

Suggested Uses:

The 09 Matte Series was designed for use on polycarbonate (some hard coats), many polyesters (print-treated and top-coated), PVC *Note pg. 4 and some book cloths. **It is the responsibility of the end user to pretest all substrates with Norcote® products prior to use in production.**

Product Features

- Abrasion Resistant
- Chemical Resistant
- Excellent Adhesion
- Matte Finish
- Durable Surface

Printing Recommendations:

All inks should be thoroughly mixed prior to use. Inks are supplied at print ready viscosity for most applications. If adjustment is needed the 09-070 Thinner can be used to thin the ink. **Do not microwave this product.**

Mesh:

A mesh count of 305-355 threads per linear inch (120-140 cm²) low elongation, monofilament polyester is suggested. Tension should range from 18-25 N/cm² on a rigid frame.

Stencil:

All direct emulsions and thin capillary films (15-25µ before application) compatible with UV inks are acceptable.

Squeegee:

A sharp 80 shore durometer polyurethane squeegee is preferred. Inks can be printed with durometers ranging from 60-90 as well as dual durometer squeegees.

Curing Parameters:

Norcote® 09 Series inks cure only when exposed to UV light of the proper wavelength. Curing speeds depend on several factors including ink film thickness and the energy level of the lamps. Ink should be cured immediately after printing.



Curing Equipment:

09 Series inks are fast curing and work well with one 300 watts/in (120 watts/cm) or two 200 watt/in (80 watts/cm) focused medium pressure mercury vapor lamps with millijoules (mJ) and (mW) of:

200 mJ/cm² @ 600 + mW/ cm² minimum for most colors and clears.

300 mJ/cm² @ 600 + mW/ cm² minimum for opaque colors (blacks, whites, tans, grays, metallics, etc.). The 09 Series inks will cure up to 80 feet per minute (25 meters per minute) with most focused UV curing units.

Screen Cleaning:

Most conventional solvent cleaners work well. Alcohol based solutions must be avoided as they break down the emulsion. Norcote recommends Press Wash 110 (flash point 113° F), 140 (flash point 140° F) or NSW-824 (flash point 150° F). These products are used for cleaning ink off screens during on press color changes or before storing the screen. They work well when removing ink from squeegees, flood bars and other equipment. Contact us for packaging options.

Coverage:

Approximately 2,500 square feet per gallon (230 square meters per gallon) depending on printing variables affecting ink film thickness and coverage.

Mixing:

All Norcote® 09 Series colors are intermixable. The 09 Series matte clears may be combined to provide a wide range of textures and gloss levels for applications requiring a hard coat, matte overprint. The 09 Series inks may also be mixed with the 04 Series gloss inks to achieve a wider range of gloss levels.

Precautions:

Avoid direct contact of ink with skin and clothing. If contact occurs, wash affected area with warm soapy water and dry thoroughly. If eye contact occurs, irrigate the area with water for 15 minutes and consult a physician. For more specific information, refer to the relevant Material Safety Data Sheet.

Adhesion:

The 09 Series is a nonvisual post-curing system. Although further cross-linking occurs up to 24 hours later, the 09 Series inks should pass a crosshatch tape test, (ASTM #D3359-97), using 3-M 600 tape after exiting the curing unit and cooling to room temperature. Maximum chemical and abrasion resistance and adhesion will be attained after 24 hours. The use of 074 Adhesion Promoter may improve adhesion and surface durability.

Intercoat Adhesion:

09 Series inks intercoat adhesion is very good. Although loss of intercoat adhesion is difficult, it should be monitored throughout the production run especially when printing 3 or more passes. Use of additives may adversely affect intercoat adhesion.

Weatherability:

The 09 Series inks are not weatherable.

Heat-Sealing/Embossing:

The 09 Series inks are difficult to emboss and heat-seal without cracking of the ink film. Consult the Norcote® Technical Service Department prior to testing the 09 Series inks for applications that require heat-sealing or embossing.

