING MATERIAL

5.1 Big Load Carrier

The definition of big load carrier includes grid boxes, pallets and other packaging which is similar in size.

5.1.1 Pallets

See [annex 5](#) and [6](#)

Basically Euro-pallets have to be used (1200x800mm). Are there no Euro-pallets available or extremely expensive, other types of pallets can be used. These pallet types require a special approval of a packaging manager of STIHL. In this case, certain criteria, which allow a processing in a highly automated warehouse, have to be fulfilled. When a pallet type is approved, it has to be used with all future deliveries.

The pallets must be undamaged, especially damage to the deck boards, blocks and skids are to be excluded. Likewise, no nails may stick out. For Euro-pallets, repairs are only permitted according to the GPAL standards. Only Euro-pallets are exchanged which at least correspond to class B according to the G-PAL standards (see [annex 12c](#)).

Half size pallets (600x800mm) are not allowed.

INKA-Pallets are not allowed.

Pallets out of LVL (laminated veneer lumber) or **plywood** are not allowed.

Pallets out of cardboard are not allowed.

Pallets made of plastic are not allowed.

Pallet-size-cardboard boxes must be stackable and have to withstand a top-load of 800 kg. The pallet-size-cardboard boxes have to be attached to the basic pallet to avoid slipping. If the pallet boxes are stapled to the pallet, insert a maximum of 8-12 sufficiently large staples.

Wooden or cardboard stacking frames will not be accepted nor re-used.

All pallets have to be treated according to ISPM 15 Standard (IPPC) and show a correspondent burn-in sign. Only heat treated pallets are allowed (HT). For each treated pallet verification must be available. Please see the 'delivery conditions' for more details.

5.1.2 Grid Boxes

Only grid boxes according to DIN 15155 (DB-Grid Boxes) are allowed (see [annex 7](#)). To protect the transported goods, the grid boxes should have a lining e.g. cardboard or PE-bag. In all cases a grid box must be closed on the top.

Grid boxes must meet the exchange-criteria of EPAL (see [annex 12b](#)).

5.1.3 Other big load carrier

There are some more big load carrier which are in use (see [annex 7](#)).

When using steel tubs (WA01) it is necessary to be aware of damaged tubs. If the damage is severe, don't use this tub for transporting goods any more. If the quality of the parts is affected by contamination, please use the tubs only in combination with a plastic bag. Deliveries in tubs WA01 is not permitted at plant D7.

The folding box KTP (GP03) is a foldable plastic carrier. To avoid damage, care must be taken when handling the load carrier. When empty, cartons, films, other packaging aids or waste must be removed. The load carrier is to be stripped of labels and folded. If required, an information sheet can be requested for handling the load carrier.

Octabins, big packs and sacks are used for the delivery of plastic granulate. For them, other dimensions than mentioned above are valid. In any case, please contact the packaging manager regarding this topic.

5.2 Small Load Carrier

Small load carriers are VDA plastic bins, small cardboard boxes and other small packaging material.

5.2.1 VDA Plastic Bins

STIHL uses three different types of plastic bins, according to the C-series VDA 4500 standard (see [annex 8](#)). A KLT must not exceed a gross weight of 14 kg (KLT6 and KLT8) or 12 kg (KLT9).

The filling level must not exceed the inner stacking line (see [annex 11a](#)).

Covering material on top is only acceptable, when it is not likely to fly away at higher transportation speeds (see [annex 11a](#)).

VDA plastic bins may not be delivered in plant D7.

5.2.2 STIHL own plastic bin for delivery in plant D7

For the delivery of spare parts, promotional and forestry items in plant D7 may STIHL own warehouse bins AKL1 can be used. For deliveries to STIHL this bins have to be stacked on a pallet (see [annex 10 and 11b](#)).

Covering material on top is only acceptable, when it is not likely to fly away at higher transportation speeds (see [annex 11a](#)).

5.2.3 Small Cardboard Boxes

The cardboard boxes must be tightly closed with adhesive tape. Metal clips and plastic straps are not allowed.

The dimensions and kind of the cardboard boxes are defined in detail (see [annex 9](#)) and must be observed. Cardboard boxes with a separate, unattached lid or opening perforation are not allowed. In exceptional cases, it is possible to deviate from these sizes or kind of box, whereby it is absolutely necessary to coordinate the deviating cardboard data with the packaging manager.

The cardboard boxes must have high stability and low tolerances.

The quality of the cardboard used must allow handling with a vacuum sucker.

