



## Suggested Uses:

The M-14 is a 100% solids UV curable screen printing ink designed for use as an overprint clear. The M-14 has a smooth matte finish. **It is the responsibility of the end user to pretest all substrates with Norcote® products prior to use in production.**

## Product Features

- Smooth Matte Finish for Clear and Printed Surfaces
- Finger Print Resistance
- Mar Resistance
- Excellent Surface Durability
- Surface Hardness

## Printing Recommendations:

The M-14 is formulated to print from the container without the use of additives on a wide range of polycarbonate and polyester films commonly used in the Industrial Graphics Industry. All inks should be thoroughly mixed prior to use. Best results when printing flood areas are acquired by keeping ample amounts of ink in the screen.

## Thinner:

The M-14 is supplied in a print ready condition. Due to the surface of the printed ink, thinners are not recommended to reduce the viscosity. If the viscosity of the product needs to be adjusted, the use of 049 Clear is recommended. Contact the Technical Service Department for additional information on the use of clears in the M-14.

## Mesh:

305-380 plain weave meshes are recommended. Note that the mesh count selected will affect gloss values.

## Squeegee:

Sharp 70-90 durometer polyurethane blade or multi-durometer blades can be used. For optimal ink lay down, a sharp 80 durometer blade is recommended.

## Stencil:

Select direct emulsions or capillary films that are UV ink compatible.

## Coverage:

The average coverage is 2,000 - 3,000 square feet per gallon, depending upon ink deposit.

## 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.

## Packaging:

M-14 is available in one (1) kilo, and (4) kilo pails. Special packaging upon request. Contact Norcote for more information on large volume packaging.

## 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.

## Cure & Adhesion:

The M-14 Matte Clear is formulated to be cured under one 300 watt per inch medium pressure mercury vapor lamps (focused) and requires a minimum of 130 mJ/cm<sup>2</sup> (840 mw/cm<sup>2</sup> at 27 m/min). Please note the UV lamps selection and setting may affect the gloss level and performance.

Adhesion is determined by the use of a cross hatch / tape test (ASTM D-3359) on a printed part that is cooled to room temperature, applying 3M #600 tape. Adhesion was established on each of the tested materials under the curing conditions listed on the following page.

## Special Note:

The final gloss level of the M-14 matte clear can be affected by adapting an Infrared (IR) heater. The IR heater can be used in front of the UV lamp(s) prior to enter the UV curing system. There is no need to stop under the IR lamp. Keep the samples passing under the IR lamp at normal speed. Depending on the intensity of the IR lamp, the final reading of the gloss level at a 60 degree angle could range from 2 - 10. The stronger the IR lamp, the lower of the gloss. Other properties stay about the same. Screen mesh and other conditions will also play a role in the final print.



	Autoflex® EBG 77	Autoflex® EBA 7	Melinex® 561	Autoflex® EBG 75	GE 8010 Lexan®	GE GS135	ProTek® Clear PC	Makrofol® DE1-4	Makrofol® DE1-1	Marnot® CLR PET	Marnot® Clear PC
Milijoule	233.13	189.8	189.8	189.8	189.8	189.8	189.8	189.8	189.8	189.8	189.8
Watt	1.489	1.469	1.469	1.469	1.469	1.469	1.469	1.469	1.469	1.469	1.469
Belt Speed	125 FPM	155 FPM	155 FPM	155 FPM	155 FPM	155 FPM	155 FPM	155 FPM	155 FPM	155 FPM	155 FPM

## Storage & Available Warranties

All UV M-14 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 for a period of one (1) year from the date of sale for the M-14 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.

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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.