Chemical Resistance:

The 09 Series inks have been exposed to a variety of chemicals to determine chemical resistance. The 09 Series has proved to be resistant to most common chemicals when properly cured.

Metallic Colors:

Most metallic pigments work well with the 09-CL Matting Clears. Ability to cure a suspension is related to pigment load and UV exposure. Select mesh with openings large enough to transfer the metallic pigments of choice; generally a mesh count of 305 threads per inch (120/cm) or lower is required. Metallic pigments will reduce the shelf life of 09 Series ink mixtures. RECOMMENDATION: Mix only enough metallic ink for one day.

09-CL6:

Use the 09-CL6 as an extender base or as a curing aid or as a base to suspend special effect pigments. If used as an extender base or as a curing aid, add up to 25% by weight to base colors. Use of 09-CL6 will affect lightfastness. Consult the Technical Service Department for details on optimum special effects pigment loading, and proper mixing instructions.

Color Range:

Specific colors can be matched at Norcote® against prints, wet ink or PANTONE® numbers.



Standard Colors:

Matte Mixing White	09-001	
Matte Mixing Black	09-005	
Matting Clear	CL2	4 day lead time
Matte Clear	CL3	"
Matte Satin Clear	CL4	"
Matte Velvet Clear	CL5	"
Low Texture Satin Finish	CL6	2 day lead time*
Signature Panel Clear	088	
Signature Panel White	1183	

Fluorescent Colors/JZB's:

Aurora Pink (Blue shade)	11 B
Aurora Pink (Yellow shade)	11 Y
Rocket Red	13
Fire Orange	14
Blaze Orange	15
Arc Yellow	16
Saturn Yellow	17
Signal Green	18
Horizon Blue	801
Corona Magenta	21

Metallics:

Gold Paste	040 (see note)
Silver Paste	042
Red Gold Paste	044
Copper Paste	046
Rich Gold Ink	240
Silver Ink	242

• 040 paste should be stored between 18C-35C to avoid solidification. If this occurs, reliquify the paste by placing it in an area with temperatures of 25C-35C.

Additives:

Check the Norcote Additives list for the products compatible with this ink series. The list is available on our website at www.norcote.com or call us at 800-488-9180 to receive a copy.



Storage & Available Warranties

All UV 09 Series inks should be stored in tightly closed, black polyethylene containers in an area with the temperature not to exceed 90° F (32.2° C). Avoid direct sunlight and indirect white light. Excess ink from print runs should be stored in separate containers to avoid contamination and is not covered under any warranty. When stored under these conditions, Norcote warrants the Products shall be free from defects in material and manufacture for a period of one (1) year from the date of sale for the 09 Series standard inks, with no additives, and for a period of one (1) month from the date of sale for any custom color containing Day Glo® JZB or T-Powder. Norcote will not warrant any custom colors **containing metallic pastes or any inks intermixed with competitor products**. Any warranties provided will be limited to the price paid for the actual products used which give rise to the warranty claim.

This Technical Bulletin is intended to be used for informational purposes only, and is in no way intended to create any warranties or other obligations on behalf of Norcote. All warranties, terms and/or conditions for a particular product will be specified on the applicable invoice and are only valid upon the creation of a legally-binding contract.

Testing

Due to the inability of Norcote to anticipate or control the conditions under which the Products and information relating thereto will be used and/or stored, Norcote cannot guarantee the results obtained from using the Products. Any Suggested Uses are merely representative, and because the final product will depend on a number of specific factors, the end user should pretest all substrates with the Products prior to use in production.

*PVC Plastics:

Decoration can aggravate embrittlement properties of PVC plastics which can lead to cracking and failure of the plastic. It is strongly recommended that the end user contact the polymer manufacturer to obtain information on the suitability for decorating with a UV ink as well as recommendations for molding / processing to reduce this potential. As every situation can not be tested for in a laboratory environment, it is the responsibility of the end user to determine the suitability of the products chosen for an end application.

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