



Certified 10/13/06



## Off-Press Proof Application Data Sheet

### GMG ColorProof

HP Z2100 Photo Series using

HP Vivera inks and

GMG Proofing Media satin low gloss 250g

GRACoL #1 commercial

IDEAlliance has approved the use of off-press proofs as input material to publications. IDEAlliance specifications recommend that: "The appearance of a hard copy or monitor proof used in this application must closely simulate Certified Proof." See other explanations and recommendations outlined on [www.swop.org](http://www.swop.org) or [www.gracol.org](http://www.gracol.org).

The following information is intended to assist producers and consumers in the use of proofing materials in an off-press proofing application

#### I. Manufacturer

GMG Americas  
35 Pond Park Road, Suite 17  
Hingham, MA 02043-4366

#### II. Product

GMG ColorProof – HP Z2100 Photo Series using HP Vivera inks and GMG Proofing Media semi matte 250g - GRACoL #1 commercial

#### III. Introduction

The GMG ColorProof color management software combined with the HP Z2100 ink jet printing devices provides a continuous tone contract quality proofing system.

The GMG ColorProof software includes four main components that are part of the standard software package:

- GMG ColorProof with 4-D GMG color engine
- GMG profile editor
- GMG RIP Server for PDF and Postscript®
- GMG Spotcolor editor

The GMG ColorProof software can drive up to three devices in parallel without any quality or performance compromise. All connected printers will meet the color requirements for GRACoL® compliant proofing.



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### IV. Control Guide

IDEAlliance specifies a control guide to 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.



GMG recommends usage of the international defacto standard Fogra Mediawedge, which complies with the IDEAlliance guidelines and also the ISO standard.



The FOGRA wedge is included free of charge with every ColorProof install.

### V. System Components

The following GMG ColorProof components and calibration procedures must be used to achieve conformance with this specification:

- GMG ColorProof Off-Press Proofing System Components

GMG ColorProof Software 4.1.15 or later  
 HP Z2100 Photo Series printer in 24 or 44 inch  
 with HP Viverna Inks  
 GMG Proofing Paper semi matte 250

- Printer Calibration Procedure

To meet GRACoL standards, the HP Z2100 Photo Series printers must be calibrated by using the GMG ColorProof printer calibration procedure.

*The calibration, has to achieve the following Delta E values:*

- Average  $\Delta E$  must be below 0.50*
- Maximum allowed  $\Delta E$  must be below 1.50*
- Average  $\Delta L$  must be below 0.50*
- Maximum allowed  $\Delta L$  must be below 1.50*

- Color Matching Profile

GRACoL2006\_#1\_commercial\_HPZ2100\_GMG250\_V1.mx4\*



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- Proofing media

The GMG Proofing Paper semi matte 250 has to be used with the above profiles. GMG guarantees a paper stability of 1  $\Delta E$  from roll to roll.

- Digital Proof control Strips

All proofs created with GMG ColorProof must contain a proofing bar to verify conformance as described under *IV. Control Guide*.

\* All calibrations and profile files are available on the GMG ColorProof software CD-ROM or webpage.

## **VI. Finishing Procedures**

By using the GMG ColorProof off-press proofing system, described in this ADS, no finishing procedures are required.

## **VII. Finished Proof Characteristics**

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

All measurements to control and verify SWOP and GRACoL proof have to be done with the X-rite Eye One (D50, 2 degree observer, no UV filter, white backing).

## **VIII. Sample Proofs**

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



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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.



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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



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Bottom 2-22	38.23	-4.77	-3.5
Bottom 2-23	26.57	-7.05	-4.13