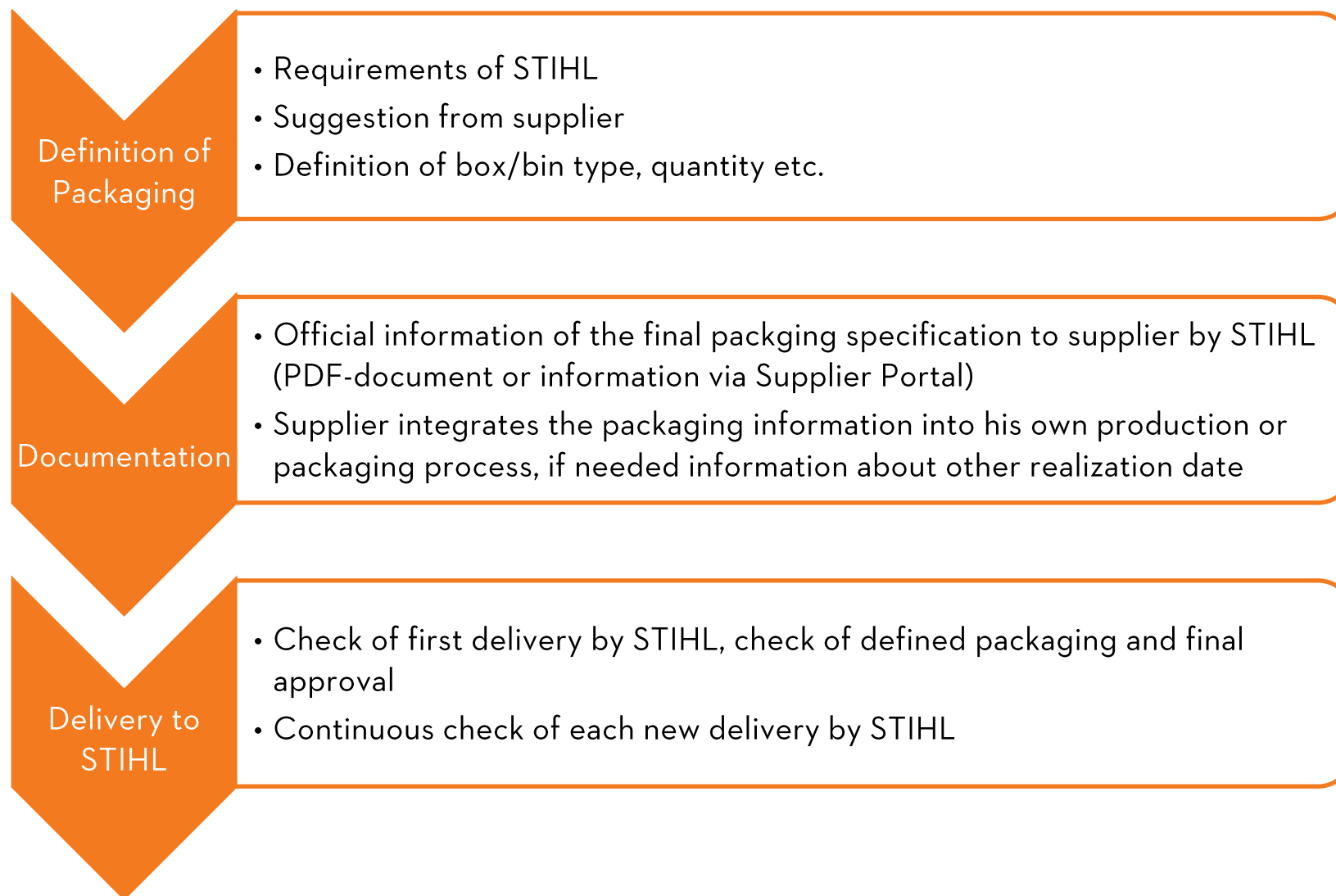
Generally the dimensions for all cardboard boxes must be stated to the packaging manager. These cardboard box types will be attributed to the according material numbers and have to be used with all future deliveries.

6 LOAD CARRIER MANAGEMENT

All guidelines and details on the subject of procurement, inventory, cleaning, damage and costs of returnable load carriers can be found in the "Framework agreement for the exchange of returnable load-carriers". This agreement is concluded with all suppliers who deliver in returnable load carriers or on Euro-Pool flat pallets.

When incoming Euro-pallets or grid boxes meet the exchange EPAL criteria they will be settled in the container account or replaced with empties (see [annex 12a-12c](#)).

If re-useable bins or boxes show damages, STIHL has to be informed by the supplier (more information see [annex 13](#)).

Annex 1: Process of Packaging Definition

Annex 2: Cover letter for new packaging fixing



ANDREAS STIHL AG & Co. KG • Postfach 1771, 71307 Waiblingen

<Company name>
<Contact Person>
<Street/Box>
<Street/Box> <Place>
<COUNTRY>

WERK 2
Andreas-Stihl-Strasse 4
71336 Waiblingen

T +49 7151 26-0
E post@stihl.de
W www.stihl.de

Your Reference	Dated	Our Reference	Phone	E-Mail	Date
		2/PSP-XX	XXXX	XXXX.XXXX@stihl.de	2023-06-21

Packaging for Deliveries - New Fixing

Dear Ms/Mr <Contact Person>,

We have decided on the following packaging for the indicated part:

Part number	Packaging	
<u>Description</u>	L1	Europallet 1.200x800mm max. 600mm height (EP01)
	L2	
	L3	

This new packaging meets our requirements and is therefore fixed by STIHL. From the beginning of **XXXX-XX-XX**, please deliver your goods according to this new packaging definition. Failure to comply with it will result in complaints from STIHL and affect your supplier evaluation figure. Changes have to be consulted with and approved by STIHL in advance.

If you do not object to this letter within 10 working days, STIHL regards this newly fixed packaging as
- accepted by your company.

Please, also take into consideration our Delivery Conditions and Packaging Regulations for Deliveries, which you will find in the supplier sector on our homepage.

[Downloads for suppliers | STIHL](#)

Best regards,

ANDREAS STIHL AG & Co. KG
Manufacturing Logistics Department

p.p.
<Packaging Manager>

This letter is done automatically and is valid without signature.

