

Vertis Color Communicator II™ SWOP Coated #5

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

Vertis Communications
250 West Pratt Street
18th Floor
Baltimore, MD 21201
410.528.9800

II. Product

The Vertis Color Communicator II™ is a hard copy proofing system utilizing the CGS ORIS Color Tuner™ rip software, Vertis semi-matte proofing paper, and Vertis branded Epson K3™ inks together with the following printers:

Epson Stylus Pro 7800™
Epson Stylus Pro 9800™

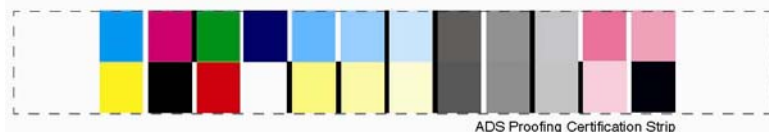
This document is to be used for making hard copy proofs for SWOP #5

III. Introduction

The Vertis Color Communicator II™ is a continuous tone digital inkjet proofing system used for producing color proofs in accordance with IDEAlliance specifications for hard copy proofing. The purpose of this document is to instruct the user in making a color proof to the IDEAlliance specifications for GRACol #1.

IV. Control Guide

IDEAlliance specifies that a control guide such as a SWOP Proofing Bar be supplied on every off-press proof. As a minimum, this guide should contain solids for the primary process colors and two-color overprints, as well as a 25%, 50%, and 75% tint in stated line screen resolution of each of the process colors and 3-color gray patches for 25%, 50%, and 75%. A control guide containing these imaging characteristics must be present on every proof. All control guides should be checked for accuracy of the original values. Use and interpretation of a control guide is the responsibility of the user.



V. System Components

The Vertis Color Communicator II™ consists of an Epson Stylus Pro 7800 or 9800 printer together with CGS ORIS Color Tuner™ rip software, Vertis semi-matte proofing paper, and Vertis branded Epson K3™ inks. To ensure the quality and consistency of the proofs the printer must be run in a controlled and calibrated state. The following steps are necessary to produce proofs that conform to this document.

- **Printer head alignment and cleaning**

Using the Control panel of the printer, check that the printer nozzles are clean and aligned correctly. Please refer to the Epson user manual for the specific procedure.

- **CGS Color Tuner™ Automatic Printer Calibration to the Reference Printer Profile**

Using the CGS ORIS Color Tuner™ software, perform an Automatic Printer Calibration of the Epson printer to the Reference Printer Profile. Please refer to the CGS Color Tuner™ manual for the specifics of this procedure. This Reference Printer Profile is provided by Vertis and can be obtained by calling 1-800-409-4888 ext. 4040

- **Vertis Measure Tool – Verification Procedure**

Using the Vertis Measure tool and an X-Rite Eye-One, the proofs must be measured 15 minutes or longer after the proof is made. The Vertis Verification tool utilizes spectral data to verify the proof is accurate. A confirmation label must be printed out and placed on back of the proof verifying accuracy. This will also store proof information in a Vertis database.

VI. Finishing Procedures

Allow the proof to dry for 15 minutes prior to making color evaluations and before taking densitometer and spectrophotometer readings.

VII. Finished Proof Characteristics

A proof with the color characteristics referenced in Appendix 1 is to be expected when measured from the ADS Proofing Certification Strip having been properly made to all the listed system components and finishing procedures.

Note: Three-color grays made up of Cyan, Magenta, and Yellow: 75, 66, 66; 50, 40, 40; and 25, 19, 19 values.

VIII. Sample Proofs

Vertis Communications has supplied three (3) sets of proofs that conform to this Application Data Sheet to IDEAlliance for its analysis and retention.

A proof with the color characteristics referenced in Appendix 1 is to be expected when measured from the ADS Proofing Certification Strip having been properly made to all the listed system components and finishing procedures.

IX. Additional Proof Data

When using complete VCC system with service contract in place, measured values from the ADS strip or the UGRA/FOGRA media wedge should be average CIE94 DE \leq 1.5, and a max per color of CIE94 DE \leq 3.

