



Viospeed Plus 70 series UV Screen Printing Ink

July 2012

General Information:

Viospeed Plus 70 series UV screen printing inks have been engineered to meet the specific requirements of screen printers for printing a variety of paper based and PVC substrates.

Product Range & Codes:

70 -187	Extender
70 - MET100	Metallic Medium
70 - Y114	NT Yellow
70 - S123	Orange
70 - U22179	Scarlet 485 Red
70 - R100	Red
70 - M100	Magenta
70 - V100	Violet
70 - U22181	Reflex Blue
70 - B100	Blue
70 - G100	Green
70 - K100	Black
70 - N70	Dense Black
70 - W100	White
70 - W70	Opaque White
70 - Y200	Process Yellow
70 - M200	Process Magenta
70 - B200	Process Cyan
70 - K200	Process Black
70 - 250	Reducer

Container Size:

70 series Viospeed Plus are available in a 5kg pack size.

Availability:

Discuss availability with your local DIC facility.
Standard Colours above ex works.
Special blends are made to order.

Properties:

70 series Viospeed Plus inks contain 100% UV solids. These inks do not contain solvents or water or any toxic materials. These inks are designed for screen printing onto select substrates through a specific range of mesh and cured with high UV energy. 70 series Viospeed Plus inks offer a robust film formed after sufficient UV curing and cross linking has occurred. Typical of all UV screen printing inks complete cross linking is a combination of ink deposit, cure energy and time and all three factors will contribute towards final printed results.

Viscosity:

70 series Viospeed Plus inks are supplied press ready. However if thinning is required we recommend a maximum addition of 5% 70 -250 Reducer by weight.

Coverage:

Approximately 75 – 90 square metres per kg through 150/31 mesh. However many variables such as squeegee, stencil, substrate and print conditions may influence coverage. Substrate conditions will impact coverage, particularly porous substrates where ink penetrates into the substrate surface.

Substrates:

70 series Viospeed Plus inks have been tested onto a range of paper based & PVC substrates.

Viospeed Plus has exhibited excellent compatibility with substrates such as; Screen board, Art Paper, Self Adhesive PVC, Banner PVC & Expanded PVC. You should note that all substrates have varying surface tensions which can differ from supplier to supplier, sheet to sheet and on each side of the same sheet. Where self adhesive PVC is used we recommend 38-40 dyne/cm and for expanded PVC we recommend thorough testing prior to any commercial print run.

Synthetic substrates should be tested for surface tension before printing to ensure that it meets manufacturer's specification.

Please note that Viospeed Plus is not recommended for substrates not mentioned herewith and all substrates should be pre tested prior to use for surface tension, manufacturers specifications, ink adhesion, post print processing and end use criteria.

Adhesion to substrate is only one aspect of absolute quality print performance and we strongly advise that all tests be fully appreciative of print, cure, adhesion, post print and end use criteria requirements.

We have taken great care to provide this information in the best interest of our customers and trust that you follow these recommendations to ensure you produce a quality printed job.

We therefore insist that you conduct your own complete evaluation to determine suitability.

Adhesion:

Full cure and adhesion of Viospeed Plus can only be realised after post curing process is complete. This will usually take 12-24 hours and will depend upon many print variables including film weight, cure energy and temperature.

Tests indicate that initial adhesion within the first 3 hours should be satisfactory when printing and curing instructions are followed and over the ensuing 9-18 hours adhesion will improve as the cross linking process becomes complete.

UV Curing:

There are many variables related to curing UV ink systems and curing has a direct relationship to adhesion. Of particular importance is ink film weight. To manage ink deposit and for best results we recommend using; 150/31 mesh, 2 + 2 coats Saati Emulsion, 75/95/75 Triple Durometer Techno squeegee. We recommend that Viospeed Plus is subjected to 75-80mJ/cm UV energy and is cured at a belt speed of 25m/hr to obtain optimum cure.

Screen Stability:

Viospeed Plus inks have excellent screen stability and will not thicken or gel in the screen therefore maintaining accurate colour strength throughout the print run. Inks should not be exposed to UV light during printing as this may affect ink properties.

Stencil:

For best results use dual cure emulsion Saati HU Blue or Chromaline UDC HV. These emulsions contain high resin solids of 35% and offer very good resolution. The higher viscosity UDC HV emulsion will assist in improving dot reproduction for half tone printing and is most suitable for 140 – 180 mesh.

Squeegee:

For best results use a triple durometer 75/95/75 squeegee. These types will apply a thinner film weight and improve print quality.

Wash up:

Viospeed Plus inks wash up well with PROWASH or any of the GR series screenwashes. PROWASH has a very slow evaporation rate and high solvency which will clean up all ink residue and reduce ink staining in the mesh. PROWASH is very low in odour, is non flammable and non combustible.

Post Print:

Some commonly used synthetic substrates have a tendency to carry very high heat retention and as such needs to be managed well. Viospeed Plus has been tested under heat stress and stacked conditions and has been proven to be most satisfactory in this regard. However we recommend that you proceed with caution and not stack warm heat affected materials in high stacks. We recommend you follow all of these recommendations to ensure that all post print requirements and end use criteria are met.

Light fastness:

Viospeed Plus standard colours will provide vibrant printed images for approximately 2 years when printed at full strength and through recommended mesh counts onto recommended substrates. During this time, particularly during the latter 12 months we would expect to see some deterioration of the finished print in comparison to the original print. For maximum light fastness we recommend you do not add clears, extenders or white inks to full strength colours.

Storage:

UV Inks should always be stored in consistent temperature conditions of between 18-24 degrees C where the environment is clean, dust free and without direct or indirect UV light. Inks should always be stored in tightly sealed UV resistant containers and carry labels stating specific contents.

Shelf Life:

For optimum performance UV Inks should be used within 12 months from the date of manufacture. UV Inks may perform perfectly well after 12 months however tests should be done to determine that ink is still fit for purpose. Shelf life is affected temperature. Please follow storage recommendations and also ensure that your containers are stored with lids tightly sealed and in a clean dry environment.

Intermixing:

We do not recommend that Viospeed Plus be blended with any other UV inks or products not within the Viospeed Plus range.
