

SOLVENT BASED INK

- **Electrical properties**

Resistivity $\leq 15 \text{ m}\Omega/\text{sq}/\text{mil} \Leftrightarrow 3.8 \times 10^{-5} \Omega.\text{cm}$.

- **Applications**

Compatible with PET, polycarbonate, glass and polyimide substrate.

- **Major advantages**

Flexibility, good abrasion resistance, high conductivity.

- **Equipment**

Manual, automatic and semi-automatic machines.

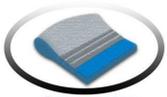


PRINTING CONDITIONS



Screens

All types of polyester or stainless steel fabrics can be used with a mesh from 77 to 120 threads/cm.



Squeegees

Polyurethane PO 65 Shore, good sharpness.



Dilution

No dilution has to be performed before printing. Such treatment would deteriorate the conductive properties of the printed patterns. As silver particles exhibit a high density, a sediment forms over time in the ink. It has to be redispersed before printing by stirring (manual stirring is sufficient).



Cleaning

We recommend ethyl acetate as cleaning solvent.



Packaging

500 g or 1 Kg in polypropylene pots. Open pots for sampling must be carefully closed as soon as possible.

Guarantee reserves

Although the data indicated in this technical Data Sheet has been established after thorough tests, they are only given as an indication: the VFP Ink Technologies cannot be held responsible in any way, it being understood that we recommend to make tests before any production run.

No salesman, representative or agent is entitled to provide a guarantee or any insurance which might contradict the above statement. Please always refer to our general conditions of sales.



Storage

1 year in closed pots kept between +5°C and +35°C



Drying and curing

Low resistivity and good adhesion can be obtained only once a chemical reaction takes place between particles and polymeric binder. This reaction has to be activated with a thermal curing. Drying and curing can be carried out at the same time with a thermal treatment at **150°C for 10 min** or **130°C for 30 min** just after printing.

The ink can also be dried (at lower temperature if necessary), and the thermal curing can be performed in delayed time (up to 4 months). In this case a thermal treatment at **150°C for 8 min** or **130 °C for 25 min** are sufficient.

Processes involving high temperatures (from 130°C to 250°C) such as lamination or thermoforming carried out on the dry printed layers can replace the thermal curing. Tests in the context of the customer's exact process have to be performed to validate this possible replacement.

Dried pattern can also be cured using quick sintering methods:

- **IR ADPHOS:** curing time **1.4 s**

- **Photonic sintering:** Total time of active pulse **< 1 s**



Hygiene and safety

Although the chemical compounds chosen for the formulation of our inks are not dangerous, they can produce allergic reactions in some particularly sensitive people. Ink or thinner stains on skin have to be washed immediately using soapy water. In all cases, please refer to our safety datasheets.