

Polyplast PY Screen Inks for Plastics & APR Varnish Alcohol/Petrol Resistant Overprint Varnish

SERICOL

PRODUCT INFORMATION

Polyplast PY is a fast drying, high gloss ink designed for printing onto a wide range of flexible and rigid plastics. APR Varnish is a protective varnish for overprinting Polyplast PY and other suitable inks, where optimum chemical and mechanical resistance is required.

Plastics

Certain plastics may be impregnated with lubricants which, like plasticiser migration, may impair adhesion and block resistance even a considerable period after printing. This can be overcome by wiping the surface with White Spirit before printing. Surface adhesive left from protective papers on rigid PVC and acrylic sheets should be thoroughly removed in line with supplier's instructions.

Certain plastics can become brittle when printed, possibly to the point of shattering, often only after several weeks. It is therefore essential to check compatibility between ink and plastic to guard against this problem.

Double-sided Stickers

Polyplast PY inks may be used to produce double-sided stickers. Prior to such use please consult your Fujifilm supplier. Owing to the complex nature of this type of work printers must satisfy themselves, before starting a production run, that their substrate and production method are compatible with the ink. PY500 Obliterating Grey is recommended as the barrier coat between the first and the second side.

Outdoor Use

Accelerated weathering tests have been carried out on prints produced using Polyplast PY inks in a Marr Weatherometer on the BS 3900 F3 Cycle. Under these conditions Polyplast PY, with the exception of individual colours mentioned below, withstood 2000 hours (comparable to approx. 24 months outdoor exposure in the UK or similar climate) of testing before significant colour deterioration was evident.

Colour matches intended for outdoor use should not contain PY164 Seritone Red (BS), PY064 Light Yellow/Seritone Yellow (GS) or PY114 Deep Orange/Seritone Orange.

Main characteristics

Finish

High Gloss

Drying

Polyplast PY: Jet drying: 55-65°C 15-20 secs. Air: 8-15 mins.

APR Varnish: Jet drying: 60°C 20-25 secs. Air: 5-10 mins.

Thinning

Polyplast PY: 15-25% ZV557. Hot shop conditions use ZV558.

High speed printing use ZV556. Fine line & slow speed use 10-30% ZV561.

APR Varnish: 20-25% ZV557. Slow or hot shop conditions use ZV558.

Wash-up

Xtend Screen Wash and Cleaner. See Xtend Screen Cleaners Product Information Sheet.

Mesh

Polyplast PY: Nos.100-120 monofilament.

APR Varnish: Nos.77-90 monofilament.

Stencil Type

Any recommended solvent resistant Dirasol emulsion, Capillex film or Indirect stencil.

Coverage & Mesh No.

Polyplast PY: 70-80m²/kg through 120 monofilament.

APR Varnish: 55-65m²/kg through 90 monofilament.

Applications

Plastics; PVC, ABS, acrylics, coated polyester, CAB, 'Hi-S Cal', 'Scotchcal', cellulose acetate.

Colour Range

Base colours available to match PANTONE® 1000 colours.

Properties

Safe, low temperature jet drying. Good flexibility (suitable for vacuum forming). Light and weather resistant, with good opacity. Excellent screen stability and self-solvency. Good petrol resistance (excellent when overprinted with APR Varnish).

Co-use with other Inks

Polyplast may be safely mixed with Plastijet XG & MattPlast MG, although compatibility should always be checked by mixing a small quantity prior to mixing for the production run. Polyplast will print over dry ink films of Plastijet XG and may be overprinted by them. Whilst Polyplast will overprint MattPlast it is not recommended that matt inks overprint Polyplast.

IMPORTANT:

Stir well before every use. Always test application fully before beginning production run as there is often considerable variance in plastics from different manufacturers and even between different batches.

Due to the nature of the pigmentation in PY461 (Non Tarnishing Gold) and PY462 (Silver) these colours should not be used for outdoor applications.

To ensure maximum outdoor exposure resistance, care should be taken to avoid the use of small additions of colour, particularly when printing pastel shades. For more information on this and other aspects of weathering please refer to the guidelines in the Fujifilm 'Printers Guide to Weathering' Hints & Tips Information Sheet.

For optimum outdoor performance the Polyplast EL System is recommended (see information sheet 'Polyplast PY EL System').

Tape Acceptance

Polyplast PY has excellent acceptance of Application and Pre-space tapes. Colours overprinted with PY433 EL Overprint Varnish or VA401 APR Varnish are also suitable for use with such tapes. However, because of variations in their tack level, the particular tape to be used should be tested before commencing a production run.

It is essential that inks and varnish are thoroughly dry before application of tapes.

Product Resistance

Polyplast inks have good resistance to a wide variety of solvents including petrol and alcohol. Where exceptionally high resistance to petrol is required, overprinting with VA401 APR Varnish is recommended.

APR varnish should not be used for prolonged outdoor exposure in excess of 2 years. Where outdoor durability greater than this is required, PY433 EL Overprint Varnish is recommended. See Product Information Sheet 'Polyplast PY EL System'. The Polyplast ink system is battery acid resistant.

