



MOORIM INK-JET INK

Technical Report for Lexmark Pigment Black



Is Moorim's Exclusive Global Partner

Ultimate Customer Satisfaction

- *High Quality*
- *Saving Cost*
- *Faster Delivery & Service*

Novel Formulation of Inkjet Ink

- *Bright & Stable Color*
- *High Fastness*
- *No Clogging & Bleeding*

Lexmark Pigmented Ink Test

Contents

1. Test Condition
2. Test Method
3. Test Ink and Media
4. Test Items
5. Results

? Attached Sheet : Printing Sample

- Plane Paper... (Sindoricoh)
- Coated Paper. (Hansol)
- OHP Film..... (Epson)
- Tracing Paper. (Heavy Media)
- Water Fastness (Sindoricoh)

Lexmark Pigmented Ink Test

1. Test Condition

-- Temperature : 25? ± 0.5? , Humidity : 50%± 5%

2. Test Methods

-- All results are actual lot analyses using standard Moorim procedures.

3. Test Inks and Media

- 1) Ink : Moorim(MCS-03), Lexmark Pigment black OEM, A ? , I ? , N ?
- 2) Media : Plane Paper, Coated Paper, OHP Film, Tracing Media

4. Test Items

1) Physical Properties : Surface Tension, Viscosity, pH, Specific Gravity, PS

2) Chemical Properties

- Chemical Stability : 1 Month test in Weatherometer.
- Precipitation : 1 Month test between -20? ~ 70? .
- PS Distribution : Test in Coulter Sub-micron particle size analyzer.
- Storage Stability : 2 Month test between -20? ~ 70? .
- Nozzle Clogging : Print after 1 month in dry chamber
- Nozzle Crusting : Print after 5th refill

3) Printing Properties

- Optical Density : Plane Paper (Macbeth RD918 Optical Densitometer)
- Colority(Shade) : Plane Paper (BYK Gardner colormeter)
- Compatibility : Mixing with OEM Ink and sample, and then print out
- First Drop Problem
- Print Quality : Plane Paper, Coated Paper, OHP Film, Tracing Media
- Drying Time : Plane Paper, Tracing Media
- Smudge Test : Plane Paper
- Water Fastness : Plane Paper
- Light Fastness : Plane Paper

Lexmark Pigmented Ink Test

5. Results

? Excellent : ?
 Good : ?
 Fair : ?
 Poor : ?
 Bad : x

5-1 Physical/Chemical Data

Sample		Item	MOORIM	OEM	A ?	I ?	N ?
Physical Properties	Pigment Purity	Pigment	Pigment	Pigment + Dye	Pigment	Pigment	
	Surface Tension (dyne/cm)	52.8	52.9	44.0	51.3	51.3	
	Viscosity (cp)	2.70	3.02	1.85	2.09	3.67	
	pH	8.83	8.06	7.09	9.03	8.80	
	Specific Gravity	1.012	1.066	1.007	1.023	1.031	
	PS (Mean Diameter)	111.8	120.7	136.5	126.3	158.6	
	PS (Standard Deviation)	25.8	44.4	40.6	45.9	40.4	
Chemical Properties	Chemical Stability	?	?	?	?	?	
	Precipitation	None	None	None	Happened	Happened	
	Storage Stability	?	?	?	?	?	
	Nozzle Clogging	?	?	?	?	?	
	Nozzle Crusting	?	?	?	?	?	

[MOORIM]

[OEM]

[A ?]

[I ?]

[N ?]

Lexmark Pigmented Ink Test

5-2 Printing Data

? Excellent : ?
 Good : ?
 Fair : ?
 Poor : ?
 Bad : x

Item Sample		MOORIM	OEM	A ?	I ?	N ?	Notes
Optical Density		1.57	1.42	1.38	1.40	1.49	
Colority (Shade)		L : 18.47 a : 1.16 b : 2.59	L : 24.50 a : 1.15 b : 1.89	L : 24.23 a : 1.35 b : 3.12	L : 23.72 a : 1.17 b : 2.66	L : 20.23 a : 1.17 b : 2.43	
Compatibility		?	-	?	?	?	
First Drop Ploblem		?	?	?	?	?	
Leveling		?	?	?	?	?	
Print Quality	Plane Paper	?	?	?	?	?	Sindoricoh ?
	Coated Paper	?	?	?	?	?	Hansol ?
	OHP Film	?	?	?	?	?	Epson ?
	Tracing Paper	?	?	?	?	?	Heavy Media
Drying Time	Plane Paper	1'14?	52?	1'03?	1'33?	2'07?	Sindoricoh ?
	Tracing Paper	2'31?	2'05?	1'52?	3'39?	3'28?	Heavy Media
Smudge Test		?	?	?	?	?	
Water Fastness		?	?	?	?	?	
Light Fastness		100%	100%	100%	100%	100%	