Color Management

Ink is color... therefore, our focus starts at the very beginning of the print production process. Superior plays an active role in your color management effort. Our ink and color scientists will work in collaboration with your pre-press and pressroom operations to help establish and maintain a repeatable color management process in your company. Simply stated, a synchronized color-managed workflow has become critical to the profitable production of print.

Print is the centerpiece of the workflow. Superior can fulfill your ink requirements in the sheetfed, web and UV arenas.

At Superior, we stand ready to consult with you on all your workflow and color management issues.

About G7™

G7, the new IDEAlliance proof to print process, is based on principles of digital imaging, spectrophotometry, and computer-to-plate (CtP) technologies. G7 is currently being applied to many types of printing including commercial and publication printing, newsprint and even flexo. This new methodology utilizes existing ISO 12647 Standards as the basis for good printing. G7 requires printing inks defined by ISO 2846-1 so that the dry solids measure as close as possible to the ISO CIE L*a*b* values for seven colors - the four primary colors and three 2-color overprints specified in ISO 12647. Because our goal is to specify a simple calibration process that will help the printers reliably achieve a close 'visual match' from proof to press, G7 breaks from tradition by focusing on colorimetric data for gray balance in the mid-tones rather than on densitometric aims, i.e. dot gain, for each color. G7 is named for its gray scale calibration technique and the 7 ISO ink colors it requires. G7 is a trademark of IDEAlliance.

The G7™ Experts Program

In order to extend the reach of the new G7 printing methodologies for industry professionals, IDEAlliance established the GRACoL Experts Program. Experts are individuals with established experience in color management and pressroom techniques. Each candidate has participated in hands-on G7 training and have demonstrated their ability to train their clients to implement the G7 press-to-proof process. These experts serve as IDEAlliance agents to qualify MasterPrinters throughout the world.

Superior has certified G7 Experts in house to assist you in the process.

G7 Calibration / Profiling Summary

A complete G7 calibration and profiling workflow consists of the following steps;

1. Prepare the equipment and materials
The first step is to make sure the device being calibrated is operating to manufacturer's specifications and using the correct consumables.

2. Print a Calibration target
The second step is to print a GRACoL P2P target on standard paper with colorants specified for the Process being calibrated, e.g. # 1 coated sheet and ISO – compliant inks. This target provides a snapshot of the natural NPDC and gray balance of the device being calibrated.

3. Compare 'found NPDC' to reference NPDC
The third step is to compare the NPDC of the calibration target to the pre-defined G7 NPDC curves, by measuring two gray scales from the P2P target – one printed in CMY only and another printed in Black only, and either drawing graphs on special G7 graph paper or entering the values into IDEAlink™ Curve software.

4. Compare 'natural gray balance' to reference gray balance
Next the natural gray balance of the device is compared either manually, using the GrayFinder target or automatically by IDEAlink Curve and the P2P target.

5. Calibrate the RIP or device driver
Correction values are read from the graph, or from the Create Curves window of IDEAlink Curve software, and entered into the CtP RIP or driver as 'wanted' CMYK percentage values.

6. Verify the calibration
A new P2P target is printed through the newly-calibrated RIP or driver and the resulting NPDCs for CMY and Black, and gray balance, are checked for accuracy.

7. Print a Characterization target (optional)
Once gray balance and NPDCs are calibrated, an optional ICC profile can be created, if needed. In the case of a digital proofer, an ICC profile (or equivalent color management system) is normally essential for best results, but when calibrating an actual press, if NPDC and gray balance calibration was successful and if standard inks and paper are used, a standardized characterization data set (appropriate for that printing type) should avoid the need for a custom press profile.

8. Verify the Characterization (optional)
The last step in a full workflow is to create a hard-copy (or soft) proof that simulates the reference characterization data via ICC or other color management, and compare it to a proof or press sheet made in step 7.

