# Norcote Technical Bulletin



# **UVS-161 Spacer Ink**

**UV Curable Ink System** 

# **Suggested Uses:**

The UVS is a 1-part system recommended for use as a general purpose spacer in the construction of membrane switches at thicknesses of 5, 7, 10 mills and greater. This system is also used for Braille applications. It is the responsibility of the end user to pretest all substrates with Norcote® products prior to use in production.

#### **Product Features**

- NVP Free
- Superb Adhesion
- Fast Curing
- Resistant to Blocking
- Flexible

### **Printing Recommendations:**

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

#### Mesh:

A mesh count of 80-120 threads per linear inch(31-47 cm <sup>2</sup>) stainless steel is suggested. Tension should be 40-70 N/cm<sup>2</sup>, as per the screen manufacturers recommendation, on a rigid frame.

#### Stencil:

Use a direct/indirect stencil system compatible with UV inks with a thickness of 150-400 microns.

## Squeegee:

Due to the unique characteristics of the UVS-161 a special floodbar and squeegee are required for the best print quality. We recommend the Newman Constant Force Squeegee<sup>m</sup> and the Newman Vector Floodbar<sup>m</sup>.

#### **Curing Parameters:**

Norcote® UVS 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:**

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Approximately 200-400 square feet per gallon (18.58-37.16 square meters per gallon) depending on printing variables affecting the ink film thickness and coverage.



# **Curing Equipment:**

UVS requires one 300 watt/in (120 watts/cm) or two 200 watt/in (80 watts/cm) medium pressure mercury vapor lamps. The UVS will cure up to 100 feet per minute (30 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.

#### Mixing:

See Adhesion

#### **Adhesion:**

The UVS is a nonvisual post-curing system.

## Intercoat Adhesion:

UVS 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.

#### **UVS-170 Reducer Base:**

Enhances transfer of ink through the screen by reducing ink viscosity. Excessive amounts of 170 will cause a loss of edge definition and the filling in of detail. We recommend the addition of 170 in the range of 5%-20% by weight. The UVS-170 is warranted for 1 year from the date of manufacture when stored correctly. See storage and warranty.

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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**

All UVS-161 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 UVS-161 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 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.

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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.