Norcote Technical Bulletin



EFX-972 High Profile Clear

UV Curable Ink System

Suggested Uses:

The EFX-972 is a UV curable 1-part clear suitable for printed raised profile or highly tactile images and designs, including Braille applications. It is the responsibility of the end user to pretest all substrates with Norcote products prior to use in production.

Product Features

- o NVP and V-Cap Free
- Wide Processing Window
- o Adhesion to a wide variety of materials
- o Non-yellowing
- o Excellent Clarity
- o Unique Combination of Flexibily and Durability

Printing Recommendations:

All inks should be thoroughly mixed prior to use and are supplied at print ready viscosity. Do not microwave this product.

Mesh:

For optimum results, it is strongly recommended that a wire mesh between 80.0020 and 180.0018 pw be used. Tension should be between 40-70 N/cm². Provided the frame is structurally rigid, both glue and retensionable frames are suitable.

Stencil:

Use a direct/indirect stencil system compatible with UV inks with a thickness of 50-400 microns, depending on desired profile height.

Squeegee

Squeegee selection will depend on deposit/profile height. For applications requiring a nominal profile height, in combination with a 50 - 150 micron stencil, an 80 - 85 durometer molded squeegee and standard floodbr are suitable. For applications requiring a high profile, or for detailed images in combination with a 100 - 400 micron stencil, the Newman Constant Force Squeegee[™] and Newman Vector Floodbar[™] are recommended.

Curing Parameters:

Norcote[®] EFX-972 cures 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.

Coverage:

Coverage will vary significantly depending on ink deposit or profile height. Based on a nominal profile height (2.50 - 5 mils) coverage is approximately 400 -800 square feet per gallon, higher profiles (5 - 10 mils) will yeild approximately 200 - 400 square feet per gallon.

Curing Equipment:

Depending of profile height or deposit thickness, the EFX-972 requires one 300 watt/in (120 watts/cm) or two 200 watt/in (80 watts/cm) medium pressure mercury vapor or iron doped lamps. The EFX-972 will cure up to 125 feet per minute with most foucsed 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 sued for cleaning ink off screens during on press color changes or before storing the screen. They work well when removing ink from squeegee, floodbars and other equipment. Contact us for packaging options.

Adhesion:

The EFX-972 has exhibited excellent adhesion to a variety of materials. Norcote recommends that adhesion should always be checked for suitability prior to production. The EFX-972 is a nonvisual post -curing system.

Intercoat Adhesion:

The intercoat adhesion characteristics of the EFX-972 is very good. Although loss of intercoat adhesion is difficult, it should be monitored throughout the production run.

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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 Material Safety Data Sheet.

Storage & Available Warranties

EFX-972 ink 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 EFX-972 standard ink, 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 legallybinding 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.

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***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.