



Comment Detail:

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 Polar Rough ID							
Product Category		Paper							
Grammage (gsm) / Basis weight (#)		170 gsm		Thickness (microns/caliper)		238 um			
Certification Number		RI7500-18-5282		Certification Center		RIT			
Date of Evaluation		04/30/2018		Evaluated on		Interpolation			
Certified for		7500, 7000, 7600, 7800, 7900, 10000 & 12000							
Evaluation Process		Interpolation							
Evaluation		Measurement		Result	Gı	rade (stars)	Comments		
Runability									
Simplex		Number of Jams Number of Jams			***				
Duplex									
Ink Adhesion / Fixing					**	*			
Peeling	100%K in 4 color mode, % in remaining								
Flaking		<1mm, % Coverage							
Photo Peeling	290K in 4 color mode, % in remaining								
Photo Flaking		<1mm, % Coverage							
Photo Recommended	>8	>80% after 10 or 60 min							
White Ink Recommended	>8	>80% after 10 or 60 min							
Blanket Compatibility									
Cleaner Pages	1s	t clean page after 12K impressions			***				
Evaluation Result			Pass						

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.

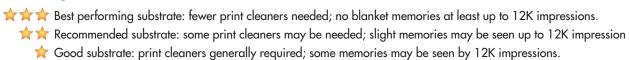
Blanket Compatibility:

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



		***	**	*	
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 Guille	Flaking Guillotine, 5min ● Coated		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%
rnoto	Flaking Guillotine, 5min	<1mm	at 350% K	N/A	Results > 1mm
Blanket	Cleaner Sheets	1ª Red is clean 3 rd Red is clean		5 th Red is clean	5th Red not clean, or White observed
Compatibility	Monitors on tested paper and reference glossy paper 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.



