

LUMICRYL® 3053
UV/EB CURABLE RESIN SOLUTION
FOR ENERGY CURABLE COATINGS

Experimental Product



THE EDGE OF INNOVATION

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GENERAL DESCRIPTION

Lumicryl® 3053 is a UV/EB-curable acrylic macromer suitable for formulating coatings and inks for application on film, laminate, plastic, metal, wood, paper or other substrates. Cured coatings based on *Lumicryl® 3053* have high hardness and good chemical resistance. *Lumicryl® 3053* can be used to formulate clear, pigmented or highly filled systems.

Coatings utilizing *Lumicryl® 3053* may be applied using conventional application equipment such as roller, spray, flexo, gravure, screen and others. Formulations based on *Lumicryl® 3053* will dry to a tack-free, dry-to-touch, film after the solvent is flashed off. The dried, but uncured, coating remains in a thermoplastic state and can undergo intermediate processing such as stamping, forming, transfer laminating, thermal transfer, sanding, and re-coating prior to UV curing.

The addition of common photoinitiators during the formulating stage is generally sufficient to afford rapid cure of the coating after solvent removal.

TYPICAL PROPERTIES*

Solids	27 - 29%
Solvent	n-propyl acetate
Viscosity	25-50 cps
Gardner Color	2 Max
Specific Gravity	1.0 - 1.1 at 25°C

* Not to be used for specification purposes

BLOCKING RESISTANCE

Post-solvent evaporation uncured coated sheets placed face-to-face under a 1.0 lb/in² weight and stored in an oven at 42°C for 24 hours show no evidence of film transfer or blocking.

CURE CONDITIONS AND CURED FILM PROPERTIES

Most free radical producing initiators can be used such as benzophenone, Irgacure 651 and Irgacure 819. Cured films of *Lumicryl® 3053* have good chemical resistance (200 MEK double rubs) and high hardness (6H Pencil Lead). Optimum cured film properties are dependent upon appropriate use of additives and cure conditions.

The degree of UV cure may be increased by the application of heat just prior to UV exposure. Additional improvements in adhesion, cure rate and abrasion resistance are possible by utilization of appropriate additives in the fully formulated end-use product.

REGULATORY LISTINGS

The components in this material are either listed or exempt from listing due to compliance with polymer exemption criteria for the following chemical listing inventories: AICS (Australia), DSL (Canada), NZIoC (New Zealand), and TSCA (United States).

One or more components of this product are not REACH registered. Import quantities may be subject to limitation.

STORAGE AND HANDLING

Store unopened containers of *Lumicryl® 3053* below 25°C (77°F) away from direct sunlight, ignition sources, and heat sources. Maintain an adequate air headspace in the product container and do not blanket or mix with inert gas as this may render the inhibitor ineffective. Estron's warranty period is 6 months from date of shipment, though properly stored material may have a longer useful shelf life. Unexpected or uncontrolled temperature excursions during shipping, transit storage, and final storage may adversely affect useful shelf life and is beyond the manufacturer's control or responsibility.

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PACKAGING AND AVAILABILITY

This product is experimental and subject to change without notice. Contact your Estron Sales Representative for additional information and product availability.
35 lb. / 15.9 kg in steel pail

CONTACT INFORMATION

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Revision Date: August 5, 2019

TDS Revised by: D. Smith

TDS Approved by: F. Allen