

Delivery instruction – I - Packaging Guideline supplementing the Transport and Packing Regulations of Würth Industrie Service GmbH & Co. KG (WIS) for suppliers based in America and Asia

I. Scope of application

This Delivery Instruction -I- Packaging guideline applies in addition to the Transport and Packing Regulations (TPR) of Würth Industrie Service GmbH & Co. KG (WIS) for all suppliers based in America and Asia. Its purpose is to prevent damage to the goods and to avoid disruptions to the conveyor system during conveyor-based pallet transport in the warehouse.

II. Transport safety / Load securing / Pallet packaging

Pallett packaging must be carried out in the following sequence:

- Use of Euro pallets (Euro pallet according to EPAL standards) with an IPPC stamp and the prescribed dimensions is mandatory (figures 1 and 2)
- Goods must be stacked safely and stably, and non-slip sheet must be placed on the pallet beneath the first layer of goods (figure 3)
- Stretch bands must be applied correctly around each complete layer of goods (figure 4)
- Wooden edge and side protectors must be installed (figure 5)
- Wooden lid must be placed on the top (figures 6 and 7)
- Goods must be securely strapped with plastic straps, both lengthwise and crosswise, using a strapping machine (figure 8)
- A pallet information sheet, clearly indicating the supplier's name and specifying whether the pallet is a single-variety or mixed pallet, must be visibly placed on top of each pallet (figure 9)
- The pallet must be foil-wrapped, ensuring that the pallet feet remain completely free of wrapping film (figure 10).

a. Pallet dimensions: the following pallet dimensions must be used. The data is based on Euro-pallet standards (DIN EN 13698-1).



Figure 1 : Pallet dimensions

Number	Description	Dimension
1	Pallet width	780 mm - 800 mm
2	Pallet length	1180 mm - 1200 mm
3	Pallet height	Insgesamt max. 144 mm
4	Thickness of boards	15 mm - 20 mm
5	Width of deck-board	n/a, max. distance between boards = 45 mm
6	Pallet block height	55 mm - 75 mm
7	Pallet block width	80 mm - 100 mm
8	Pallet bottom board width	Same as blocks (max. 100 mm)
9	Wood treatment	IPPC stamp

Table 1: Pallet dimensions

The total pallet foot height, consisting of the bottom board height (4) and the block height (6), must be between 70 mm and 95 mm

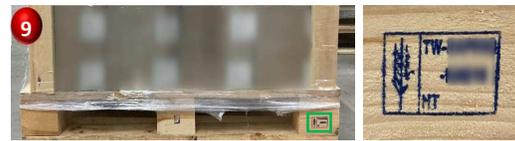


Figure 2: IPPC stamp

Every wooden part must carry an IPPC stamp.

b) Non-slip sheet: a non-slip sheet must be placed on the pallet beneath the first layer of good



Figure 3: Non slip sheet

c. Stretch bands: stretch bands (1200 × 100 mm) must be applied tightly around each complete layer of goods.



Figure 4: Stretch bands

d. Edge and side protectors: wooden edge protectors must be installed on all four corners of the pallet. Central vertical wooden supports must be added, either as single boards or as T-profiles. All wooden supports must be of equal height.



Figure 5: edge protectors

e.) Pallet lid: a wooden lid is used to stabilize the transport unit. The pallet lid must:

- be made of wood and bear an IPPC stamp,
- have a board thickness of 10–20 mm
- fully cover the pallet surface and must not exceed the pallet dimensions of 1200mm x 800mm



Figure 6: Pallet wooden lid

The lid shall be secured as illustrated in reference figure no. 7



Figure 7: fixing wooden lids

f. Pallet strapping: plastic straps must be applied directly beneath the pallet deck boards to secure the goods. Straps should not be placed beneath the pallet blocks or footboards. The pallet must be tightly secured using at least two straps lengthwise and crosswise.



Figure 8: Strapping of pallets

g.: Supplier identification and pallet information sheet: the pallet information sheet must include supplier's name and indicate whether the pallet is single-variety or mixed pallet. Green sheets are used for single-variety pallets, while yellow sheets are used for mixed pallets. The supplier's name should be written using Latin alphabet characters.

