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.

Colour Range

Uvipak NG colours should be used to overprint Uvipak VC whites. See product information sheet 'Uvipak NG UV curing screen inks'.

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.

The following table shows the general resistance properties of Uvipak VC 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		●

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.

Standard Colours

Uvipak VC

VC023	Extra Opaque White
VC025	Opaque White
VCA03	Dense White

Available in 5kg containers

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^2/kg through 180.31(T)

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

Colour Range
Uvipak NG colours should be used to overprint Uvipak VC whites. See product information sheet 'Uvipak NG UV curing screen inks'.

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.

Reducers and Additives

ZE818 Thinner
ZE813 Fast Thinner
ZE808 Gel Additive

Available in 5ltr containers

ZE 828 Special UV Cure Additive
ZE 824 Flashcure Additive

Available in 1ltr containers

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.

Fujifilm Speciality Ink Systems Limited:

- Has certification to the International Environmental Standard, ISO 14001
- Is committed to minimising the risk to users of our products, and also to minimising the impact of our activities on the environment, from formulation through to production and supply.
- Research & development team, work to an in house Health, Safety and Environmental policy, termed 'Design for Health, Safety and Environment', with the aim of proactively developing products with the least impact on health, safety and the environment.
- Regularly review and monitor our impacts and activities, setting objectives and targets as part of a continual improvement process.
- Is committed to reducing waste through better use of raw materials, energy, water, re-use and recycling.

Safety and Handling

Uvipak VC Inks:

- Have a flashpoint greater than 55°C and are therefore not classified as a 'dangerous substance' under the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR).

Comprehensive information on the safety and handling of Uvipak VC screen inks and additives are given in the appropriate Fujifilm Material Safety Data Sheets, available upon request.

Environmental Information

Uvipak VC inks:

- Are formulated free from aromatic hydrocarbons
- Are free of any volatile solvent and can therefore be considered to have less impact on the environment, when compared with solvent-based products.

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