Kommanditgesellschaft mit Sitz in Waiblingen, HRA 260269, Amtsgericht Stuttgart • Persönlich haftende Gesellschafter: Hans Peter Stihl und STIHL AG mit Sitz in Waiblingen, HRB 263722, Amtsgericht Stuttgart • Vorstand der STIHL AG: Michael Traub (Vorstandsvorsitzender), Sarah Gewert, Ingrid Jägering, Anke Kleinschmit, Dr. Michael Prochaska, Martin Schwarz • Vorsitzender des Aufsichtsrats der STIHL AG: Dr. Nikolas Stihl

Baden-Württembergische Bank Stuttgart
IBAN DE94 6005 0101 0001 1854 50
BIC SOLADEST600

Commerzbank AG Stuttgart
IBAN DE21 6008 0000 0907 7650 00
BIC DRESDEFF600

Annex 3: Permitted / Non-permitted Materials

TYPE	PERMITTED MATERIAL	EXAMPLES OF NOT PERMITTED MATERIALS
Fibrous materials Cardboards Corrosion protection paper	Papers and cardboards which are free of paper production pollutants VCI papers which have proven recyclable. Protective paper with paper or cardboard (VCI: Volatile Corrosion Inhibitor)	Paper or cardboard with water insoluble coatings or adhesives Paper with incompatible additives, incompatibly impregnated or saturated paper (e.g. bitumen paper)
Plastics	Molded parts PE, PET, PP, PS, PA Protective caps PE, PET, PP, PS, PA Foil PE, PP, PS Foams PE, PP, PS Strapping tapes PP (Farbe, schwarz) VCI-Foil The use of VCI foil must be agreed individually with ANDREAS STIHL AG & Co. KG	PVC Impure plastics Plastic fibers (glass fibers) PA plastic straps
Metals	Steel (also galvanized or lacquered) Aluminum	
Wood	Solid wood without impregnation Wood wool	Wood, lacquered or coated Plywood Laminated Wood
Textiles	Cellulose fibers (e.g. cotton, sisal, hemp)	Impregnated or coated cellulose (e.g. wax linen)
Glass	Only if absolutely necessary due to chemical compatibility with the filled goods	

Annex 4: Sample of VDA goods tag (VDA standard 4902)

Pallet Label:

(1) Warenempfänger Andreas STIHL AG & Co. KG D-71336 Waiblingen		(2) Abladestelle - Lagerort - Verwendungsschlüssel Mörikestraße 81+83 71636 Ludwigsburg	
(3) Lieferschein-Nr (N) 908146943 		(4) Lieferantenanschrift (Kurzname, Werk, PLZ, Ort) Max Mustermann GmbH	
(8) Sach-Nr Kunde (P) 11210201218A 		(5) Gewicht netto 400	(6) Gewicht brutto 450
		(7) Anzahl Packstücke 2	
(9) Füllmenge (Q) 560  ST		(10) Bezeichnung Lieferung, Leistung Zylinder mit Kolben	
(12) Lieferanten-Nr (V) 57349611 		(11) Sach-Nr Lieferant (30S) 123456789 	
(15) Packstück-Nr (S) 440010300010340 		(13) Datum D 07.08.20	
(17) Max Mustermann GmbH		(14) Änderungsstand Konstruktion	
		(16) Chargen-Nr (H) 1481781001 	

Warenanhänger VDA 4902, Version 4

Bin/Box Label:

(1) Warenempfänger Andreas STIHL AG & Co. KG D-71336 Waiblingen		(2) Abladestelle - Lagerort - Verbrauchsstelle Mörikestrasse 71636 Ludwigsburg		(3) Lieferschein-Nr. (N) 12345678 	
(8) Sach-Nr. Kunde (P) 42386703600B 					
(9) Füllmenge (Q) 40 ST 			(10) Bezeichnung Lieferung, Leistung WASSERANSCHLUSS		
(12) Lieferanten-Nr (V) 90033759 			(11) Sachnummer Lieferant 6428-01 		
(15) Packstücknummer (S,M,G) S123456789 			(13) Versanddatum D 07.08.14		(14) Änderungsstand Konstruktion RevStd 09
			(16) Chargen-Nr. (H) 1234567 		

Annex 5: Pallets and pallet-size cardboard boxes

OFFICIAL NAME	EURO-POOL-PALLET DIN 15146	ONE-WAY-PALLET BASIS DIN EN13382:2002	PALLET-SIZE CARDBOARD BOX	PALLET-SIZE CARDBOARD BOX
STIHL name	Euro-Pallet EP01-EP03 EU05 - EU22	One-way pallet EW01-EW03 PS05 - PS22	Pallet-cardboard box PK02	Pallet-cardboard box PK01
Heat Treatment	ISPM 15 according to IPPC (HT)	ISPM 15 according to IPPC (HT)		
Outside dimensions LxWxH [mm]	1200x800x150	1175x750 - 1215x810* See annex 6	1180x750x750	1180x750x400
Tare Weight [kg]	25	18	10	6
Volume [l]	-	-	618	322
Limit of gross weight [kg]	Plant D1,2,3,5,6,8: Max. 600* Plant D4: Max. 800* Plant D7: Max. 1000	Plant D1,2,3,5,6,8: Max. 600* Plant D4: Max. 800* Plant D7: Max. 1000	Plant D1,2,3,5,6,8: Max. 600* Plant D4: Max. 800* Plant D7: Max. 1000	Plant D1,2,3,5,6,8: Max. 600* Plant D4: Max. 800* Plant D7: Max. 1000
				