Appendix 1
Characterization Data CIELab Values

ADS Proofing Certification Strip SWOP 2006 Coated #5

Patch ID	CIELab Data			Maximum Delta E(ab)
	L*	a*	b*	
Paper	90.06	-0.01	4.14	3
Yellow Solid	85.43	-5.82	84.62	5
Yellow 75%	86.09	-5.37	64.65	-
Yellow 50%	87.06	-4.26	43.35	-
Yellow 25%	88.36	-2.35	22.94	-
Magenta Solid	47.64	69.97	-3.54	5
Magenta 75%	56.07	53.01	-3.15	-
Magenta 50%	66.63	34.02	-1.81	-
Magenta 25%	78.24	16.14	0.7	-
Cyan Solid	56.56	-37.98	-40.93	5
Cyan 75%	63.13	-28.69	-31.86	-
Cyan 50%	71.09	-18.91	-21.04	-
Cyan 25%	80.17	-9.3	-8.93	-
Black Solid	19	1.01	1.18	5
Black 75%	38.89	0.04	0.98	-
Black 50%	56.84	-0.35	1.34	-
Black 25%	73.53	-0.34	2.37	-
Red Solid	47.43	64.38	42.74	6
Green Solid	52.26	-61.49	26.76	6
Blue Solid	26.54	18.56	-42.01	6
3 Color 100%	24.73	0.21	-0.12	6
3 Color 75%	39.12	-0.3	1.18	-
3 Color 50%	42.61	-27.97	-17.89	3
3 Color 25%	71.43	0.13	2.35	-

Note: 3-color 25% and 75% CIELab values are calculations from the IT8/7.4 characterization data as these patches are not a subset of that data.

FOGRA Wedge Characterization Data CIELab Values for SWOP 2006 Coated #5

Patch ID	CIELab Data		
	L*	a*	b*
Top 1-1	56.56	-37.98	-40.93
Top 1-2	64.7	-26.67	-29.7
Top 1-3	74.66	-14.97	-16.25
Top 1-4	47.64	69.97	-3.54
Top 1-5	58.14	49.08	-2.95
Top 1-6	71.27	26.57	-0.9
Top 1-7	85.43	-5.82	84.62
Top 1-8	86.28	-5.18	60.33
Top 1-9	87.57	-3.62	34.92
Top 1-10	51.52	34.92	26.64
Top 1-11	39.68	20.08	14.53
Top 1-12	31.94	36.18	19.58
Top 1-13	32.13	39.93	-3.07
Top 1-14	48.3	0.4	37.18
Top 1-15	35.52	-32.59	13.72
Top 1-16	36.89	-23.99	-15.38
Top 1-17	22.3	8.91	-21.61
Top 1-18	83.35	-0.16	3.31
Top 1-19	76.87	-0.3	2.65
Top 1-20	63.64	-0.37	1.69
Top 1-21	49.96	-0.23	1.09
Top 1-22	35.02	0.23	0.98
Top 1-23	19	1.01	1.18
Bottom 2-1	26.54	18.56	-42.01
Bottom 2-2	40.3	15.39	-31.31
Bottom 2-3	58.71	9.32	-18.66
Bottom 2-4	47.43	64.38	42.74
Bottom 2-5	57.01	44.95	36.24
Bottom 2-6	69.81	23.76	24.45
Bottom 2-7	52.26	-61.49	26.76
Bottom 2-8	61.52	-39.1	20.93
Bottom 2-9	72.64	-20.24	13.24
Bottom 2-10	66.7	19.12	19.7
Bottom 2-11	68.36	21.69	65.39
Bottom 2-12	47.52	67.23	15.19
Bottom 2-13	37.79	50.15	-21.11
Bottom 2-14	70.77	-24.24	58.75
Bottom 2-15	54.38	-50.05	-13.62
Bottom 2-16	44.23	-17.41	-40.21
Bottom 2-17	90.06	-0.01	4.14
Bottom 2-18	82.97	-0.71	2.28
Bottom 2-19	76.35	-1.37	0.96
Bottom 2-20	63.01	-2.34	-0.55
Bottom 2-21	50.12	-3.02	-0.72
Bottom 2-22	38.32	-4.29	-1.11
Bottom 2-23	28.42	-6.54	-2.7

ISO12647-7 Digital Control Strip 2007

The IDEAlliance Print Properties Working Group has developed a new digital control strip for off-press proofs. As of November 2007, this control strip replaces the current FOGRA Wedge and proofing bar on the proofing certification test forms. This ADS Attachment provides the CIE Lab data for all fifty-four (54) patches contained in the new strip. These data sheets will replace Appendix 1 in the Application Data Sheets for all previous certified proofing systems to the specific data set for GRACoL C1, SWOP C3, or SWOP C5.



