

# PREMIUM JET COLOR

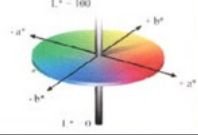
SPECIAL  
LACQUERS



Light-fastness tests

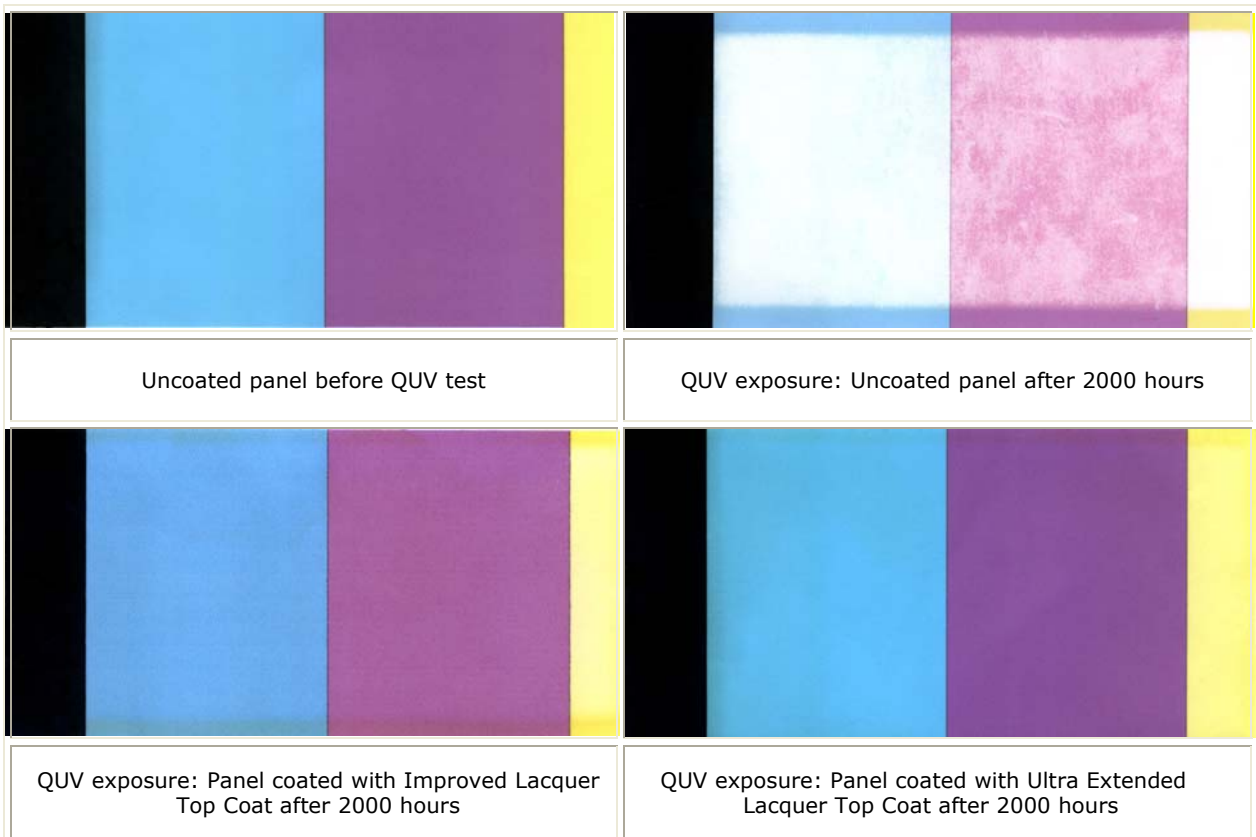
Gdańsk 2008

# PRIM JET COLOR LACQUER TOP COAT PROTECTIVE PROPERTIES TESTS

Pigmented ink light-fastness test summary						
Panel	Parameter	Color				Result
		Blue	Red	Yellow	Black*	
Uncoated	$\Delta E_{0-2000h}$	25.10	18.81	51.74	4.29	Poor
Coated with lacquer:						
Improved	$\Delta E_{0-2000h}$	2.79	5.69	26.60	2.26	Very good
Extended	$\Delta E_{0-2000h}$	5.93	5.89	10.27	3.90	Excellent
Ultra Extended	$\Delta E_{0-2000h}$	5.63	3.16	10.67	2.68	Excellent

\*Black panel was exposed for 750 hours.

