Omniplus UL

Screen Inks

SERICOL *Product Information*

Omniplus UL is an ultra-violet curing ink system designed for printing onto a wide range of plastic substrates. This product is also capable of being vacuum formed.

Main Characteristics

Finish	Drying	Thinning & Wash-up	Mesh	Stencil Type	Coverage & Mesh No.	Applications	Colour Range
Trichromatics Satin Line Colours Gloss	20 - 30 metres per minute through 150.34 mesh with two 80 watt/cm^2 lamps. (see 'Curing Information')	**Thinning** 5% ZE850 Hardener, whenever forming is not required. Up to 10% ZE834 when forming is required. **Wash up** CPS Screen Wash A5 or Wash up No.1	140.34 - 165.34 PW monofilament	Any UV resistant stencil. **Recommended:** Capillary film or indirect film: Dirasol 916	Trichromatic Colours: 80 - 100 m^2/kg through 150.34 PW mesh Line Colours: 70 – 80 m^2/kg through 150.34 PW mesh	Self adhesive & rigid PVC, flexible banner PVC, PETG, some grades of PET, Polystyrene, Polycarbonate and Acrylic ** Banners pre-wiped with methylated spirits to remove plasticiser.	Seritone Pantone Matching System base colours and Trichromatic process colours.

Properties

Unlimited screen stability and excellent print definition. Solvent free with negligible atmospheric pollution.

Co-use with other inks and varnishes

It is not recommended that Omniplus UL is mixed with any other inks as this may adversely affect performance.

IMPORTANT: Stir well before every use.

Curing Information

The curing schedule quoted is typical for modern UV dryers. Actual drying rates for Omniplus UL depend on a number of factors, including film thickness, opacity, the number and type of lamps used (including lamp emission spectrum, power and efficiency) and also the plastic being printed.

Post Curing:

The chemical reaction initiated by the UV dryer will continue for some time after the dried prints have emerged from it. In certain circumstances, this reaction can adversely affect intercoat adhesion and care should, therefore, be taken to ensure that prints are not over-cured. The adhesion of subsequent colours, as well as the first colour down should be assessed at regular intervals.

Plastics

Certain plastics may be impregnated with lubricants which, similar to the migration of plasticisers, may impair adhesion and block resistance - even after considerable time post printing. This can usually be overcome by wiping the surface with white spirit before printing. Surface adhesive left from protective papers on PVC sheets should be thoroughly removed as per suppliers' instructions.

Certain plastics can become brittle when printed, sometimes even to the point of shattering, often only after several weeks. It is therefore essential to check compatibility between ink and plastic to guard against this problem.

Outdoor Use

Accelerated Weathering:

Tests have been conducted on prints produced using Omniplus UL colours, which indicate that provided application recommendations are followed, a life of around 1 year can be expected before significant colour deterioration becomes evident.

Pantone

The Omniplus UL Seritone colour system includes a Pantone™ approved matching database. Pantone colours may be easily and quickly mixed using formulae from the Omniplus UL Pantone Formula Book, the Sericol Colour Manager software and using Sericol Pantone Scales. Further details are available in the Sericol Pantone Mixing System Manual.

Storage

Omniplus UL inks and thinners should not be stored in direct sunlight or near warm pipes and should be kept away from peroxides. In the interests of maximum shelf life, storage temperatures should be between 10^{0}C and 25^{0}C. When stored in a cool environment, the inks and varnishes are expected to have a shelf-life of approximately 12 months from the date of manufacture.

Precautions to prevent blocking in the stack

Omniplus UL is a highly flexible, thermoplastic ink. Because of this, Omniplus UL may, in some circumstances, have a tendency to block in the stack. Care should therefore be taken to ensure that the product is fully cured. As there is a danger that most substrates will retain heat after curing, finished prints should be racked or stacked vertically until cool, and/or interleaved.

Where print is not required to be formed it is recommended that 5% ZE850 Omniplus Hardener should be added prior to printing, to maximize cure and minimize any tendency to block.

Special Recommendations

To obtain the best results from the Omniplus UL system, the following recommendations must be followed during colour matching and print production:

1. The colours which comprise the Omniplus UL matching system and UL381 extender base may be:

a) printed over and under each other

b) intermixed for matching purposes provided that:

i) the combined proportion by weight of extender base and white does not exceed 80% of the total mix.

ii) the individual proportion of any one colour, except black, is not below 5% of the total mix.

2. No colour, other than the Omniplus UL system must be added.

3. The Omniplus UL system must be printed on to suitably durable and compatible substrates.

Safety and Handling

Omniplus UL is formulated to be free from any known or suspected toxic, carcinogenic, mutagenic or reprotoxic chemicals.

Comprehensive information on the safety and handling of Omniplus UL screen inks and thinners is given in the appropriate Sericol Material Safety Data Sheet (MSDS), which is available upon request.

Environmental Information

The Omniplus UL system:

- Is free from heavy metals
- Does not contain ozone depleting chemicals as described in the Montreal convention.
- Is free from any volatile solvent and is therefore beneficial to the environment when compared to solvent-based products.

Colour Range

Omniplus UL

UL001	Black
UL009	Dense Black
UL025	Opaque White
UL021	White
UL064	Seritone Yellow (GS)
UL066	Seritone Yellow (RS)
UL114	Seritone Orange
UL121	Seritone Red (YS)
UL164	Seritone Red (BS)
UL165	Seritone Magenta
UL127	Seritone Violet
UL230	Seritone Blue
UL325	Seritone Green
UL381	Seritone Extender Base

UL052	Trichromatic Yellow
UL135	Trichromatic Magenta
UL215	Trichromatic Cyan
UL004	Trichromatic Black
UL396	Trichromatic Extender Base

Available 5kg containers.

Reducer

ZE834 Uviplast Thinner
Available in 1 litre containers.

Hardener

ZE850 Omniplus Hardener
Available in 1 litre containers.

Metallics

Metallic shades can be obtained by mixing gold and silver powders with Omniplus UL Application Varnish. Recommended mixing ratios (by weight) are as follows:

Gold:

UL360 Omniplus UL Application Varnish	85 Parts
851045 Gold Powder	15 Parts

Silver:

UL360 Omniplus UL Application Varnish	88 Parts
850143 Silver Powder	12 Parts

Omniplus UL metallics should not be tinted as this has an adverse effect on stability. A pot life of approximately 8 hours can be expected if the above ratios are used under normal conditions.

The information and recommendations contained in this Product Information sheet, as well as technical advice otherwise given by representatives of our Company, whether verbally or in writing, are based on our present knowledge and believed to be accurate. However, no guarantee regarding their accuracy is given as we cannot cover or anticipate every possible application of our products and because manufacturing methods, printing stocks and other materials vary. For the same reason our products are sold without warranty and on condition that users shall make their own tests to satisfy themselves that they will fully meet their particular requirements. Our policy of continuous product improvement might make some of the information contained in this Product information sheet out of date and users are requested to ensure that they follow current recommendations.

SERICOL More than ink...Solutions.

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