

**Packaging guideline to Transport and Packing Regulation of Würth Industrie Service GmbH & Co. KG („WIS“) for suppliers located in Europe**

**I. Scope of application**

The packaging guideline applies in addition to Transport and Packing Regulation (TPR) of Würth Industrie Service GmbH & Co. KG (WIS) for suppliers located in Europe. It is intended to prevent and avoid damage to the goods and the conveyor system while transporting euro pallets.

**II. Transport safety / Load safety / Pallet packaging**

To ensure safe packaging for transport and loading, the following has to be considered:

1. Stretch bands

Stretch bands measuring 1200 x 150 mm should be stretched around each full layer generously. (pic. 1)



2. Edge protection

To prevent damage of the goods, edge protectors may be used. These have to be fixed at all four corners of the euro pallet. (pic. 2)



3. Strapping of euro pallets

The goods have to be secured directly under the pallet deck with plastic straps and not be strapped under the blocks or footboards (length or width wise). At least two straps along length and two straps along width have to be fixed tightly. Edge protectors are mandatory to prevent the cardboard from being cut into. (pic. 3)



4. Plastic filming of euro pallets

All goods on the pallet must be stretched with plastic film only the foot space of the pallet has to be completely free. Plastic film ends have to be properly cut and fixed that no loose ends hang on the pallet. (pic. 4)



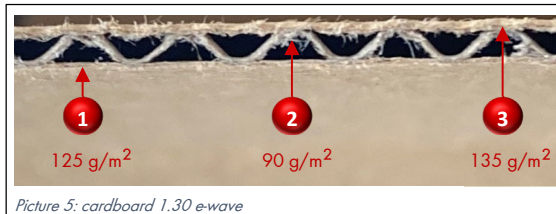
**III. Cardboard quality**

Additionally to paragraph III point 4 Transport and Packing Regulation (TPR) of WIS carton boxes suitable for robot handling have to meet following requirements (pic. 5 and pic. 6):

1. Up to a volume of 750cm<sup>3</sup> / 0.75 liters:

Paper quality: 1.30 e-wave single-wave

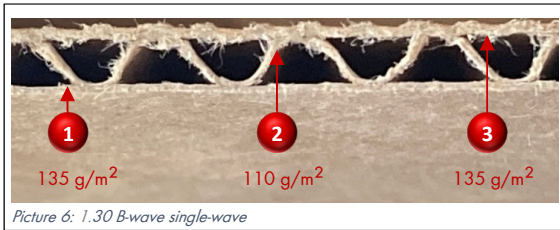
1. Outer ceiling 125 g/ m<sup>2</sup> Kraftliner brown
2. Wave track 90 g/ m<sup>2</sup> wave material
3. Inner ceiling 135 g/ m<sup>2</sup> Testliner brown



2. From a volume of 750cm<sup>3</sup> / 0.75 liters:

Paper quality: 1.30 B-wave single-wave

1. Outer ceiling 135 g/ m<sup>2</sup> Kraftliner brown
2. Wave track 110 g/ m<sup>2</sup> wave material
3. Inner ceiling 135 g/ m<sup>2</sup> Testliner brown



Picture 6: 1.30 B-wave single-wave

#### IV. Taping of carton boxes

Circulating adhesive stripes of the cartons have to be placed crosswise up to insert flap. (pic. 7)



Picture 7: Taping of carton boxes