



Off-Press Proof Application Data Sheet

HP Indigo 7000 Digital Press / HP Indigo Press 5500/5000, CGS ORIS Press Matcher Pro, ORIS Pearl Digital 170

Certification category - GRACoL Coated #1

The IDEAlliance Print Properties Working Group has established a certification process for off-press proofs as input material to publications. In accordance with this process, “the appearance of a hard copy or monitor proof used in this application must have the ability to closely match specific CGATS or other documented characterization data sets within outlined tolerances.” See further explanations and recommendations outlined on www.swop.org or www.gracol.org. The following information is intended to assist producers and consumers in the use of vendor specified proofing materials in an off-press proof application.

I. Manufacturer

Hewlett-Packard Company, Indigo Division, Kiryat Weizmann, P.O. Box 150, Rehovot 76101, Israel (Tel: +972 (8) 938-1818) North America contact, HP Indigo Customer Care Center, 1-800-204-6344

II. Product

1. Press: HP Indigo 7000 Digital Press / HP Indigo Press 5500/5000
2. Press RIP: Global Graphics Harlequin 7.2 r7
3. Proofing Software: CGS ORIS Press Matcher Pro Version 4.6
4. Substrate: CGS ORIS Digital Pearl 170
5. Certification Category: GRACoL Coated #1



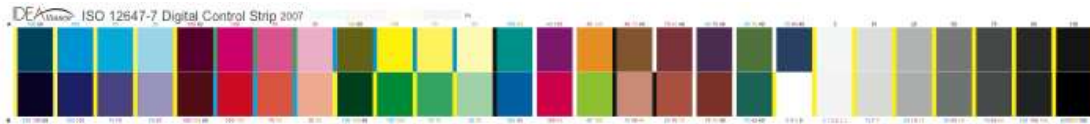
Certified: Feb 6, 2009

III. Introduction

The Hp Indigo Digital press utilizes liquid electro photography (LEP) to create offset and photo quality prints. Its high accuracy, consistency and uniformity make it well suited for both proofing and production. The CGS ORIS Press Matcher Pro color transformation process creates a color conversion table, which enables the HP Indigo Digital Press to reach the desired accuracy that is needed for GRACoL proofing level.

IV. Control Guide

IDEAlliance specifies a control guide, such as an IDEAlliance ISO 12647-7 Digital Control Strip 2007, be supplied on every off-press proof. As a minimum, any control guide used for proofing applications should contain solids for the primary process colors (YMCK), two-color overprints (RGB), and a three-color overprint (YMC), as well as a 25%, 50%, and 75% tint in stated line screen resolution of each of the primary process colors and 3-color gray patches. All control guides should be checked for accuracy of the original values. Use and interpretation of a control guide is the responsibility of the creator.



V. System Components

1. Press: HP Indigo 7000 Digital Press / HP Indigo Press 5500/5000
2. Press RIP: Global Graphics Harlequin 7.2r7
3. Proofing Software: ORIS Press Matcher Pro Version 4.6
4. Substrate: ORIS Pearl Digital 170
5. X-Rite Eye-one iSis (UV-Included)

VI. Set by Step Procedure

HP Indigo Press with the use of CGS ORIS Press Matcher Pro can create proofs and production prints that meet or exceed GRACoL proofing criteria. The steps for achieving this goal are:

1. Install suitable substrate (see paragraph V) on HP Indigo Press
2. Run full color calibration on the HP Indigo Press (see “*HP Indigo – User Guide*”)
3. Create the color-transformation using CGS ORIS Press Matcher Pro
 - a. Create target using the CGS ORIS Press Matcher Pro – Color Transformation component
 - i. Target ICC profile should be “GRACoL2006_Coated1v2.icc”
 - ii. Chart should be “IT8.7-4 CMYK”
 - iii. More information please see: “*ORIS Color Tuner Version 5.4 - Calibrating and Applying Color Match*”
 - b. Load the target and print it on the press
 - i. Create a ticket template with color management turned off. “*HP SmartStream Production Pro Print Server - User Guide*”
 - ii. Line thinning should be turned on. *HP SmartStream Production Pro Print Server - User Guide*”
 - iii. More information can be found at “*HP SmartStream Production Pro Print Server - User Guide*”
 - c. Measure the target using the spectrometer X-Rite Eye-one iSis (UV-Included)
 - d. Enabled paper white simulation in the Color Transformation dialog box by clicking the Paper White Settings button, and then select “Calculate paper white”.
 - e. Load the measured data to ORIS Color Tuner, and create “Color Transform Table”
 - f. Steps [a-d], should be repeated until reaching the quality target (mean dEab<1.5)
 - i. dEab can be found on ORIS Color Tuner – Color Transformation, the third column
4. Verification can be done by measuring the IDEAlliance 12647-7 Color Control Strip, and compare to appendix1
5. Printing workflow
 - a. Create hot folder workflow using the CGS hot folder Manager component of ORIS Press Matcher Pro (for more information see: “*ORIS Color Tuner Version 5.4 - Calibrating and Applying Color Match*”)
 - b. The system is ready - output the proof job to HP Indigo Press hot folder (4colors) and print it
 - i. The input files should be CMYK.