Stacking empty	Max. 14-times	Max. 14-times	-	-
Stacking filled	-	-	2-times	4-times
Max. Pallet Height [mm]	Max. 1000* Hazardous goods storage at DSV: Max. 1400	Max. 1000*	-	-
Bending with gross weight in longitudinal direction 1000mm clearance in rack [mm]	20	20	-	-
Bending with gross weight in transverse direction [mm]**	20	20		

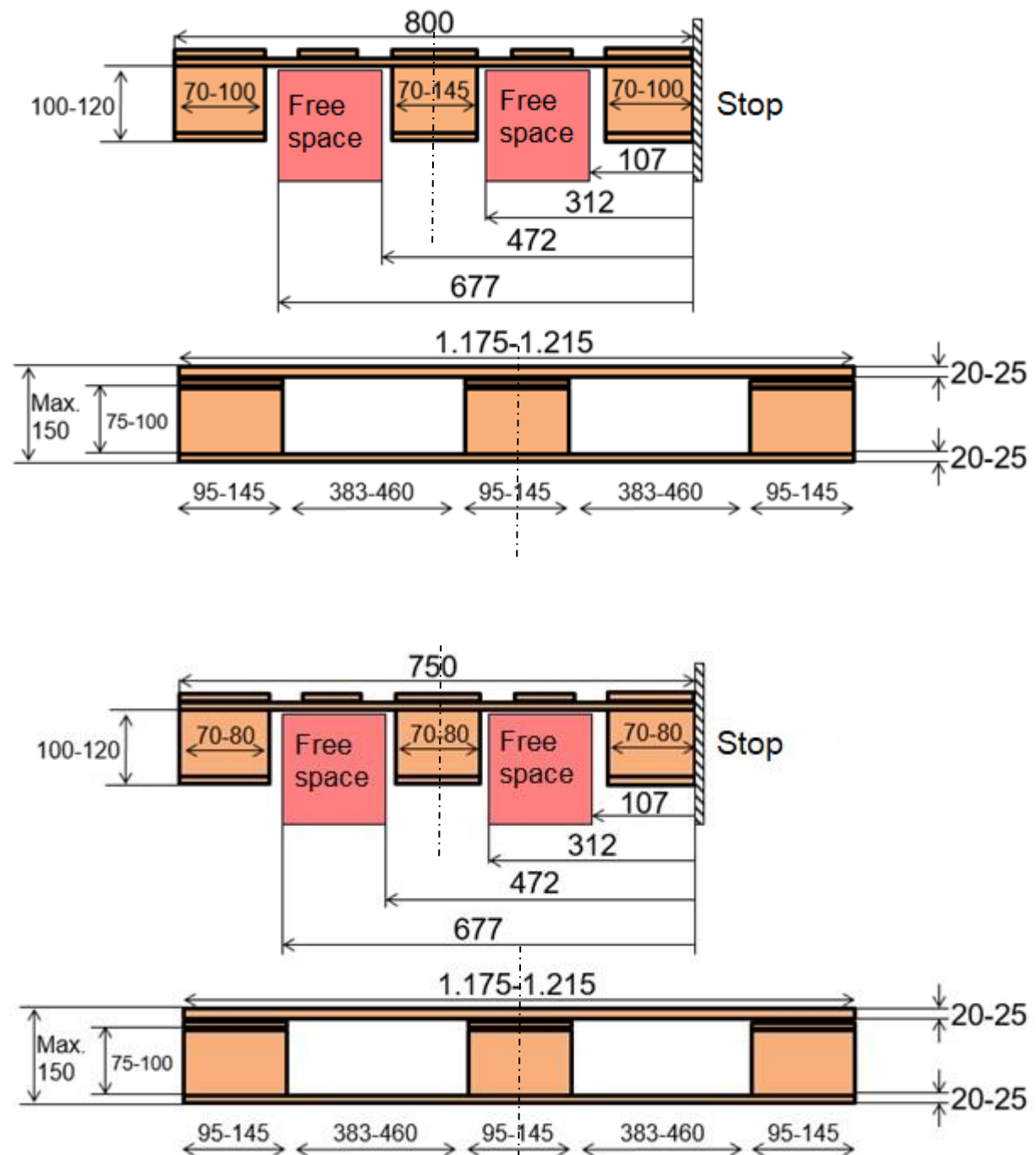
* Higher weights and deviating dimensions must be approved by the packaging manager at STIHL

** Requirement distribution logistic

Annex 6: One-way pallets

All types of one-way pallets need a design release of a STIHL packaging manager.