GRACoL Print Characterization Data

Profile:	GRACoL2006 Coated1.txt
Substrate:	Grades #1 & #2 gloss / dull coated
LPI (for reference only):	175 LPI
TAC (Total Area Coverage):	340%

L*a*b* Aims D50 over white backing

	L*	a*	b*
Substrate	95.00	0.00	-2.00
Black	15.00	0.00	0.00
Cyan	55.00	-37.00	-50.00
Magenta	48.00	74.00	-3.00
Yellow	89.00	-5.00	93.00

DEab of 5 or less for all colors

2007 Densities / TVI

Black	1.70	/ 20
Cyan	1.45	/ 17
Magenta	1.45	/ 17
Yellow	1.00	/ 16

Densities are suggested starting points L*a*b* takes precedent

Neutral Density Aims minus Paper Density

25C/19M/19Y	25% CMY/K	.25 / .22
50C/40M/40Y	50% CMY/K	.54 / .50
75C/66M/66Y	75% CMY/K	.90 / .90

Measurement Conditions:
45°/0° or 0°/45° geometry, 2° observer, status T density, no filter, white backing

The Right Set

Our ISO 2846-1 compliant inks are formulated to provide excellent color reproduction with vivid overprints.

Evolution G7

Predictable performance and outstanding ink water balance.

Tack	Black	Cyan	Magenta	Yellow
Low	AE-1670	MBE-8733	DRE-1546	YC-3960
Medium	AE-1671	MBE-8734	DRE-1545	YC-3959

	Dense Black
Low	AE-1777
Medium	AE-1776

Biolocity

Environmentally responsible with low VOC levels.

Tack	Black	Cyan	Magenta	Yellow
Low	AE-2143	MBE-9147	DRE-1931	YC-4239
Medium	AE-2118	MBE-9117	DRE-1900	YC-4197
High	AE-2138	MBE-9140	DRE-1922	YC-4225

	Dense Black
Low	AE-2164
Medium	AE-2163

Super-Cure™ UV

Traditional UV for a variety of paper and board substrates.

Black	Cyan	Magenta	Yellow
UA-1635	UB-2398	UR-2200	UY-1578

Inter-Cure™ UV

Hybrid UV for both conventional and UV compatible rollers.

Black	Cyan	Magenta	Yellow
UA-1636	UB-2399	UR-2315	UY-1579

Plastik-Cure™ UV

For the widest range of plastics and foils.

Black	Cyan	Magenta	Yellow
UA-1638	UB-2400	UR-2317	UY-1580

For ISO 2846-1 compliant inks in our other product lines, please consult your Superior Ink sales representative.

About Superior

Founded in 1918, Superior Printing Ink Company, Inc. has grown to become the largest supplier of commercial sheetfed inks in North America. Our unique ability to understand the printer's needs, and then factor this understanding into product development has earned us a major share of the U.S. commercial printing ink market. Superior, a privately owned American company, owns and operates 17 full-service manufacturing branches in the U.S. and maintains over two dozen in-plant customer service locations. In addition, the company operates two wholly-owned subsidiaries dedicated to the manufacture of small press inks (Spinks Ink) and flexographic and gravure inks (Gotham Ink). Superior Printing Ink Company, Inc. is headquartered in Teterboro, New Jersey.

Superior Printing Ink Company has always been committed to education throughout the industry. We are proud members of key industry associations and research initiatives. As a printing ink manufacturer with an ISO certified Central Manufacturing Facility (Hamden, CT), we have made a deep commitment to on-going education throughout our company. The evolving nature of graphic communications requires that we continue our commitment to education.

Our motto,
'Modern Technology / Old Fashioned Service,'
truly describes our company and products.

MEMBER OF IDEAlliance®

Advancing Graphic Communications
PRINTING INDUSTRIES OF AMERICA

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BVQI ISO9001:2000 ANSI-RAB QMS ACCREDITED
ISO 9001:2000 Certified Quality Management System
CMF1 Hamden, CT

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Calibrating Proofing and Printing with G7®

Superior PRINTING INKS

Modern Technology / Old Fashioned Service™
since 1918