VII. Finished Proof Characteristics

A proof with the color characteristics referenced in Appendix 1 is to be expected when measured from the IDEAlliance 12647-7 Color Control Strip, having been properly made to all the listed system components and finishing procedures. The measurement device used to compare CIE Lab data was X-Rite Eye-one iSis (UV-Included).

VIII. Sample Proofs

HP Indigo Division has supplied three (3) sets of hard copy proofs for retention that conform to this Application Data Sheet by an IDEAlliance certifying contractor.



**Appendix 1
Characterization Data CIELab Values**

IDEAlliance ISO 12647-7 Control Strip 2007 for GRACoL 2006 Coated #1

Patch ID Top	CIELab Data			Maximum
	L*	a*	b*	CIE ΔLab
A1	30.05	-22.65	-28.82	-
A2	54.96	-37.12	-50.00	5
A3	66.60	-25.13	-37.01	-
A4	82.64	-9.99	-17.85	-
A5	26.45	41.59	-1.73	-
A6	47.93	74.11	-3.01	5
A7	60.35	51.93	-5.67	-
A8	80.03	20.38	-5.35	-
A9	48.53	-5.30	49.19	-
A10	88.94	-5.02	93.17	5
A11	90.56	-4.57	63.58	-
A12	92.84	-2.51	24.77	-
A13	52.53	-53.19	-19.34	-
A14	37.89	52.56	-22.07	-
A15	70.88	22.91	72.40	-
A16	50.86	15.13	33.06	-
A17	42.17	33.42	13.25	-
A18	34.60	23.09	-17.15	-
A19	52.45	-18.04	26.12	-
A20	36.56	-1.43	-26.62	-
A21	92.88	-0.08	-1.96	-
A22	87.93	-0.20	-1.98	-
A23	77.43	-0.40	-1.93	-
A24	59.77	-0.53	-1.61	-
A25	39.75	-0.57	-1.02	-
A26	25.57	-0.21	-0.53	-
A27	14.95	0.19	-0.14	5

Patch ID Bottom	CIELab Data			Maximum
	L*	a*	b*	CIE ΔLab
B1	15.18	8.84	-24.61	-
B2	24.13	17.20	-46.14	6
B3	40.84	17.09	-35.77	-
B4	69.57	8.37	-19.26	-
B5	26.22	35.38	24.54	-
B6	47.37	68.25	48.79	6
B7	59.09	47.55	39.25	-
B8	78.62	17.92	18.20	-
B9	28.47	-39.38	12.04	-
B10	50.12	-68.43	25.00	6
B11	62.69	-41.44	20.96	-
B12	80.64	-14.75	8.25	-
B13	42.57	-16.27	-48.19	-
B14	48.28	70.95	17.76	-
B15	72.70	-25.21	65.09	-
B16	70.23	19.71	18.63	-
B17	53.40	36.61	28.63	-
B18	41.61	32.01	26.83	-
B19	45.40	-26.20	-3.82	-
B20	95.00	-0.02	-1.96	3
B21	92.43	0.19	-2.06	-
B22	86.74	0.31	-2.04	-
B23	75.52	0.07	-1.50	-
B24	57.54	-0.12	-1.44	3
B25	39.39	-0.30	-0.55	-
B26	23.00	0.17	-0.25	-
B27	8.46	0.34	0.44	-

Note: Color measurements comparing measured proof data to this reference data requires the use of a calibrated spectrophotometer.