Off-Press Proof Application Data Sheet

ColorBurst® RIP Proofing System for GRACoL Coated #1 proofs

Using the Epson Stylus® Pro 11880 printer, UltraChrome K3™ inks with Vivid Magenta, & Epson Standard Proofing Paper

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

ColorBurst Systems (CSE, Inc.)
44710 Cape Court
Suite 142
Ashburn, VA 20147

II. Product

ColorBurst® RIP Proofing System

- ColorBurst® RIP (Mac & Windows)
- Epson Stylus® Pro 11880
- UltraChrome K3™ inks with Vivid Magenta
- Epson Standard Proofing Paper

III. Introduction

The ColorBurst® RIP combined with the Epson Stylus® Pro 11880, UltraChrome K3™ Inks with Vivid Magenta, and Epson Standard Proofing Paper is a non-halftone, ICC color managed, digital ink jet color proofing system. The ColorBurst RIP Proofing System provides a high quality, continuous tone, color accurate proof. This document is intended to assist users in calibrating and verifying their ColorBurst RIP Proofing System for use in proofing workflows (e.g. SWOP®, GRACoL®, etc.). Proofs made according to this document were certified in accordance with the process established by the IDEAlliance Print Properties Working Group.

IV. Control Guide

IDEAlliance specifies a control guide such as an ADS Proofing Certification Strip be supplied on every off-press proof. As a minimum, this guide 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.

ADS Proofing Certification Strip

V. System Components

For a ColorBurst RIP Proof to be considered a "SWOP" proof, the following components must be used:

- ColorBurst® RIP software (Mac 5.5 or later, Windows 8.0 or later)

- ColorBurst Environment file: SP11880 SWOP Epson Standard Proofing Paper PK

- Epson Stylus® Pro 11880 printer using UltraChrome K3™ Inks with Vivid Magenta

- Epson Standard Proofing Paper

- SpectralVision Pro software (included with ColorBurst RIP software)

- Supported spectrophotometer (must have a UV filter)

  - ✓ X-Rite: DTP20 (PULSE), DTP41, DTP45, or DTP70

  - ✓ X-Rite (GretagMacbeth): Eye-One Pro, Eye-One iO, Eye-One iSis, iCColor, or SpectroScan

- Calibrated workflow (to ensure color quality and consistency, ColorBurst Systems specifies that all proofs must be created in a workflow where calibration procedures are followed)

VI. Finishing Procedures

The following finishing instructions are necessary in order for the ColorBurst RIP Proofing System to conform to this Application Data Sheet.

1. Select the **SP11880 SWOP Epson Standard Proofing Paper PK** environment in the ColorBurst RIP (see the ColorBurst RIP Manual for information on setting up the ColorBurst RIP and selecting printer environments).

2. Perform a relinearization using a supported spectrophotometer (see the SpectralVision Pro Manual for instructions on performing a relinearization and steps for troubleshooting).

   Note that the Baseline values contained in the environment are crucial to the accuracy of the ICC profile for the SP11880 printer and should *not* be changed.

3. Save the environment file with a new name. If the goal is to match the provided measurements in Appendix 1, then any ICC profile settings in ColorBurst should *not* be changed.

   - ✓ CMYK Input Profile = **ColorBurst GRACoL G7.icc**
   - ✓ Rendering Intent = **Absolute Colorimetric**
   - ✓ CMYK Output Profile = **SP11880 SWOP Epson Standard Proofing Paper PK.icc**
   - ✓ Simulation Profile = **None**

4. Print out a control guide such as the ADS Proofing Certification Strip or the ColorBurst RIP Proofing Color Bars (the latter is provided with the ColorBurst RIP).

   Color bars should be given a *minimum* of 15 minutes to dry before any measurements are done.

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 and Ugra/FOGRA Media Wedge CMYK-EPS V2.0x having been properly made to all the listed system components and finishing procedures.

Important: For greatest sheet-to-sheet consistency, a Custom Paper should be created on the front panel of the printer. Choose a platen gap setting of Narrow, and change the Media Thickness to 2 (after printing the test pattern).

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

All data listed in Appendix 1 was taken directly from the GRACoL2006_Coated1 data set (provided by IDEAlliance).

VIII. Sample Proofs

ColorBurst Systems (CSE, Inc.) has supplied three (3) sets of hard copy proofs for retention or has had their monitor system verified that it conforms to this Application Data Sheet by an IDEAlliance certifying contractor.