Container number should be specified if possible. The information sheet must be placed on the top of the pallet and be at least 160mm x 250mm in size.

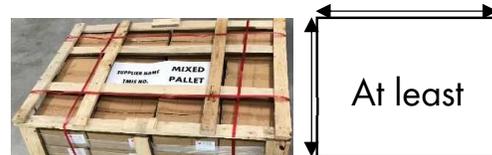


Figure 9: Pallet info sheet

h. Foil-wrapping of pallets: pallets containing goods must be foil-wrapped, ensuring that the pallet foot space remains completely free of film. The film ends must be cut and secured so that no loose ends remain.



Figure 10: pallet plastic filming

III. Cardboard quality requirements for packing units

Utilized cardboard has to be:

1. For volumes up to 750 cm³ (0.75 liters):

Paper quality: 1.30 e-flute, single-wall

1. Outer liner 125 g/m² kraftliner brown
2. Fluting: 90 g/m² corrugating medium
3. Inner liner 135 g/m² testliner brown

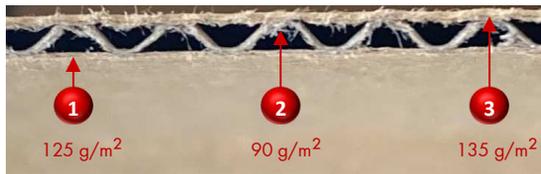


Figure 11: cardboard 1.30 e-flute

2. From a volume above 750cm³ (0.75 liters):

Paper quality: 1.30 B- flute, single wall

1. Outer liner 135 g/m² kraftliner brown
2. Fluting: 110 g/m² corrugating medium
3. Inner liner 135 g/m² testliner brown

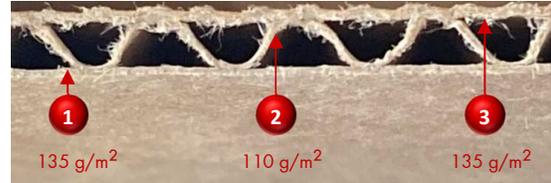


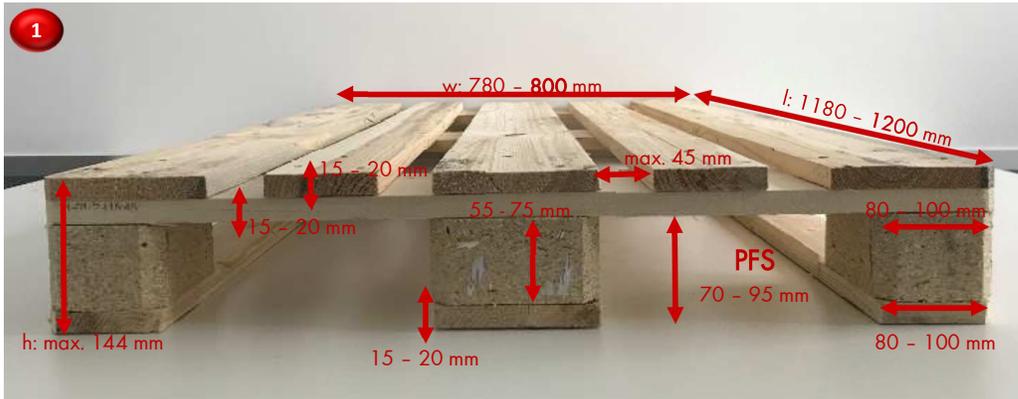
Figure 12: cardboard 1.30 B-wave

IV. Sealing of packing units

Packing units must be sealed crosswise, i.e. one strip of adhesive tape must be applied along the central closing seam and a second strip applied perpendicularly over the insertion tab to reinforce the closure. Adhesive tape with a minimum width of 50 mm must be used.



Figure 13: sealing of packing units



Step 1: consider pallet dimensions



Step 2: put non-slip sheet



Step 3: fist layer of goods



Step 4: stretch bands generously around each layer



Step 5: edge and side protectors



Step 6: wooden lid



Step 7: pallet strapping



Step 8: pallet info sheet



Step 9: foil wrapping of pallets



Step 10: check foot space make sure no plastic film or strap on pallet foot

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