## QUV -EXPOSURE - PRIM JET COLOR'S PIGMENTED INK AND LACQUER AFTER 2000 HOURS

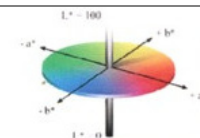


Prim Jet Color exposure data after 2000 hours

Pigmented ink color BLUE fading reading							
Panel	Parameter	Exposition time					
		Initial	48 h	200 h	400 h	1000 h	2000 h
Uncoated	L - value	80.46	80.12	80.86	82.43	83.61	90.53
	a*-value	-18.83	-19.20	-18.62	-16.94	-12.52	-3.59
	b*-value	-17.82	-14.66	-13.44	-12.72	-8.30	-0.60
Coated with lacquer:							
Improved	L - value	73.87	72.22	71.12	72.49	72.90	72.29
	a*-value	-25.64	-26.03	-24.30	-24.09	-24.04	-23.90
	b*-value	-13.77	-8.13	-10.92	-12.74	-12.08	-12.27
Extended	L - value	74.12	71.41	70.94	70.82	71.10	71.42
	a*-value	-25.44	-24.87	-24.45	-24.00	-23.58	-23.50
	b*-value	-11.97	-3.68	-3.21	-4.61	-6.53	-7.06
Ultra Extended	L - value	75.43	73.78	73.18	73.56	73.70	73.88
	a*-value	-25.96	-26.91	-26.90	-26.96	-26.88	-26.84
	b*-value	-17.35	-11.34	-11.25	-10.99	-11.90	-12.01

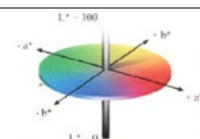
Pigmented ink color BLUE fading reading							
Panel	Parameter	Exposition time					$\Delta E_{0-1000h}$
		0-48 h	0-200 h	0-400 h	0-1000 h	0-2000 h	
Uncoated	$\Delta L$ - value	-0.34	0.40	1.97	3.15	10.07	25.10
	$\Delta a^*$ -value	-0.37	0.21	1.89	6.31	15.24	
	$\Delta b^*$ -value	3.16	4.38	5.10	9.52	17.22	
Coated with lacquer:							
Improved	$\Delta L$ - value	-1.65	-2.75	-1.38	-0.97	-1.58	2.79
	$\Delta a^*$ -value	-0.39	1.34	1.55	2.60	1.74	
	$\Delta b^*$ -value	5.64	2.85	1.03	1.69	1.50	
Extended	$\Delta L$ - value	-2.71	-3.18	-3.30	-3.02	-2.70	5.93
	$\Delta a^*$ -value	0.57	0.99	1.44	1.86	1.94	
	$\Delta b^*$ -value	8.29	8.76	7.36	5.44	4.91	
Ultra Extended	$\Delta L$ - value	-1.65	-2.25	-1.87	-1.73	-1.55	5.63
	$\Delta a^*$ -value	-0.95	-0.94	-1.00	-0.92	-0.88	
	$\Delta b^*$ -value	6.01	6.10	6.36	5.45	5.34	