APR Varnish – Properties

APR Varnish is resistant to a wide variety of products which include alcohol, petrol, brake fluid, battery acid and detergent solutions. It offers effective protection against white spirit, Shellsol A, Methanol, Butanol, Ethyl Cellosolve, Butyl Cellosolve and many other solvents. Where resistance to a particular solvent is a prime requirement, printers should test the efficiency of APR Varnish prior to production runs. Because of its hard, tough film, APR Varnish increases the resistance of prints to mechanical abrasion and similar damage.

Vacuum Forming

Polyplast PY inks permit trouble-free deep draw vacuum forming without mould staining on PVC, ABS, Cellulose Acetate, CAB & Acrylics.

Spraying and Brushing

Suitably thinned with ZV556 Fast Thinner, Polyplast inks may be used for spraying banners and tarpaulins such as those used on curtain-sided vehicles. For brushing, ZV557 Thinner may be used though for optimum durability when decorating flexible materials,

such as tarpaulins, up to 5% ZV541 Rigid Thinner is recommended.

PY025 Opaque White is not as flexible as other colours in the range and is not suitable for such applications. It is recommended that the ink and substrate are proved compatible before embarking on a production run.

PANTONE® Matching System

The Polyplast PY range includes 9 Seritone base colours plus Black, White and Extender Base to produce accurate simulations of PANTONE colours in the coated ('C' suffixed) section. See section 'Outdoor Use' for important information concerning resistance properties of colour matches. The Fujifilm package includes:

1. **PANTONE® Colour Formula Guide**
2. **Fujifilm Formula Guide**
Formulations given in percentages by weight.
3. **PANTONE Formula Scales**
Pre-programmed with PANTONE shades to ensure maximum accuracy, speed and cost savings.

Colour Range

PY025 Opaque White has similar printing and drying properties to other Polyplast shades, but a slightly lower gloss level. See section 'Outdoor Use' for limitations.

PY025 Opaque White is not recommended where extreme flexibility is required, such as when printing banners or tarpaulins for curtain-sided vehicles.

Polyplast PY Varnish is used for the following purposes:

- As a constituent of the Seritone Matching System.
- For mixing with standard Polyplast PY colours to promote transparency.
- For overprinting Polyplast PY colours to give additional abrasion resistance.

Standard Colours

Polyplast:

PY001	Black
PY010	Tinting Black
PY021	White
PY030	Tinting White
PY025	Opaque White
PY064	(P) Light Yellow/Seritone Yellow (GS)
PY066	(P) Mid Chrome/Seritone Yellow (RS)
PY114	(P) Deep Orange/Seritone Orange
PY191	(P) Vermilion/Seritone Red (YS)
PY192	Scarlet
PY164	(P) Seritone Red (BS)
PY165	(P) Seritone Magenta
PY127	(P) Deep Violet/Seritone Violet
PY203	Mid Blue
PY230	(P) Seritone Blue
PY236	Reflex Blue
PY283	Bright Green

PY325 (P) Seritone Green
PY461 Non Tarnishing Gold
PY462 Silver
Available in 5 and 1 kg containers.

PY284 Monastral Green
PY500 Obliterating Grey
Available in 5 kg containers.

(BS) Blue Shade (GS) Green Shade
(RS) Red Shade (YS) Yellow Shade
(P) Seritone Base colours for colour matching and simulation of PANTONE® 1000.

Opaque Colours:

PY941 Opaque Light Yellow
PY943 Opaque Mid Chrome
PY921 Opaque Vermilion
PY922 Opaque Scarlet
Available in 5 kg containers.

Varnishes:

PY383 Polyplast PY Varnish
Available in 5 and 1 ltr containers.

PY433 EL Overprint Varnish (Ø)
VA401 APR Varnish (Ø)
Available in 5 kg containers.

Solvents:

ZV557 Thinner
ZV556 Fast Thinner
ZV558 Retarder
ZV561 Vinyl Gel Retarder
Available in 5 ltr containers.

Universal Tinters

A range of 10 non-fluorescent and 4 fluorescent highly concentrated colour bases for tinting. The fluorescent colours are not recommended for use with Polyplast PY, but up to 10% of the non-fluorescent tinters may be added. See Information Sheet 'Universal Tinters, Metallic Inks and Varnishes'.

Special Matches

Matches can be supplied against prints, wet ink samples or to PANTONE references, 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. Minimum quantity 5 kgs.

Fujifilm Speciality Ink Systems Limited:

- Has certification to the International Environmental Standard, ISO 14001.
- Has certification to the Quality Management Standard, ISO 9001.
- Has certification to the Occupational Health and Safety Standard, ISO 18001.
- 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 and 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

Polyplast PY & APR Varnish:

- Unless otherwise indicated, colours in the range are routinely tested and supplied EN71-3 2013 approved.
- Products marked (Ø) are not formulated to comply with EN71-3 2013.

Comprehensive information on the safety and handling of Polyplast PY screen inks and varnishes is given in the appropriate Safety Data Sheets.

Environmental Information

Polyplast PY & APR Varnish:

- Do not contain ozone-depleting chemicals as described in the Montreal Convention

The information and recommendations contained in this Product Information sheet, as well as technical advice otherwise given by representatives of Fujifilm Speciality Ink Systems Limited and its associated companies, 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.

FUJIFILM SPECIALITY INK SYSTEMS LIMITED

Pysons Road, Broadstairs
Kent CT10 2LE
United Kingdom
T: +44 (0)1843 866668
F: +44 (0)1843 872184
www.fujifilm.eu