

## Uvipak VC

UV Curing Screen Ink for PETG, PVC, Pre-treated Polyethylene, Polypropylene and PET

**Uvipak VC is a UV curing ink designed for printing on to PETG, PVC, pre-treated polyethylene, polypropylene and PET bottles and containers.**

### The Seritone Matching System

The Seritone Matching System enables printers to readily match special colours. The system consists of 9 base colours, each of which has been selected for its cleanliness of tone and suitability for intermixing.

VC010 Tinting Black and VC021 White/Tinting White are pigmented to achieve the ideal tinting and tint reducing power, and are therefore suitable for colour matching purposes. Using the Seritone base colours plus Black, White and Extender Base, almost any colour can be reproduced.

### PANTONE® Matching System

The Uvipak VC range includes nine Seritone base colours plus Black, White/Tinting White and Extender Base to produce accurate simulations of the PANTONE colours in the coated ('C' suffixed) section. The Sericol package includes:

#### 1. PANTONE Color Formula Guide

The original PANTONE book customised by Sericol

#### 2. Prediction Database

When used with a compatible spectrophotometer and software, this database can be used to predict formulae for simulations of PANTONE colours. The wide range of substrates and print conditions commonly used in container decoration will inevitably mean that some formulae may need adjustment. The use of the correction facility incorporated in the spectrophotometer software can greatly simplify this process.

#### 3. Easytint Scales

- Integrated precision bench-top scale and PC with flat screen display, CD and floppy disc drives.
- Full colour 'Windows' based formulation software.
- Recalculation function in the event of over weigh errors.
- Costing calculation.
- Can be linked to a suitable spectrophotometer with appropriate software.
- Weighs to an accuracy of 0.1gm.
- Storage facility for user's own formulations.

### Product Resistance

Uvipak VC inks generally have better chemical and solvent resistance than conventional inks. They will resist attack by most products likely to be packed in a printed container. Resistance of prints immediately after cure is excellent, but for best results it is advisable to allow six hours after curing to achieve optimum resistance.

**Uvipak inks are not recommended for use in applications where outdoor exposure is a possibility.**

### Impact Resistance

Impact resistance of some PVC and PETG containers can deteriorate after printing. This condition is related to time and may take up to twelve weeks to develop. Uvipak VC inks are formulated to minimise this condition, but it is essential to establish that inks and containers are fully compatible by conducting suitable impact or drop tests.

## Main Characteristics

### Finish

High gloss.

### Curing

Hourly output of approximately 4000 containers of 60mm diameter may be expected from machines with suitable medium pressure mercury vapour or electrodeless lamps. Cure speed is dependent on film thickness, colour and opacity, coupled with lamp type and condition.

### Thinning

Warming the ink to a maximum of 38-40°C will reduce viscosity, or ZE818 can be used for minor adjustments.

### Wash-up

Xtend Screen Wash Universal. Do not wash up with any UV thinners.

### Mesh

140 to 180 monofilament.

### Stencil Type

All solvent resistant stencils are suitable.

#### Recommend:

Dirasol 916, Dirasol SuperCoat or 18 micron capillary film.

### Coverage

80-90 m<sup>2</sup>/kg through 180.31(T)

### Applications

PETG, PVC, pre-treated polyethylene, polypropylene and PET bottles and containers.

### Colour Range

9 of the Seritone System, plus Black, Tinting Black, White/Tinting White and Extra Opaque White. Extender Base may be used to reduce colour strength.

### Properties

Fast cure. Unlimited screen stability. Low odour. Excellent physical and chemical resistance.

### Co-use with other inks

May be over printed, in line, with Uvipak NG.

### Overprinting

Uvipak VC has been designed to be overprintable with itself for up to 72 hours after the first colour down. However, overprinting should ideally be conducted in-line on multicolour machines as any delay in overprinting may result in poor intercoat adhesion. Uvipak VC can also be overprinted with Uvipak NG. Resistance of such prints will reflect those of Uvipak NG.

### Post Curing

The chemical reaction initiated by UV radiation will continue for some time after the dried prints emerge from the dryer. It is therefore important that the adhesion of the first colour down, and all subsequent overprint colours, is assessed at regular intervals.

