J.M. FRY INKS
A FAMILY COMPANY

PREPRESS COLOR CONTROL ESSENTIALS

MATCH THE SUBSTRATE. CONTROL THE CHEMISTRY. PROOF WITH CONFIDENCE.

1 COATED vs. UNCOATED PANTONE COLORS

The same formula can look different on different surfaces.

COATED (C)

PANTONE 213 C

- Brighter / cleaner appearance
- More vibrant color
- Sharper detail
- Ink stays more on the surface

UNCOATED (U)

PANTONE 213 U

- Softer / muted appearance
- Less gloss
- Slightly darker or flatter look
- More absorption into the sheet

WHAT CHANGES?

SURFACE SMOOTHNESS
Coated stock is smoother; uncoated is more porous.

ABSORPTION
Uncoated papers absorb more ink.

BRIGHTNESS
Coated reflects more light; appears brighter.

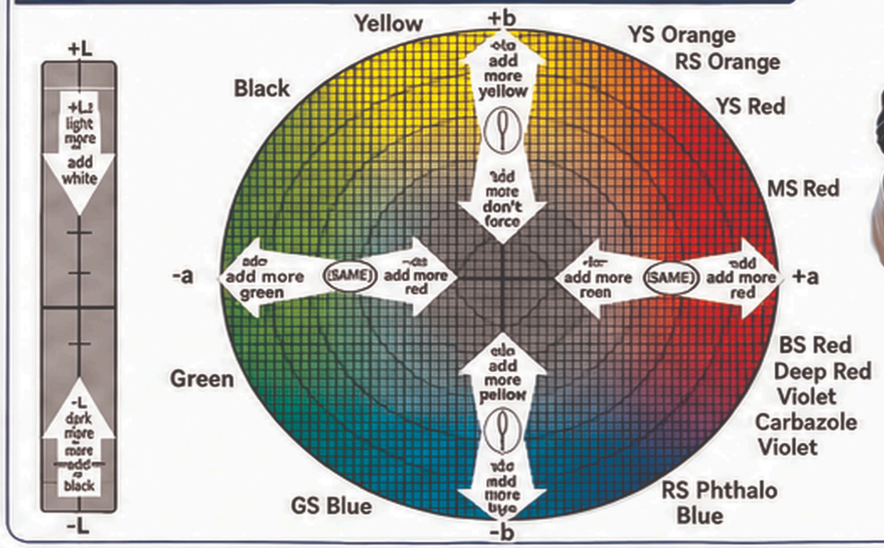
DETAIL
Coated shows crisper lines and fine detail.

PERCEIVED COLOR STRENGTH
The same formula can look different in strength.

CONTROL CHECKLIST

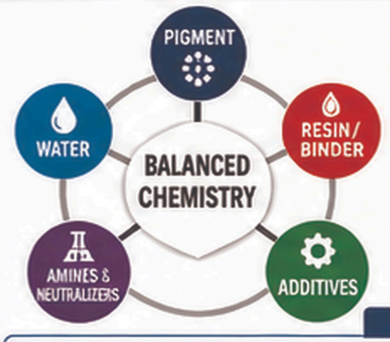
- Confirm coated or uncoated target
- Match Pantone to actual substrate
- Pull drawdowns on actual stock
- Review color under proper lighting
- Communicate expectations early

2 L* a* b* COLORSPACE NAVIGATION



*** Always refer to the original formula before making adds to the ink. Working within the listed ingredients will bring the color into tolerance in most instances.

3 WATER-BASED INK CHEMISTRY



WHY CHEMISTRY MATTERS

- Affects color strength and shade
- Impacts viscosity and flow
- Controls drying speed
- Influences adhesion and rub resistance
- Helps maintain print consistency
- Reduces waste, rework, and press adjustments

WHAT HAPPENS WHEN CHEMISTRY DRIFTS

- Low pH can reduce stability and affect transfer
- High viscosity can cause poor flow and dirty print
- Low viscosity can weaken color strength
- Poor balance can lead to slow drying or poor rub resistance
- Ink instability can cause inconsistency through the run

WATER-BASED INK CONTROL WORKFLOW

1. CHECK pH
2. CHECK VISCOSITY
3. MIX THOROUGHLY
4. MONITOR COLOR AND DRYING
5. SAMPLE OFTEN

4 HAND PROOFE COLOR SWATCH PROCESS

WHY HAND PROOFS MATTER

- Verify the ink formula before production
- Show how color will appear on the target substrate
- Check strength, shade, and color accuracy
- Spot potential over/under-inking, surprises, deviations
- Reduce trial-and-error, waste, and rework

WHAT A GOOD SWATCH LOOKS LIKE

- Smooth, even film
- Clean color laydown
- No streaks, skips, or chatter
- Accurate shade and strength
- Clearly labeled and repeatable

STEP-BY-STEP PROCESS

1. **PREPARE THE INK** — Mix thoroughly. Check pH, viscosity (CFU), and let ink if needed.
2. **SELECT THE SUBSTRATE** — Use the actual stock whenever possible. Label the sample clearly.
3. **APPLY THE INK** — Use a #2 wire-wound bar or orifti or orific a the start of the drawdown area.
4. **RUN THE HAND PROOFER** — Use the same ink on all runc ote to verify color color repeatability.
5. **DRY AND EVALUATE** — Let the swatch dry fully. Compare to target or proof approval.
6. **RECORD THE DETAILS** — Note formula, substrate, ink viscosity, date, and any adjustments.

COMMON PROBLEMS TO AVOID

- Dirty or damaged hand proofer
- Uneven pressure or speed
- Too much or too little ink
- Wrong substrate for the comparison
- Incorrect drying or before evaluation
- Poor pH or viscosity control

IMPORTANT: A hand proof is only as reliable as the process controls, substrate, ink consistency, and drying all affect the final swatch.

pH CHECKED | VISCOSITY VERIFIED | SAMPLE LABELED | COLOR EVALUATED | RESULTS DOCUMENTED

PREPRESS MASTER CHECKLIST

1. Confirm substrate and Pantone reference.
2. Review target color in L*a*b* direction.
3. Check ink chemistry and pH/viscosity.
4. Pull a clean hand proof on the actual substrate.
5. Verify appearance, communicate expectations, and document the result.

BETTER PREPRESS CONTROL. BETTER COLOR. BETTER RESULTS. | **CHECK. MATCH. PROOF. VERIFY. EVERY TIME.**