



# Commercial Substrate Evaluation Report

Certified for  
HP Indigo

Supplier Information	
Supplier Name	Arctic Paper Munkedals AB
Supplier Address	Bruksvägen, Munkedal, SE-45581
Supplier Country	Sweden

Product Information			
Product Name	Munken Kristall ID		
Product Category	Paper		
Grammage (gsm) / Basis weight (#)	100 gsm	Thickness (microns/caliper)	113 um
Certification Number	RI5500-17-5121	Certification Center	RIT
Date of Evaluation	05/23/2017	Evaluated on	Interpolation
Certified for	5500, 5600 multi-shot, 7000, 7500, 7600, 7800, 7900, 10000 & 12000		
Evaluation Process	Interpolation		

Evaluation	Measurement	Result	Grade (stars)	Comments
<b>Runability</b>			★★★★	
Simplex	Number of Jams			
Duplex	Number of Jams			
<b>Ink Adhesion / Fixing</b>			★★★★	
Peeling	100%K in 4 color mode, % in remaining			
Flaking	<1mm, % Coverage			
<b>Photo Peeling</b>	290K in 4 color mode, % in remaining			
<b>Photo Flaking</b>	<1mm, % Coverage			
<b>Photo Recommended</b>	>80% after 10 or 60 min			
<b>White Ink Recommended</b>	>80% after 10 or 60 min			
<b>Blanket Compatibility</b>			★★★★	
Cleaner Pages	1st clean page after 12K impressions			
<b>Evaluation Result</b>		Pass		

Comment Detail:

## The substrate certification procedure incorporates several processes.

An initial screening evaluation is followed by a more comprehensive evaluation

looking at the performance of the particular substrate within the press. This checks for:

### Runnability:

The ability of the substrate to run smoothly through the press in various print modes.

### Fixing:

Ink-substrate interaction as determined by: 1) The degree of ink adhesion to the substrate for standard and photo-related applications as measured in a tape peel test of the image; and 2) The degree of flaking of the ink layer. The fixing properties are measured through a range of blanket temperatures and pressures.

### Blanket Compatibility:

Blanket-substrate interaction as determined by: 1) Ink-transferability, which is the quality of ink transfer from the blanket to the substrate as reflected in highlight dots, thin lines, heavy images and image edge integrity; 2) 'Blanket Memory' effects, reflected in gloss or density differences between solids and background areas of the previously printed image; and 3) Number of cleaner pages, in which blankets are routinely maintained by performing a self cleaning procedure ("cleaner pages") used to refresh the blanket's release layer.

### Photo and White Ink Applications:

Use of robust media products is strongly recommended when printing photo-related and/or white ink applications and/or Light Cyan and Light Magenta due to additional ink coverage demands of these applications. This media has been tested and approved to perform well with higher levels of ink coverage, and is therefore recommended for photo-related and/or white ink type applications. However, it is strongly recommended that user acceptance ultimately be evaluated per individual application and finishing requirements, etc. The test results are provided as a guide; assess actual performance to determine suitability for individual use.

### Star Rating

- ★★★★ Best performing substrate: fewer print cleaners needed; no blanket memories at least up to 12K impressions.
- ★★★ Recommended substrate: some print cleaners may be needed; slight memories may be seen up to 12K impression
- ★ Good substrate: print cleaners generally required; some memories may be seen by 12K impressions.

		★★★★	★★★	★	
Evaluation	Measurement	Best-performing	Recommended	Good	Failure
Transport	Runnability	No jams with the tested paper	No more than 1 jam or minor issue with the tested paper	No more than 1 jam and minor issues with the tested paper	2 jams with the tested paper, control performs well
Fixing	Peeling	All 4 results are ≥ 90%	All 4 results are ≥ 80%	At least 1 result is ≥ 80%	All results < 80%
	Flaking Guillotine, 5min • Coated	All results are > 250%	At least 1 result is > 250%	At least 1 result is > 200%	Results < 200%
	Flaking Guillotine, 5min • Uncoated	Result is > 300%	Result is > 250%	Result is > 200%	Results < 200%
Photo	Peeling 290% Black	Result is > 80% after 10 or 60 minutes		N/A	Results < 80%
	Flaking Guillotine, 5min	<1mm at 350% K		N/A	Results > 1mm
Blanket Compatibility	Cleaner Sheets	1 <sup>st</sup> Red is clean	3 <sup>rd</sup> Red is clean	5 <sup>th</sup> Red is clean	5 <sup>th</sup> Red not clean, or White observed
	Monitors on tested paper and reference glossy paper	Very minor memories at least up to 12K impressions	Slight memories may be seen up to 12K impressions	Some memories may be seen by 12K impressions	Severe lack of dots/cracks/gloss memory

This substrate is certified for the next two years from the date of evaluation, provided there is no change to the paper properties or production processes. At the end of two years from the original evaluation date, if there have been no changes in paper properties or production processes, the certification can be extended for another two years. After four years from the original certification date, a new certification is required.



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