### Pre-treatment

To achieve adhesion to polyethylene, polypropylene and PET and for optimal product resistance, consistent levels of surface pre-treatment must be achieved. A surface free energy of 52 -58 dynes/cm is recommended and is best achieved with the use of a gas/air flame.

#### IMPORTANT:

**Stir well before every use. Always test application fully before beginning any production run as supposedly similar plastics can vary between different manufacturers, and even between different batches. Certain plastics may be impregnated with lubricants or anti-static additives, which, like migrating plasticisers, may impair adhesion even a considerable period after printing.**

The following table shows the general resistance properties of Uvipak inks through a No.180 monofilament screen onto pre-treated polyethylene, fully cured with one medium pressure mercury vapour lamp of 120w/cm. The resistance properties were assessed after 24 hours immersion in each product.

	Excellent	Good
Aftershave Lotions	●	
Alcohol	●	
Water		●
Antifreeze	●	
Battery Acid		●
Bleach		●
Brake Fluid		●
Cosmetics	●	
Detergents	●	
Household Cleaners	●	
Motor Oil	●	
Petrol		●
Skin Care Products	●	
Solvents		●

## Standard Colours

### Uvipak VC

VC001	Black
VC010	Tinting Black
VC021	White/Tinting White
VC023	Extra Opaque White
VC064 (s)	Seritone Yellow (Green Shade)
VC043 (s)	Mid Chrome/Seritone Yellow (Red Shade)
VC114 (s)	Seritone Orange
VC121 (s)	Vermilion/Seritone Red (Yellow Shade)
VC164 (s)	Seritone Red (Blue Shade)
VC165 (s)	Seritone Magenta
VC127 (s)	Deep Violet/Seritone Violet
VC230 (s)	Seritone Blue
VC325 (s)	Seritone Green
VC381	Extender Base

(s) = Seritone Base Colours

Available in 5kg containers

### Reducers and Additives

ZE818	Thinner
ZE813	Fast Thinner
ZE808	Gel Additive

Available in 5 and 1ltr containers

ZE 828 Special UV Cure Additive

ZE 824 Flashcure Additive

Available in 1ltr containers

## Special Matches

Colours can be supplied against prints, wet ink samples or to PANTONE reference, 'British Standard', 'HKS', 'Munsell' or 'Seritone' numbers. A sample of the substrate to be printed, with the number and type of mesh to be used, as well as other relevant data, should be attached to orders. The product resistance of special matches may be very important and it is necessary that full details be supplied of the process to be followed and the product to be packed in the container. Minimum quantity 5kg.

## Storage

Containers should be tightly closed immediately after use. At the end of long printing runs, surplus ink from the screen should be disposed of. Uvipak VC inks are outside the Petroleum (Flammable Liquids) Order 1971 and Liquefied gases Regulations 1972. Uvipak should not be stored in direct sunlight or near warm pipes and should be kept away from peroxides. In the interest of maximum shelf-life, storage temperatures should be between 10°C and 25°C. When stored in a cool environment the inks are expected to have a shelf-life of approximately 12 months from the date of manufacture.

## Safety and Handling

### Uvipak VC Inks:

- Are formulated to be free from any (toxic) carcinogenic, mutagenic or reprotoxic chemicals.
- Do not have a flashpoint and are therefore exempt from the Highly Flammable Liquids Regulations.
- Are formulated free from lead and other heavy metals and therefore should comply with the EN71-3: 1988 Toy Safety Standard.
- Comprehensive information on the safety and handling of Uvipak VC screen inks and additives are given in the appropriate Sericol Material Safety Data Sheets, available upon request.
- All UV curing inks and varnishes contain acrylates. Acrylates, like any organic solvent, are skin and/or eye irritants. It is essential that the measures given in Section 8 of the Material Safety Data Sheet for this product are always followed.

## Environmental Information

### Uvipak VC inks:

- Are free of any volatile solvent and are therefore beneficial to the environment when compared to solvent-based products.
- Are formulated free from aromatic hydrocarbons, which are known to have an adverse effect on the environment.
- Are free of any volatile solvent and are therefore beneficial to the environment when compared to solvent-based products.

*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 meet fully 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**  
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