

### Suggested Uses:

The PCI8 series was designed for use in many common container and tube applications where direct printing is required. This series is suitable for use on treated HDPE, treated LDPE tubes and containers, treated Polypropylene, Styrene, PET and PVC. For some applications requiring PET, flame treatment may be necessary to achieve acceptable adhesion. For additional suggestions and information, please contact Technical Service. **It is the responsibility of the end user to pretest all substrates with Norcote® products prior to use in production.**

### Product Features

- One Part
- Incredibly Flexible
- Compatible With Multiple Substrates
- Chemical Resistant  
Passes Multiple Acetone Wipes
- Quick Curing  
Hard Surface for Immediate Packaging
- Superb Gloss
- High Definition
- Enhanced Flow  
Minimal Waste During Start-Up (1-5 Containers)
- Excellent Intercoat Adhesion
- NVP Free

### 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 PCI8-070 Thinner or PCI8-049 Clear can be used to thin the ink. Do not microwave this product. Note that very high or low temperatures can change the ink's viscosity. This in turn can affect flow properties, print definition and the color opacity of the ink.

### Mesh:

A mesh count of 355 threads per linear inch and higher (140 cm<sup>2</sup>) low elongation, monofilament polyester is suggested. Tension should range from 18-25 N/cm<sup>2</sup> 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:

Curing speeds depend on several factors including ink film thickness and the energy level of the lamps. The PCI8 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/cm<sup>2</sup> @ 600 + mW/ cm<sup>2</sup> minimum for most colors and clears.

300 mJ/cm<sup>2</sup> @ 600 + mW/ cm<sup>2</sup> minimum for opaque colors (blacks, whites, tans, grays, metallics, etc.).

### Adhesion:

The PCI-8 series is a nonvisual post-curing system. Although further cross-linking occurs up to 24 hours later, the PCI8 series inks should pass a crosshatch tape test, (ASTM #D3359-97), using 3M 600 tape after exiting the curing unit and cooling to room temperature. In-line, direct flame treat of Polyethylene containers is recommended for optimum performance. The majority of PET and Styrene materials will not require flame treatment.

### Intercoat Adhesion:

PCI8 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 6 or more passes. Use of additives may adversely affect intercoat adhesion.

### 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. Note: Coverage, cure and color are affected by the mesh count, screen tension, squeegee durometer and other press variables.

## Mixing

All Norcote® PCI8 series colors are intermixable.

## Chemical Resistance:

The PCI8 series inks have been exposed to a variety of chemicals to determine chemical resistance. PCI8 series inks have proved to resist most common chemicals when properly cured. Allow 10-15 minute post cure prior to testing chemical resistance. For details contact the Technical Service Department.

## Water Resistance:

If water resistance is required, a cross-hatch tape adhesion must be attained upon exiting the curing unit and before any further testing is performed. Test thoroughly for conformance to your specific water resistance requirements.

## Metallic Colors:

Most metallic pigments work well with the PCI8-049 Clear. 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 PCI8 series ink mixtures. RECOMMENDATION: Mix only enough metallic ink for one day.

## 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.

## Color Range:

Specific colors can be matched at Nor-Cote® against prints, wet ink or PANTONE® numbers.

## Standard Colors:

<b>Radiant Yellow</b>	<b>PCI8-012 •</b>
<b>Brilliant Yellow</b>	<b>PCI8-016 •</b>
<b>Permanent Orange</b>	<b>PCI8-019 •</b>
Red	PCI8-022
Rhodamine Red	PCI8-023
Weatherable Fire Red	PCI8-241
Rose	PCI8-024
Emerald Green	PCI8-030
Spruce Green	PCI8-031
Permanent Blue	PCI8-034
Violet	PCI8-035
Reflex Blue	PCI8-037
Opaque Yellow	PCI8-2233
Lightfast Yellow	PCI8-2313
Lightfast Orange	PCI8-2872



• May not be suitable for lightfast applications and is not recommended for prolonged exposure to direct sunlight.

## Whites, Blacks and Clears:

Mixing White	PCI8-002
Opaque White	PCI8-1046
Opaque Black	PCI8-1019
Jet Black	PCI8-4100
Mixing Clear	PCI8-000 ♦
Overprint Clear	PCI8-049

## Fluorescent Colors T Powders:

Aurora Pink (Blue shade)	T-11
Rocket Red	T-13
Fire Orange	T-14
Blaze Orange	T-15
Arc Yellow	T-16
Saturn Yellow	T-17
Signal Green	T-18
Horizon Blue	T-19
Corona Magenta	T-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.

## ♦PCI8-000 Mixing Base

**Caution, this product is very reactive to fluorescent and incandescent light when not mixed into a pigmented ink.**

The ink can set up within 10-15 minutes. Store properly away from light sources. The PCI8-000 should be added into pigmented ink. This product increases cure and adhesion rates.

## 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](http://www.norcote.com) or call us at 800-488-9180 to receive a copy.



## Storage & Available Warranties

All UV PCI8 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). Do not freeze. Do not store ink below 32°F. 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 PCI8 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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