

PPC7 Series UV Curable Ink System

PPC7 SERIES UV SCREEN INK

The PPC7 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 Resistance (passes multiple acetone wipes)
- Quick Curing (hard surface for immediate packaging)
- Superb Gloss
- High Definition
- Enhanced Flow (minimal waste during start-up)
- Excellent Intercoat Adhesion

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 PPC7-070 Thinner or PPC7-049 Clear can be used to thin the ink. 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.

Do not microwave this product.

Mesh:

A mesh count of 355 threads per linear inch and higher (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.

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.

Cure Parameters:

Curing speeds depend on several factors including ink film thickness and the energy level of the lamps. The PPC7 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

Adhesion:

The PPC7 Series is a nonvisual post-curing system. Although further cross-linking occurs up to 24 hours later, the PPC7 Series inks should pass a cross-hatch 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:

PPC7 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.



PPC7 Series UV Curable Ink System

Mixing:

All Norcote® PPC7 Series colors are intermixable.

Chemical Resistance:

The PPC7 Series inks have been exposed to a variety of chemicals to determine chemical resistance. PPC7 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

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.

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.

Metallics:

Most metallic pigments work well with the PPC7-000 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 PPC7 Series ink mixtures. RECOMMENDATION: Mix only enough metallic ink for one day.

Using Metallics:

Metallic pigments will reduce the shelf life of ink mixtures. Actual shelf life will depend upon individual users conditions. As a general rule it is recommended to only mix enough metallic ink for one day.

Recommended mixing ratios are (by weight):

040 Gold Paste:	up to 20%*
042 Silver Paste:	up to 8%
044 Red Gold Paste:	up to 20%
046 Copper Paste:	up to 15%
038 Silver Powder:	up to 15%
240 Liquid Gold:	up to 30%
243 Silver Metallic:	up to 30%

Select mesh with openings large enough to transfer the metallic pigment of choice; generally a mesh count of 195-305 PW are recommended.

**040 Gold Paste should be stored between 64°-95°F (18°-35°C) to avoid solidification. If this occurs, reliquify the paste by placing it in an area with a*



PPC7 Series UV Curable Ink System

Color Range:

Custom and specific colors can be matched at Norcote® with customer supplied print sample, wet ink sample, Pantone® numbers as well as other recognized standards.

Standard Colors:

PPC7-012	Radiant Yellow•
PPC7-016	Brilliant Orange•
PPC7-019	Permanent Orange•
PPC7-021	Cha-Cha Red
PPC7-022	Red
PPC7-023	Rhodamine Red
PPC7-024	Rose
PPC7-030	Emerald Green
PPC7-031	Spruce Green
PPC7-034	Permanent Blue
PPC7-035	Violet
PPC7-037	Reflex Blue
PPC7-201	Primrose Yellow
PPC7-214	Lightfast Clm Orange
PPC7-2233	Opaque Yellow
PPC7-2313	Lightfast Yellow
PPC7-2872	Lightfast Orange

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

Whites, Blacks & Clears:

PPC7-002	Mixing White
PPC7-1046	Opaque White
PPC7-1056	Non-Chalking Opaque White
PPC7-1057	Nano-Opaque White
PPC7-005	Mixing Black
PPC7-1019	Opaque Black
PPC7-4100	Jet Black
PPC7-000	♦ Mixing Base
PPC7-049	Overprint Clear
PPC7-055	High Viscosity Overprint Clear

Fluorescent Colors/JZB's:

Fluorescent colors are available upon request. Fluorescent pigments are not light-fast beyond 60-90 days even with an overprint clear. For maximum brightness and color stability 230-260 plain weave monofilament mesh counts are recommended. Please contact our color match department for more information 800-488-9180.

♦PPC7-000 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 PPC7-000 should be added into pigmented ink. This product increases cure and adhesion rates.



PPC7 Series UV Curable Ink System

Storage & Available Warranties:

All UV PPC7 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 PPC7 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.

Revision: 08/14/2024

Supersedes: 04/15/2024

Norcote® International, Inc. Locations

World Headquarters
Norcote® International, Inc.
605 Lafayette Ave.
Crawfordsville, IN. USA 47933
800-488-9180

Nor-Cote® Int'l Pte. Ltd.
 Blk 4012 Ang Mo Kio Ave 10
 #07-06 Techplace 1
 Singapore 569628
 +65-6291-0898
 info_asia@norcote.com

Nor-Cote® Int'l Ltd.
 Unit 8, Warrior Park
 Chandlers Ford Ind. Est.
 Eastleigh Hampshire UK S053 4NF
 +44-2380-270542
 info@nor-cote.co.uk

Norcote® Internacionales
 de Mexico S.A. de C.V.
 1ra Calle No. 124 Oriente
 Colonia Miguel Alemán
 San Nicolás de los Garza
 Nuevo León, 66479
 +52-81-8394-8299
 infomexico@norcote.com