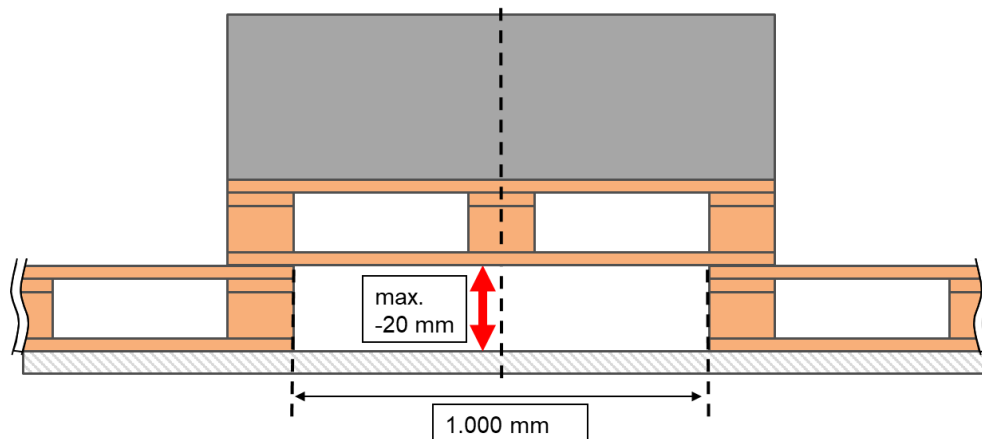
To ensure that the pallets can be used in STIHL warehouses, only constructions of the following dimensions may be delivered. Here is an example for a 800 or 750 mm wide pallet. All dimensions in mm:



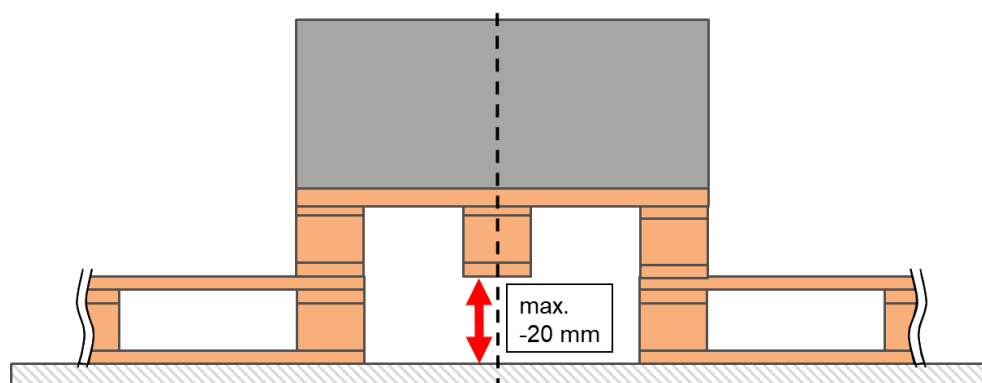
Furthermore:

- 3 rows of wooden blocks are necessary
- no cross boards at the bottom
- no outstanding nails
- quality like EPAL/ GPAL minimum class: „B“
- no LVL-wood
- Four-way system must be possible (see picture)
- bending to maximum value (see pictures)

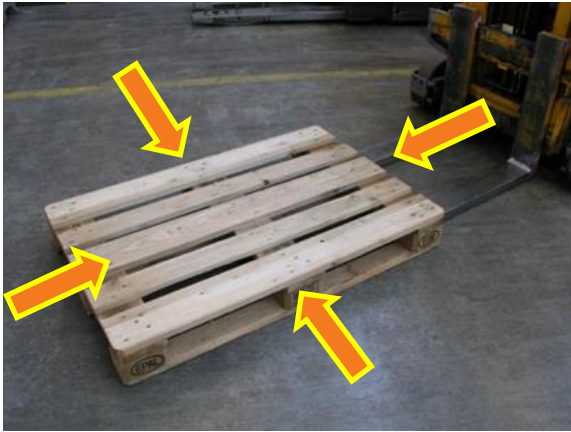
Bending of the pallet in the longitudinal direction max. 20 mm at maximum load with the items to be delivered.



Bending of the pallet in transverse direction max. 20 mm at maximum load with the items to be delivered. For this purpose, the pallet is placed on the outer skids. The center skid must not be supported from below.



Four way access must be possible






Burn-In sign of ISPM Treatment (HT)



Stretch film must not block the clearance area for the forklift forks:

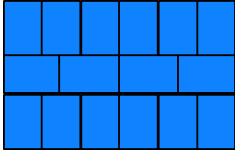
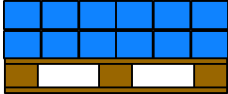
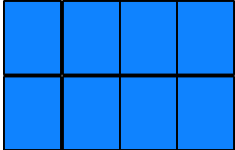
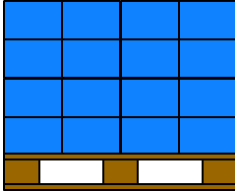
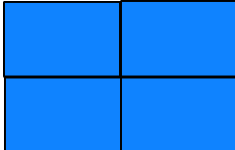
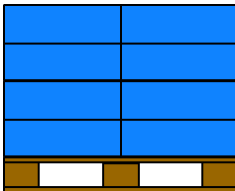






Annex 7: Big load carrier (GLT)

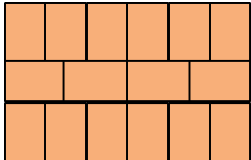
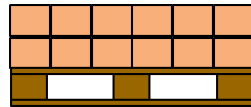
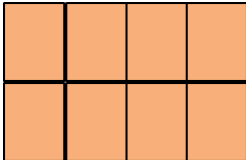
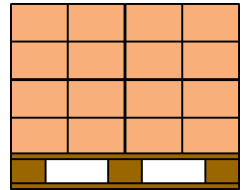
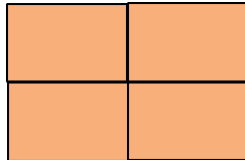
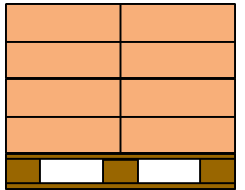