IX. Additional Proof Data

Additional information on creating proofs with the ColorBurst RIP Proofing System can be provided by contacting support@colorburstrip.com.

Appendix 1

Characterization Data CIELab Values

ADS Proofing Certification Strip GRACoL 2006 Coated #1

Patch ID	CIELab Data			Maximum Delta E(ab)
	L*	a*	b*	
Paper	95	-0.02	-1.96	3
Yellow Solid	88.94	-5.02	93.17	5
Yellow 75%	90.28	-4.69	69.03	-
Yellow 50%	91.66	-3.87	43.57	-
Yellow 25%	93.15	-2.14	20.33	-
Magenta Solid	47.93	74.11	-3.01	5
Magenta 75%	57.88	56.32	-5.35	-
Magenta 50%	70.24	35.3	-6.06	-
Magenta 25%	82.55	16.79	-4.98	-
Cyan Solid	54.96	-37.12	-50	5
Cyan 75%	64.5	-27.32	-39.44	-
Cyan 50%	74.69	-17.15	-27.45	-
Cyan 25%	84.68	-8.25	-15.29	-
Black Solid	14.95	0.19	-0.14	5
Black 75%	39.75	-0.57	-1.02	-
Black 50%	59.77	-0.53	-1.61	-
Black 25%	77.43	-0.4	-1.93	-
Red Solid	47.37	68.25	48.79	6
Green Solid	50.12	-68.43	25	6
Blue Solid	24.13	17.2	-46.14	6
3 Color 100%	23	0.17	-0.25	6
3 Color 75%	39.4	-0.54	-0.45	-
3 Color 50%	57.54	-0.12	-1.44	3
3 Color 25%	75.41	0.3	-1.36	-

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 GRACoL 2006 Coated #1

Patch ID	CIELab Data		
	L*	a*	b*
Top 1-1	54.96	-37.12	-50
Top 1-2	66.6	-25.13	-37.01
Top 1-3	78.64	-13.52	-22.72
Top 1-4	47.93	74.11	-3.01
Top 1-5	60.35	51.93	-5.67
Top 1-6	75.1	27.61	-5.85
Top 1-7	88.94	-5.02	93.17
Top 1-8	90.56	-4.57	63.58
Top 1-9	92.21	-3.24	33.89
Top 1-10	53.4	36.61	28.63
Top 1-11	40.54	20.86	14.82
Top 1-12	31.57	36.9	22.52
Top 1-13	32.32	40.62	-2.26
Top 1-14	49.01	0.15	40.24
Top 1-15	33.5	-36.22	11.08
Top 1-16	35.04	-25.01	-20.6
Top 1-17	20.89	6.27	-23.5
Top 1-18	87.93	-0.2	-1.98
Top 1-19	80.88	-0.38	-1.99
Top 1-20	67.04	-0.47	-1.76
Top 1-21	52.32	-0.59	-1.47
Top 1-22	35.39	-0.56	-0.87
Top 1-23	14.95	0.19	-0.14
Bottom 2-1	24.13	17.2	-46.14
Bottom 2-2	40.84	17.09	-35.77
Bottom 2-3	61.97	10.77	-23.84
Bottom 2-4	47.37	68.25	48.79
Bottom 2-5	59.09	47.55	39.25
Bottom 2-6	73.54	24.66	23.99
Bottom 2-7	50.12	-68.43	25
Bottom 2-8	62.69	-41.44	20.96
Bottom 2-9	76.12	-20.37	11.54
Bottom 2-10	70.23	19.71	18.63
Bottom 2-11	70.88	22.91	72.4
Bottom 2-12	48.28	70.95	17.76
Bottom 2-13	37.89	52.56	-22.07
Bottom 2-14	72.7	-25.21	65.09
Bottom 2-15	52.53	-53.19	-19.34
Bottom 2-16	42.57	-16.27	-48.19
Bottom 2-17	95	-0.02	-1.96
Bottom 2-18	87.56	-0.34	-3
Bottom 2-19	80.65	-1.08	-3.55
Bottom 2-20	66.41	-2.16	-3.96

Bottom 2-21	52.3	-2.93	-3.25
Bottom 2-22	38.23	-4.77	-3.5
Bottom 2-23	26.57	-7.05	-4.13