

# Speciality **ink** Screen

**Metal, Glass Decoration  
& Industrial Application**

## **POLYSCREEN PI**

High gloss ink for a wide range of metals, glass, ceramics, plastics & stoved enamel substrates

### **FEATURES**

- Wide adhesion range
- Solvent based
- High gloss finish
- Good opacity
- Excellent resistance to heat
- Excellent resistance to chemicals such as acids, alkali, solvents, grease, cosmetics, detergents and household products.
- Low viscosity rheology
- Suitable for machine and manual printing by screen
- Suitable for pad printing
- Two pack ink

### **Substrate :**

Wide range of substrates such as: aluminium, brass, steel & most of their alloys, ceramics, vitreous & stoved enamel surfaces, glass, pre-treated polyethylene and polypropylene and other plastics.

**TEST INKS ON SUBSTRATES  
BEFORE PRODUCTION RUN.**

**SERICOL**  
More than ink...Solutions.  
**FUJIFILM**

## Applications:

The Polyscreen PI inks are intended for screen printing or pad printing for metal, glass decoration in industrial application.

**Note:** Polyscreen PI inks are not recommended for use in applications where prolonged outdoor exposure is a possibility.

## Adhesion:

Polyscreen PI inks possess excellent adhesion over a wide range of difficult metal, ceramic and plastic surfaces including: aluminium, copper, brass, tinplate, steel and most of their alloys, ceramic, glass, vitreous enamel, phenolics (Bakelite), urea/melamines (Formica), resin impregnated papers for laminating, acrylics, flame treated polyethylene and polypropylene, nylon and certain grades of polyester films.

Polyscreen PI has excellent adhesion to most stoved enamel surfaces and generally overcomes the ink repellent effects of silicones and waxes often found in stoved enamels. In case of difficulty, adhesion may often be enhanced by wiping the enamel surface with good quality white spirit, SS-643 Tursub or Propanol.

## Product resistance:

Polyscreen PI ink system has an excellent resistance to chemicals such as acids, alkali, solvents, grease, cosmetics, detergents and household products.

## Colour Range:

The Polyscreen PI is available in 13 standard intermixable colours.

## Colour Matches:

Colour matches can be supplied against prints and / or wet ink.

## A) Standard Colours:

PI 001	Black
PI 021	White
PI 041	Light Yellow
PI 043	Mid Chrome
PI 101	Light Orange
PI 121	Vermilion
PI 122	Scarlet (T)
PI 124	Deep Red
PI 126	Magenta
PI 203	Mid Blue
PI 204	Royal Blue
PI 206	Deep Blue
PI 283	Bright Green
PI 383	Extender Base
PI 386	Catalyst
PS 386	Catalyst

## B) Polyscreen PI Reducers:

SS 551	Reducer
SS 574	Slow Reducer
SS 639	Universal Screen Wash

**Note:** The slow reducer will increase the drying time of print, whilst the reducer will not change the normal drying time of print.

## Catalyst mixing:

Polyscreen PI inks are supplied in two parts - ink and catalyst. Before printing, estimate the amount of ink required for a day's work and thoroughly mix the ink and catalyst together in the following ratio, for PS 386 use below composition.

Polyscreen inks: 80% by weight  
Polyscreen catalyst: 20% by weight

Polyscreen extender base: 75% by weight  
Polyscreen catalyst: 25% by weight

For PI 386 use below composition:

Polyscreen inks: 90% by weight  
Polyscreen catalyst: 10% by weight

Polyscreen extender base: 87% by weight  
Polyscreen catalyst: 13% by weight

### **Thinning :**

Maximum of 15 % by weight of ink used. For the recommended thinners Please refer to the section on Polyscreen PI Reducers.

### **Mesh :**

Print Polyscreen PI inks through 90/cm to 120/cm, monofilament polyester fabric, depending on the application.

### **Stencils :**

Stencils can best prepared with Sericol's stencil making products :

**Xtend Prep 101** for abrasion of screen mesh

**Xtend Prep 102** for degreasing of screen mesh

**Emulsions:** Dirasol 902(two pack) or Dirasol 915(two pack) .

### **Wash Up:**

Wash up screens with SS 639 universal screen wash. This will ensure long life of stencils made with Dirasol emulsions.

### **Coverage:**

Polyscreen PI inks should give coverage of 20 to 25 sq.m./kg, when printed through a 120/cm mesh.

### **Drying:**

**Air dry:** 30 minutes to 3 hours. The drying time is dependent on the reducer used. Do not stack prints immediately. Allow sufficient time for through cure.

**Convection Oven Stoving:** 150 deg.C for 5-8 minutes or 120 deg.C for 10-15 minutes or 80 deg.C for 25-30 minutes.

**Note:** Polyscreen PI dries by a combination of solvent evaporation and a chemical reaction between the base and catalyst.

Air drying times can be as fast as half an hour using SS-551 reducer or as slow as 3 hours when using SS-574 slow reducer. At room temperature, full chemical resistance and adhesion are not developed until 4 days after printing.

### **Pre-Production Test:**

Always test for adhesion and other properties before each production run because there can often be significant differences between substrates from different manufacturers and even between different batches.

**Important: End user must determine suitability of this product for the intended use prior to production.**

### **Storage :**

- Keep inks in cool place, away from direct sunlight.
- Keep lids tightly closed when not in use.
- Any unused ink should not be returned to can, must be stored separately.
- Shelf life is two years from the date of manufacturing.
- Stir well before every use.

### Safety and Handling:

Product marked (T) Contain lead and therefore should not be used on objects liable to be chewed by children and may cause harm to unborn child. All other products are formulated free from lead and other heavy metals and formulated to be free from any (toxic) carcinogenic, mutagenic or reprotoxic chemicals.

Comprehensive information on the safety and handling of Polyscreen PI screen inks and solvents is given in the Material Safety Data Sheet, which is available on request.

### Environmental Information:

Polyscreen PI ink system does not contain ozone depleting chemicals as described in the Montreal Convention. Polyscreen PI ink system is formulated free from aromatic hydrocarbons which are known to have an adverse effect on the environment.

### Important Note:

*The information and recommendations contained in this product information sheet as well as technical advice otherwise given by representative of our company, whether verbally or in writing, are based on our present knowledge and experience. Such information/ technical advice is given in good faith, but without warranty, in view of the many factors that may affect processes or applications 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 the products will meet fully the particular requirements of the labels/ brands/ agencies of their clients and also that no proprietary rights and existing laws and legislation are violated.*

*Our advice does not relieve processors from the responsibility of carrying out their own tests and experiments, nor does it imply any legally binding assurance in respect of properties or suitability for a specific purpose or of the legal status of the listed products.*

*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.*

### Fujifilm Sericol India Pvt Ltd

- Has certification to the international Environmental Standard, ISO 14001.
- Is committed to minimizing the risk to users of our products, and also to minimizing the impact of our activities on the environment, from formulation through to production and supply.
- Regularly review and monitor our impacts and activities, setting objectives and targets as part of a continual improvement process.
- Is committed to reduce waste through better use of raw materials, energy, water, re-use and recycling.

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