Pigmented ink color RED fading reading

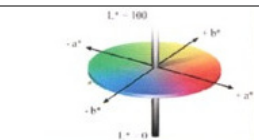


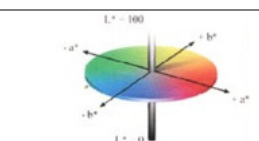
Panel	Parameter	Exposition time					
		Initial	48 h	200 h	400 h	1000 h	2000 h
Uncoated	L - value	66.97	67.23	68.41	69.68	72.99	81.08
	a*-value	20.45	19.61	19.87	19.85	20.30	16.62
	b*-value	-17.77	-15.45	-15.69	-14.90	-11.83	-5.93
Coated with lacquer:							
Improved	L - value	63.89	62.91	62.67	62.69	62.72	61.84
	a*-value	19.84	18.08	18.52	18.59	18.60	18.17
	b*-value	-14.36	-9.87	-10.09	-10.21	-9.55	-9.09
Extended	L - value	64.49	63.35	62.90	62.75	63.05	63.32
	a*-value	17.91	16.53	17.05	17.18	17.37	17.66
	b*-value	-13.44	-6.92	-7.01	-6.87	-7.91	-7.67
Ultra Extended	L - value	60.54	59.91	59.70	59.62	59.63	59.81
	a*-value	19.36	18.07	18.57	18.67	19.04	19.16
	b*-value	-18.67	-14.13	-14.65	-14.87	-15.42	-15.60

Pigmented ink color RED fading reading

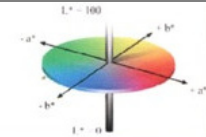


Panel	Parameter	Exposition time					$\Delta E_{0-1000h}$
		0-48 h	0-200 h	0-400 h	0-1000 h	0-2000 h	
Uncoated	$\Delta L$ - value	0.26	1.44	2.71	6.02	14.11	<b>18.81</b>
	$\Delta a^*$ -value	-0.84	-0.58	-0.60	-0.15	-3.83	
	$\Delta b^*$ -value	2.32	2.08	2.87	5.94	11.84	
Coated with lacquer:							
Improved	$\Delta L$ - value	-0.98	-1.22	-1.20	-1.17	-2.05	<b>5.69</b>
	$\Delta a^*$ -value	-0.76	-0.32	-0.25	-0.24	-0.67	
	$\Delta b^*$ -value	4.49	4.27	4.15	4.81	5.27	
Extended	$\Delta L$ - value	-1.14	-1.59	-1.74	-1.47	-1.17	<b>5.89</b>
	$\Delta a^*$ -value	-1.38	-0.86	-0.73	-0.54	-0.25	
	$\Delta b^*$ -value	6.52	6.43	6.57	5.53	5.77	
Ultra Extended	$\Delta L$ - value	-0.63	-0.84	-0.92	-0.91	-0.73	<b>3.16</b>
	$\Delta a^*$ -value	-1.29	-0.79	-0.69	-0.32	-0.20	
	$\Delta b^*$ -value	4.54	4.02	3.80	3.25	3.07	

Pigmented ink color YELLOW fading reading							
Panel	Parameter	Exposition time					
		Initial	48 h	200 h	400 h	1000 h	2000 h
Uncoated	L - value	88.34	88.20	89.82	89.53	92.54	93.41
	a*-value	-7.63	-6.91	-5.64	-5.46	1.20	0.95
	b*-value	52.40	50.24	32.96	34.32	32.44	1.63
Coated with lacquer:							
Improved	L - value	87.88	86.00	85.73	85.81	86.60	86.95
	a*-value	-8.73	-6.60	-6.17	-6.13	-6.14	-5.24
	b*-value	68.46	68.28	67.20	63.73	55.46	42.11
Extended	L - value	87.63	86.47	84.83	85.02	85.03	86.05
	a*-value	-8.20	-6.70	-4.66	-4.64	-4.56	-4.76
	b*-value	64.46	64.18	64.08	63.60	60.43	54.91
Ultra Extended	L - value	85.51	85.45	85.15	84.67	84.40	86.42
	a*-value	-3.69	-1.64	-1.55	-0.68	-1.17	-1.01
	b*-value	55.54	55.85	55.75	55.91	53.35	45.25