OFFICIAL NAME	DB-GRID BOX PALLET DIN 15155	FOLDABLE PLASTIC BOX	STEEL TUB GALVANIZED
STIHL name	Grid box GP01	Foldable box KTP GP03	Steel tub WA01
Inside dimensions LxWxH [mm]	1200x800x800	1190x790x795	720x420x470
Outside dimensions LxWxH [mm]	1240x835x910	1230x830x980	800x500x600 (excl. stacking corners)
Tare weight [kg]	70/ 85	45	35
Volume [l]	768	750	240
Limit of gross weight [kg]	Plant D1,2,3,5,6,8: Max. 600* Plant D4: Max. 800* Plant D7: Max. 1000	350	800
Stacking empty	Max. 6-times	Max. 14-times	Max. 5-times
Stacking filled	Max. 4-times	Max. 3-times	Max. 5-times
			

* Higher weights must be approved by the packaging manager at STIHL

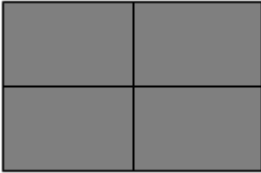


Annex 8: Small load carrier – bins according to VDA 4500

OFFICIAL NAME	C-KLT 3214	C-KLT 4321	C-KLT 6421	COVER PLATE A1208
STIHL name	Transport container KLT9	Transport container KLT8	Transport container KLT6	Cover plate for KLT-pallets
Inner dimensions LxWxH [mm]	260x136x144	334x247x168	532x346x164	1200x800x95
Outside dimensions LxWxH [mm]	300x200x147,5	400x300x213	600x400x213	1204x807x95
Tare weight [kg]	0,7	2,0	3,7	6,1
Volume [l]	4,6	14	30	-
Limit of gross weight [kg]	12	14	14	-
Stacking layout on pallet	<p>16 bins per layer</p>  <p>2 layers per pallet</p>  <p>= 32 bins per pallet</p>	<p>8 bins per layer</p>  <p>4 layers per pallet</p>  <p>= 32 bins per pallet</p>	<p>4 bins per layer</p>  <p>4 layers per pallet</p>  <p>= 16 bins per pallet</p>	
				

Annex 9: Small load carrier – cardboard boxes

OFFICIAL NAME	KLT CARDBOARD BOX SIZE 9	KLT CARDBOARD BOX SIZE 8	KLT CARDBOARD BOX SIZE 6
STIHL name	KAR9	KAR8	KAR6
Outside dimensions LxWxH [mm]	292x193x145 +/- 5mm	402x292x195 +/- 5mm	600x402x195 +/- 5mm
Quality	EB 2.40 or similar	EB 2.40 or similar	EB 2.40 or similar
Possible content-load [kg]	20	30	30
Possible top-load [kg]	50	50	80
Closing method	Top flaps taped	Top flaps taped	Top flaps taped
Limit of gross weight [kg]	12	14	14
Stacking layout on pallet	<p>16 boxes per layer</p>  <p>2 layers per pallet</p>  <p>= 32 boxes per pallet</p>	<p>8 boxes per layer</p>  <p>4 layers per pallet</p>  <p>= 32 boxes per pallet</p>	<p>4 boxes per layer</p>  <p>4 layers per pallet</p>  <p>= 16 boxes per pallet</p>
			

Annex 10: Storage bin Plant D7

OFFICIAL NAME	PLASTIC BIN FOR PLANT D7
STIHL name	AKL1
Inner dimensions LxWxH [mm]	565x370x202
Outside dimensions LxWxH [mm]	600x400x220
Tare weight [kg]	2,5
Volume [l]	42
Limit of gross weight [kg]	30
Stacking layout on pallet	<p>4 bins per layer</p>  <p>4 layers per pallet</p>  <p>= 16 bins per pallet</p>
	

Annex 11a: Specialties with small load carrier deliveries

The height of the material must not exceed the inner stacking line (red) of the plastic KLT



Plastic Bags have to be closed properly



No material which can fly away easily



Pallet with KLT secured with edge protection + straps



VDA-labels have to put into the right spot (red)



Label fixed with glue dot (removable without residue)



KLT Cardboard box size 9 with 4 glue dots



Annex 11b: Plastic bin for delivery in plant D7



The bins must be filled in such a way that the bins can be stacked properly.
It must be ensured that no goods can slip out of the container through the handle opening.

Annex 12a: STIHL KLT Exchange criteria

This KLT complies with the STIHL-KLT-Exchange criteria

- undamaged
- clean
- without adhesive residues



A KLT does not meet the STIHL KLT exchange criteria if it has one or more of the following deviations:



The KLT is **damaged or deformed**, so that it ceases to be fully serviceable or rather ceases to offer the necessary working safety (for example KLT's ground or sides are cracked massively), or the original form can no longer be produced.

- **Consequence:** The exchange of such bins is not possible in the STIHL pool.
- **Measure:** The KLT owner needs to dispose of this KLT at his own expense.



The KLT is **pasted or contaminated**.


- **Consequence:** A bin exchange in the STIHL pool is possible but may lead to a complaint (if it can be proved that the label(s) had been attached by the supplier).
- **Measures:** Prior to the filling of the KLT, contamination and old labels need to be removed to a great extent;
 - At least, the labels need to be made unrecognizable, so that neither a wrong part number nor a quantity indication or a barcode can lead to confusion.
 - The bin must be cleaned to an extent, that a quality reduction of the parts can be excluded.



