

ELG-1400 Series UV Curable Ink System

The ELG-1400 was recently developed to complement our ELG UV Curable Conductive Silver line; as such we are still in beta test mode and have limited technical information available. This data sheet will be updated when test data is available.

Product Features:

- Ease of Use
- Excellent Intercoat Adhesion
- Very Good Leveling / Coverage

Printing Recommendations:

Processing or printing of ELG-1400 Series dielectric should be very similar to current UV curable dielectrics available on the market; i.e. screen mesh, ink film deposition, etc. The most significant difference will be seen in terms of ease of processing, cure speed, intercoat adhesion and compatibility with most commonly used PET substrates.

Do not microwave this product.

Mesh:

230 - 305 Plain weave low elongation, monofilament polyester mesh is recommended. Comparable wire or steel mesh can be used but is not required. Tension should be as such to provide low off contact with good snap off.

Stencil:

Direct or capillary emulsions that are UV compatible, with a dry micron thickness between 7-10 μm is recommended. Thicker stencils can be used based on the ability to cure the increased ink deposit.

Squeegee:

Cut (sharp) or molded 70-90 durometer or multi-durometer polyurethane blades that are UV compatible.

Coverage:

Approximate coverage is 2200-2500 sq. feet per gallon. This value is an approximate only and is dependent on printing variables affecting ink film thickness and coverage.

Adhesion:

ELG-1400 Series is a non-visual post curing system. Although further cross linking occurs up to 24 hours later, it should pass a cross hatch tape test using 3M 600 tape after exiting the cure unit and cooling to room temperature.

Intercoat Adhesion:

ELG-1400 Series intercoat adhesion is very good. Although loss of intercoat adhesion is difficult, it should be monitored throughout the product run, especially when printing 6 or more passes. Use of additives may adversely affect intercoat adhesion.

Cure Parameters:

Average cure rates are as follows:

	mJ/cm ²	mW/cm ²
UVA	179.36	614.39
UVB	171.39	577.86
UVC	27.234	94.775
UVV	152.79	523.72

These values are indicative of 2 medium pressure mercury bulbs set at 200 wpi with a belt speed of 80 fpm.

These guidelines are meant to be a starting point only. Curing requirements vary depending on ink film thickness, substrate type, etc. Testing should always be performed under actual productions to determine suitability.



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Additives:

There are currently no additives for this series. If further information is needed contact one of our Technical Service Representatives at 800.488.9180 or info@norcote.com.

Clean Up:

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), Press Wash 140 (flash point 140°F) or NSW-824 (flash point 150°F). These products are used for cleaning ink off screens during 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.

Precautions:

Gloves and/or barrier cream are recommended when handling UV inks. Avoid direct contact of ink with skin and clothing. If contact occurs wash affected area with warm soapy water (do not use solvents or thinners). If eye contact occurs, irrigate the area with water for 15 minutes and consult a physician. For more specific information refer to the relevant Safety Data Sheet.

Standard Colors:

ELG-1400	Clear
ELG-1419	Orange
ELG-1430M	Green
ELG-1434	Blue
ELG-14335	Violet

Storage & Available Warranties:

All ELG-1400 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 until the expiration date shown on the product label.

Norcote® will not warrant any ink intermixed 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 result 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 product to use in production.

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