Control Strip Patch Values

Patch ID Top	Patch Tint % Values			
	CMYK_C	CMYK_M	CMYK_Y	CMYK_K
A1	100	0	0	60
A2	100	0	0	0
A3	70	0	0	0
A4	30	0	0	0
A5	0	100	0	60
A6	0	100	0	0
A7	0	70	0	0
A8	0	30	0	0
A9	0	0	100	60
A10	0	0	100	0
A11	0	0	70	0
A12	0	0	30	0
A13	100	0	40	0
A14	40	100	0	0
A15	0	40	100	0
A16	0	40	70	40
A17	0	70	40	40
A18	40	70	0	40
A19	40	0	70	40
A20	70	40	0	40
A21	0	0	0	3
A22	0	0	0	10
A23	0	0	0	25
A24	0	0	0	50
A25	0	0	0	75
A26	0	0	0	90
A27	0	0	0	100

Patch ID Bottom	Patch Tint % Values			
	CMYK_C	CMYK_M	CMYK_Y	CMYK_K
B1	100	100	0	60
B2	100	100	0	0
B3	70	70	0	0
B4	30	30	0	0
B5	0	100	100	60
B6	0	100	100	0
B7	0	70	70	0
B8	0	30	30	0
B9	100	0	100	60
B10	100	0	100	0
B11	70	0	70	0
B12	30	0	30	0
B13	100	40	0	0
B14	0	100	40	0
B15	40	0	100	0
B16	10	40	40	0
B17	20	70	70	0
B18	0	70	70	40
B19	70	0	40	40
B20	0	0	0	0
B21	3.1	2.2	2.2	0
B22	10.2	7.4	7.4	0
B23	25	19	19	0
B24	50	40	40	0
B25	75	66	66	0
B26	100	100	100	0
B27	80	70	70	100

Appendix 1
Characterization Data CIELab Values

ISO12647-7 Digital Control Strip 2007 for GRACoL 2006 Coated #1 Data Set

Patch ID Top	CIELab Data			Maximum
	L*	a*	b*	ΔE (ab)
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	-

Patch ID Bottom	CIELab Data			Maximum
	L*	a*	b*	ΔE (ab)
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	-

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

Appendix 2
Characterization Data CIELab Values

ISO12647-7 Digital Control Strip 2007 for SWOP 2006 Coated #3 Data Set

Patch ID Top	CIELab Data			Maximum
	L*	a*	b*	ΔE (ab)
A1	31.96	-21.01	-26.32	-
A2	56.99	-37.23	-44.95	5
A3	66.07	-27.13	-33.53	-
A4	80.52	-11.80	-15.33	-
A5	25.80	40.75	-2.90	-
A6	47.84	72.08	-3.11	5
A7	58.95	51.61	-4.46	-
A8	78.03	20.64	-3.18	-
A9	47.67	-4.29	45.76	-
A10	87.97	-5.03	88.10	5
A11	89.28	-5.09	62.78	-
A12	91.24	-2.93	25.28	-
A13	54.86	-51.51	-16.56	-
A14	38.04	51.19	-21.63	-
A15	69.74	23.44	67.23	-
A16	49.55	15.84	31.56	-
A17	40.89	33.29	12.00	-
A18	34.01	22.69	-16.52	-
A19	52.24	-17.96	25.88	-
A20	36.91	-2.13	-25.08	-
A21	90.46	-0.06	-0.21	-
A22	85.69	-0.18	-0.70	-
A23	75.49	-0.39	-1.61	-
A24	58.21	-0.51	-2.27	-
A25	39.28	-0.34	-1.80	-
A26	26.88	-0.14	-0.89	-