Note: CLEAN = When rubbed out with a cloth, no contamination can be detected (free of dust, oil, chips...).

Annex 12b: Grid box exchange criteria (see also www.gpal.de)

EPAL BOX PALLET

1,200 x 800 mm



The work of the European Pallet Association, its National Committees and licensees forms the stable basis for the successful, open pallet pool and enables the global exchange of EPAL load carriers. The EPAL box pallet is a key component in industry. Wherever it is necessary to introduce components that have not been individually repackaged to the production process, it is an essential link between the suppliers and the production facilities. Constant quality assurance and high quality materials ensure trouble-free, safe performance for users and loading. It therefore offers tangible benefits compared to alternative containers available on the market.


FACTS & FIGURES

Materials: Sturdy steel lattice framework construction with 2 hinged panels, 4 boards of quality timber.

Length	1,200 mm
Width	800 mm
Height	970 mm
Weight	70 kg if produced after 2011 prior to that 85 kg
Safe working load	1,500 kg if produced after 1990 prior to that 900 kg
Cargo space	0.75 m³
Superimposed load	Max. 6,000 kg

When stacking laden box pallets on a solid, even surface, the bottommost box pallet must not exceed a load of max. 6,000 kg.


MARKINGS



Since August 2013, only "EPAL" in oval.

Y 16571845

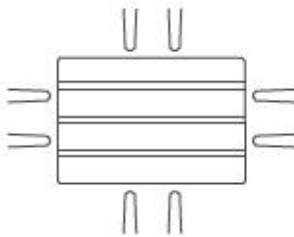
Embossed with Y, number stamped/stenciled on.



Newly produced box pallets must display the name and location of the producer or the EPAL licence number and year of production. This is dispensed with after exchange during repair because such pallets are identified by a repair seal.



HANDLING

4-sided accessibility enables highly efficient handling during production, storage and transportation all the way along the supply chain. Compatible with all (conventional) standard load carriers, forklift trucks and warehouse systems.




QUALITY CONTROL

The international pool of EPAL load carriers is the only load carrier pool in the world subject to independent quality assurance by external inspection companies. This is the only way for EPAL load carriers to guarantee the consistently high quality that they offer the markets.





ISPM 15



Compliance with the ISPM 15 standard for all wooden components is an essential condition for the unrestricted use of load carriers in the international movement of goods. EPAL pallets are produced and repaired according to the strict IPPC (International Plant Protection Convention) standard and can therefore be used across borders. For EPAL box pallets, ISPM 15 treatment is an optional service that can be requested and ordered when purchasing new and repaired EPAL box pallets.

REPAIR



EPAL box pallets damaged as a result of improper use or being overloaded can be repaired cost effectively and in a climate-friendly manner by an EPAL-licensed repair operation. EPAL box pallets repaired according to standard receive a control seal bearing the "EPAL" trademark and the licence number of the repair operation, following the quality-assured repair, EPAL load carriers may only be repaired by an EPAL-licensed repair operation.

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 Tel: +49 211 98 480 48 - 0 • Fax: +49 211 98 480 48 - 48 • info@epal-pallets.org • www.epal.eu

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PB 02/2022 GB

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Annex 12c: Euro pallets exchange criteria (see also www.gpal.de)





EPAL TERMS OF EXCHANGE

Conditions for exchanging EPAL Euro pallets

The EPAL Terms of Exchange are binding.
EPAL Euro pallets are exchangeable if there is no significant damage or any faults that result in loss of usability.
Damage or faults that result in loss of usability also result in loss of exchangeability.
The EPAL Terms of Exchange can be supplemented by the EPAL Quality Classification whereby the companies involved in the exchange, purchase or supply of EPAL Euro pallets mutually agree to use the EPAL Quality Classification as well as to exchange or supply EPAL Euro pallets of a specific class.

TYPICAL DAMAGE AND FAULTS THAT RESULT IN LOSS OF EXCHANGEABILITY AND USABILITY:

<p>A board is missing in part or in full.</p>		
<p>A board is broken or split in such a way that more than one nail shank is visible.</p>		
<p>A board is broken crossways or at an angle.</p>		
<p>A block is missing or split in such a way that more than one nail shank is visible.</p>		
<p>One block is twisted and protrudes more than 1 cm beyond the outer edge of the pallet.</p>		
<p>EPAL marking is missing on both corner blocks of one long side.</p>		

Further criteria for loss of exchangeability:

The load bearing capacity is no longer guaranteed (e.g. rotten or decayed boards, severe breakages or splits). Some components are obviously unacceptable (e.g. boards too thin, blocks too narrow). Several blocks exhibit severe breakages or splits.
Severe soiling of the pallet may lead to contamination of the payload.

Restoration of exchangeability:

To restore exchangeability, damaged EPAL Euro pallets must be repaired by an EPAL-licensed repair company. A list of EPAL-licensed repair companies is available on the EPAL website (www.epal.eu | license search).




www.epal.eu

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Pallets deviating from the above properties will not be exchanged!

