
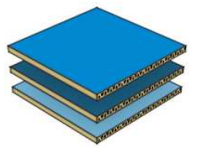




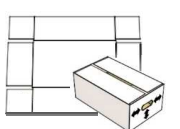
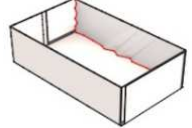

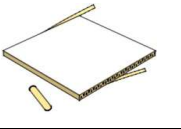
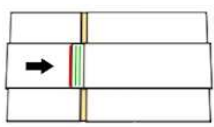
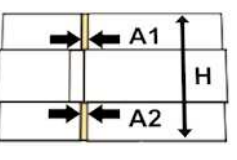
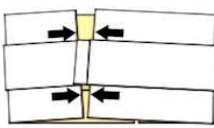
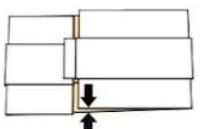



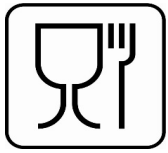


Smurfit Kappa Olomouc External Product Quality Specifications			
	Description	Target	Specification
General			
	Warp Warped, curved or twisted board.	Warp Factor (WF) = 0 $WF = H \cdot (500/L)^2$ Warp% = H/L %	The maximum warp factor (WF): 15 Blank sizes above > 500 mm: Max. 3 Warp %
Printing			
	Colour deviation (Pantone colours) Right colour	Delta E=0	White paper delta E<5
	Colour deviation (CMYK) Right colour	Density	Density tolerance of individual colours within the order +/- 0,2 D
	Print to print register Register between colours	No deviation from specification	Offset: +/- 0,2 mm Against reference colour
	Visual print inspection Text, surface, varnish, Defects in printed motif (Pits/Slugs, Dirt, Scratch, Coating Defects, Bubbles)	No deviation from specification	Text factually correct, well legible and in accordance with approved reference. Without visible defects on primary surface exposed to direct view to the customer. (Parts inspection 50 cm away, inspection time 5-10 s.)
	Barcode readability Barcode quality and number	Barcode quality number according to specification.	Quality of printed standard barcode. Number according to specification: White paper: minimal C grade Brown paper: minimal D grade
Laminating			
	Overlay Printed sheet to fluting	Not visible open flute, printed sheet to fluting overlay : 2 mm.	Overlay Printed sheet 2 mm +/- 2 mm
Cutting / Creasing			
	Dimensions, crease lines position Dimensions, position of diecut pieces and crease lines	No deviation from specification	Individual inner dimension (length, width, high) +/- 2 mm In normal conditions.
	Cracking Crease lines Cracking of crease lines	No cracking	Outside of the box no cracking allowed. Inside of the box less than 10% of any one crease line.
	Print to cut register Register between colours and edge	No deviation from specification	F - flute : 1,5 mm +/- E - flute : 1,5 mm +/- B - flute : 3,0 mm +/- C - flute : 3,0 mm +/-
	Cutting quality Angel hair, dust, cutting waste	Clean product	Scrap of different shapes < 5 mm cannot be always removed.
Folding / Gluing			
	Gluing Not properly glued too much too little, internal/external gluing, position not ok, glued together.	Good gluing integrity	Adequate gluing, the glue flap length shows fibre tear. No glue on the outside.
	Glue gap Space between the edges of the two folded panels. Gap = (A1+A2) / 2 A1=Lead edge gap A2=Trail edge gap	Glue gap according drawing, typically: F - flute : 1,5 mm E - flute : 2,0 mm B - flute : 3,0 mm C - flute : 4,0 mm	Max deviation: ' F - flute : max. 1,5 mm +/- E - flute : max. 2,0 mm +/- B - flute : max. 3,0 mm +/- C - flute : max. 4,0 mm +/-
	Fishtailing Faulty parallelism between the edges of the two folded panels. Difference between Lead edge gap (A1) and trail edge gap (A2)	No fishtailing	Max diff A1 - A2: H < 200; 200 - 400; > 400 F - flute : 1,5 mm; 2,0 mm; 3,0 mm E - flute : 1,5 mm; 2,0 mm; 3,0 mm B - flute : 2,0 mm; 3,0 mm; 4,0 mm C - flute : 2,0 mm; 3,5 mm; 5,0 mm
	Squaring Misalignment of the lead edges of the two folded panels	No out of squareness	Max deviation: ' F - flute : max. 1,5 mm +/- E - flute : max. 2,0 mm +/- B - flute : max. 3,0 mm +/- C - flute : max. 4,0 mm +/-

**Smurfit Kappa Olomouc
External Product Quality Specifications**

	Description	Target	Specification
	Palletisation		
	Bundling Nr of pieces in the bundle, patern of the bundle, alignment of the bundle, bundle strapping	No deviation from specification	Banding must be tight but not damage product. No deviation from specification
	Palletising Pallet pattern, number of pieces on the pallet, pallet height, bottom and top protection, type and cleanliness of pallet.	No deviation from specification	No deviation from specification
	Pallet labelling Visibility/readability of label, position , number of labels	No deviation from specification	No deviation from specification
	Storage, process conditions		
	Storage conditions Recommended storage temperature 5-45°C and relative air humidity 30-70%.	Acclimatization required in case of temperature and humidity change.	In case of transport or storage with different conditions (temperature, humidity) than the production conditions, it is necessary to acclimatize the product to the conditions of use (pallet without foil, strapped). The recommended acclimatization period is 24 hours. In the event of a sudden change in the environment, the products may be warped.
	Product safety - product for direct food contact (valid only for products declared and labeled for direct food contact)		
	Legislative compliance According to the Regulation EC 1935/2004, Czech Regulation MZd č. 38/2001 Sb	In compliance	Atest of materials, verification tests in accredited laboratory.
	Restriction of use Unsuitable/extreme conditions of use may have negative effect on barrier properties, functionality, safety of product		Use in temperature 5-45°C and relative humidity 30-70%, for dry and nonfat foods.
	Allergens In production is used starch glue and papers, which contain/may contain gluten.	Products may contain gluten.	Atest of materials, verification tests in accredited laboratory.
	Content of the recycled material For the production they are used paper's materials containing recycled share.	0-100 % it depends on type of board grade.	According to the specifications of paper suppliers.

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