Patch ID Bottom	CIELab Data			Maximum
	L*	a*	b*	ΔE (ab)
B1	15.57	11.13	-25.12	-
B2	26.85	18.10	-44.32	6
B3	40.85	16.19	-34.08	-
B4	67.49	7.60	-17.17	-
B5	25.19	35.01	22.46	-
B6	46.86	66.21	45.03	6
B7	57.68	47.17	37.42	-
B8	77.94	18.06	18.43	-
B9	29.42	-36.88	12.46	-
B10	52.12	-64.75	24.83	6
B11	63.15	-41.26	21.06	-
B12	79.23	-15.72	8.94	-
B13	44.63	-16.62	-44.13	-
B14	47.87	69.02	16.49	-
B15	72.78	-24.61	60.84	-
B16	68.56	20.02	18.67	-
B17	52.11	36.50	27.30	-
B18	40.29	32.11	25.13	-
B19	45.95	-26.09	-3.01	-
B20	92.50	0.00	0.00	3
B21	90.08	-0.02	-0.08	-
B22	84.59	-0.04	-0.22	-
B23	73.54	-0.15	-0.48	-
B24	56.29	-0.48	-0.41	3
B25	39.80	-0.33	0.14	-
B26	24.79	0.22	-0.52	-

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

Appendix 3
Characterization Data CIELab Values

ISO12647-7 Digital Control Strip 2007 for SWOP 2006 Coated #5 Data Set

Patch ID Top	CIELab Data			Maximum
	L*	a*	b*	ΔE (ab)
A1	32.65	-22.26	-23.31	-
A2	56.56	-37.98	-40.93	5
A3	64.70	-26.67	-29.70	-
A4	78.29	-11.19	-11.42	-
A5	26.42	40.29	-3.23	-
A6	47.64	69.97	-3.54	5
A7	58.14	49.08	-2.95	-
A8	75.88	19.59	0.11	-
A9	47.09	-4.83	44.51	-
A10	85.43	-5.82	84.62	5
A11	86.28	-5.18	60.33	-
A12	88.09	-2.76	26.91	-
A13	54.38	-50.05	-13.62	-
A14	37.79	50.15	-21.11	-
A15	68.36	21.69	65.39	-
A16	48.86	15.14	31.31	-
A17	40.69	32.61	12.52	-
A18	33.04	22.15	-14.98	-
A19	51.08	-17.54	25.50	-
A20	36.75	-2.64	-22.16	-
A21	87.97	-0.06	3.85	-
A22	83.35	-0.16	3.31	-
A23	73.53	-0.34	2.37	-
A24	56.84	-0.35	1.34	-
A25	38.89	0.04	0.98	-
A26	27.07	0.55	1.06	-

Patch ID Bottom	CIELab Data			Maximum
	L*	a*	b*	ΔE (ab)
B1	15.76	11.76	-23.91	-
B2	26.54	18.56	-42.01	6
B3	40.30	15.39	-31.31	-
B4	65.80	7.14	-13.75	-
B5	26.49	34.78	21.45	-
B6	47.43	64.38	42.74	6
B7	57.01	44.95	36.24	-
B8	74.61	17.32	19.99	-
B9	30.65	-35.02	14.67	-
B10	52.26	-61.49	26.76	6
B11	61.52	-39.10	20.93	-
B12	76.68	-14.80	10.89	-
B13	44.23	-17.41	-40.21	-
B14	47.52	67.23	15.19	-
B15	70.77	-24.24	58.75	-
B16	66.70	19.12	19.70	-
B17	51.52	34.92	26.64	-
B18	40.31	31.25	24.75	-
B19	45.31	-25.37	-1.12	-
B20	90.06	-0.01	4.14	3
B21	87.67	0.00	3.75	-
B22	82.19	-0.02	3.09	-
B23	71.47	-0.07	2.12	-
B24	54.70	-0.44	1.24	3
B25	39.10	-0.23	1.19	-
B26	24.73	0.21	-0.12	-

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