Additional remark of STIHL in red: **only with ISPM 15 / IPPC!**




EPAL QUALITY CLASSIFICATION

Recommendations for the use and exchange of EPAL Euro pallets

The EPAL Quality Classification provides non-binding recommendations and serves to optimise the use and exchange of EPAL Euro pallets. It is only to be used if there is mutual agreement between the companies involved (exchange, purchase or supply of EPAL Euro pallets). In this case, the EPAL Quality Classification supplements the EPAL Terms of Exchange and offers an option of agreeing to supply or exchange EPAL Euro pallets of a specific class.


If there is no agreement to use the EPAL Quality Classification, only the EPAL Terms of Exchange apply (unrestricted exchangeability of new and used EPAL Euro pallets of classes A, B and C).

NEW
MCH-SUITABILITY*

<p>Characteristics:</p> <ul style="list-style-type: none"> - ISPM 15 / IPPC - chamber-dried - 800 x 1,200 x 144 mm - guaranteed nominal load: 1,500 kg - max. 22% residual moisture content 	<p>Rough-sawn, consistent and repetitive nail positioning.</p> <p>No signs of use, light-coloured wood.</p> <p>All 4 corners of the pallet are chamfered at an angle of 45°.</p>	<p>EPAL marking on all 4 corner blocks.</p> <p>All bottom boards are chamfered on both sides.</p> <p>IPPC marking: Source number-year-month, control staple.</p>	
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*MCH = suitable for use in machines, with conveyor technology and high-bay stacking in accordance with the GS1 DACh recommendation "Settings for monitoring in automated conveying and warehouse systems"

CLASS A only with ISPM 15 / IPPC!
MCH-SUITABILITY*

<p>Characteristics:</p> <ul style="list-style-type: none"> - pallet has already been used - mainly light coloured - NOTE: Lightness alone is not a guarantee of a particular quality class. The criteria for the other classes must also always be checked. - surface moisture due to use / environment is permitted 	<p>No adhesions e.g. cardboard, foil, tapes, labels. Some residue permitted.</p> <p>Signs of use. No dirt or contamination which may be transferred to the payload.</p> <p>Inspection criteria: No twisted blocks, fork clearance, legs firmly attached.</p>	<p>At least one EPAL marking must be legible on each side.</p> <p>Some splitting permitted in the wood.</p> <p>May have been repaired. Repair marking nail as proof of licensed repair.</p>	
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*MCH = suitable for use in machines, with conveyor technology and high-bay stacking in accordance with the GS1 DACh recommendation "Settings for monitoring in automated conveying and warehouse systems"

CLASS B only with ISPM 15 / IPPC!
MCH-SUITABILITY*

<p>Characteristics:</p> <ul style="list-style-type: none"> - pallet has already been used - mainly dark coloured - surface moisture due to use / environment is permitted 	<p>No adhesions e.g. cardboard, foil, tapes, labels. Some residue permitted.</p> <p>Signs of use. No dirt or contamination which may be transferred to the payload.</p> <p>Inspection criteria: No twisted blocks, fork clearance, legs firmly attached.</p>	<p>At least one EPAL marking must be legible on each side.</p> <p>Some splitting permitted in the wood.</p> <p>May have been repaired. Repair marking nail as proof of licensed repair.</p>	
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*MCH = suitable for use in machines, with conveyor technology and high-bay stacking in accordance with the GS1 DACh recommendation "Settings for monitoring in automated conveying and warehouse systems"

CLASS C
MCH-SUITABILITY*

<p>Characteristics:</p> <ul style="list-style-type: none"> - pallet has already been used - mainly dark coloured - surface moisture due to use / environment is permitted 	<p>Adhesions, e.g. cardboard, foil, tapes, labels permitted. After removal, a higher classification is possible.</p> <p>Signs of heavy use. No dirt or contamination which may be transferred to the payload.</p> <p>Slightly twisted blocks (x 1 cm protrusion).</p>	<p>At least one EPAL marking must be legible on each side.</p> <p>Splitting permitted in the wood.</p> <p>May have been repaired. Repair marking nail as proof of licensed repair.</p>	
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NOTE: Max. 1 nail shank visible per component, in total max. 2 nail shanks per pallet. The nail tips must not be visible or exposed.

NOT FIT FOR USE
Pallets exhibiting these faults must not be used in the open pallet exchange pool without having been repaired.


According to the EPAL Terms of Exchange, EPAL Euro pallets are not exchangeable if damage or faults result in loss of usability.

Typical damage and faults that result in loss of exchangeability and usability are shown here and in the EPAL Terms of Exchange.

Restoration of exchangeability
To restore exchangeability, damaged EPAL Euro pallets must be repaired by an EPAL-licensed repair company.




Missing component




Unrecognition component that does not comply with the EPAL Technical Regula- tion, e.g. unlicensed, rotten, holes




Broken crosspiece, partly or completely broken board




Twisted block > approx. 1 cm protrusion



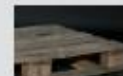
Visible nail tips or more than 2 nail shanks per pallet



Dirt or contamination which may be transferred to the payload, e.g. paint, oil, grease, mud, damp stains, etc.




Repair not to specifications



No legible EPAL marking

UNSORTED
Mixed pallets of all kinds, which are exchanged one-to-one by market players. Criteria and permitted mix are agreed individually by the exchange/contractual partners.



www.epal.eu

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More information at: [GPAL_Qualitaetsklassifizierung/Plakat_DE.pdf \(epal-pallets.org\)](https://www.epal.eu/Qualitaetsklassifizierung/Plakat_DE.pdf)

Annex 13: Interface of Quality Responsibility for Means of Transport