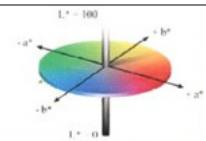
Pigmented ink color YELLOW fading reading							$\Delta E_{0-1000h}$
Panel	Parameter	Exposition time					
		0-48 h	0-200 h	0-400 h	0-1000 h	0-2000 h	
Uncoated	$\Delta L$ - value	-0.14	1.48	1.19	4.20	5.06	51.74
	$\Delta a^*$ -value	0.72	1.99	2.17	8.83	8.58	
	$\Delta b^*$ -value	-2.16	-19.44	-18.08	-19.96	-50.77	
Coated with lacquer:							
Improved	$\Delta L$ - value	-1.88	-2.15	-2.07	-1.28	-0.93	26.60
	$\Delta a^*$ -value	2.13	2.56	2.60	2.59	3.49	
	$\Delta b^*$ -value	-0.18	-1.26	-4.73	-13.00	-26.35	
Extended	$\Delta L$ - value	-1.16	-2.80	-2.61	-2.60	-1.58	10.27
	$\Delta a^*$ -value	1.50	3.54	3.56	3.64	3.44	
	$\Delta b^*$ -value	-0.28	-0.38	-0.86	-4.03	-9.55	
Ultra Extended	$\Delta L$ - value	-0.06	-0.36	-0.84	-1.11	0.92	10.67
	$\Delta a^*$ -value	2.05	2.14	3.01	2.52	2.68	
	$\Delta b^*$ -value	0.32	0.21	0.37	-2.19	-10.29	

## Pigmented ink color BLACK fading reading



Panel	Parameter	Exposition time					
		Initial	48 h	200 h	400 h	750 h	2000 h
Uncoated	L - value	19.88	19.79	24.11	23.32	22.67	---
	a*-value	0.51	0.30	0.86	1.45	1.50	---
	b*-value	-0.67	0.33	0.25	1.41	2.43	---
Coated with lacquer:							
Improved	L - value	28.24	28.57	28.02	28.41	29.29	---
	a*-value	1.24	0.74	0.55	0.54	0.44	---
	b*-value	-4.46	-3.27	-3.19	-2.81	-2.62	---
Extended	L - value	31.30	31.31	31.30	31.25	30.99	---
	a*-value	1.70	1.04	0.68	0.58	0.52	---
	b*-value	-8.3	-6.31	-5.37	-4.98	-4.60	---
Ultra Extended	L - value	31.98	32.16	31.96	31.00	31.27	---
	a*-value	1.55	1.09	0.68	0.50	0.64	---
	b*-value	-11.26	-10.34	-8.85	-8.59	-8.84	---

## Pigmented ink color BLACK fading reading



Panel	Parameter	Exposition time					$\Delta E_{0-750h}$
		0-48 h	0-200 h	0-400 h	0-750 h	0-2000 h	
Uncoated	$\Delta L$ - value	-0.09	4.23	3.44	2.79	---	4.29
	$\Delta a^*$ -value	-0.21	0.35	0.94	0.99	---	
	$\Delta b^*$ -value	1.00	0.92	2.08	3.10	---	
Coated with lacquer:							
Improved	$\Delta L$ - value	0.33	-0.22	0.17	1.05	---	2.26
	$\Delta a^*$ -value	-0.50	-0.69	-0.70	-0.80	---	
	$\Delta b^*$ -value	1.19	1.27	1.65	1.84	---	
Extended	$\Delta L$ - value	0.01	0.00	-0.05	-0.31	---	3.90
	$\Delta a^*$ -value	-0.66	-1.02	-1.12	-1.18	---	
	$\Delta b^*$ -value	1.99	2.93	3.32	3.7	---	
Ultra Extended	$\Delta L$ - value	0.18	-0.02	-0.98	-0.71	---	2.68
	$\Delta a^*$ -value	-0.46	-0.88	-1.05	-0.91	---	
	$\Delta b^*$ -value	0.92	2.41	2.67	2.42	---	