Polyplast PY EL Systems

Light Resistant Screen Inks for Self Adhesive Vinyls

Polyplast PY EL is a system of inks and overprint varnish designed for long life outdoor applications on suitable Self Adhesive flexible vinyls

Special Recommendation

To obtain best results from the Polyplast PY EL Systems, the following recommendations must be followed during colour matching and print production.

1. The 13 colours, which comprise the PY EL System, may be:

Printed over and under each other.
Intermixed for matching purposes provided that:

The combined proportion by weight of PY021 White, PY030 Tinting White and PY383 Varnish does not exceed 80% of the total colour match mix.
The individual proportion of any one colour, except Black is not below 5% of the total mix.

2. Universal Tinters must not be added to PY EL colour matches.
3. Only colours in the PY EL System should be used.
4. The PY EL System must be printed on to suitably durable and compatible substrates.
5. Because of different pigmentation, the Seritone colours may vary in shade from the same named colours in the standard Polyplast PY range.
6. Finishing processes, which includes heating, may adversely affect colour. Please check prior to production.
7. Metallic shades, or colour matches containing any proportion of them, overprinted with PY433 EL Overprint Varnish should not deteriorate significantly during a period of less than 5 years.

Please Note

Some grades of PVC may have trace amounts of plasticiser or other contaminants on the surface that may impair adhesion and block resistance, even a considerable period after printing. These surface contaminants can be removed from the surface with White or Methylated Spirit or similar cleaning solvent before printing.
Some PVCs can become brittle when printed, possibly to the point of shattering, often after several weeks. It is therefore essential to check compatibility between ink/varnish and PVC to guard against this problem.

Outdoor-Use

Weathering tests have been carried out on prints produced in zone 1 with Polyplast PY EL (Unvarnished), which indicate 6 years outdoor exposure in the UK or similar climate before significant colour change was evident.
For optimum outdoor durability (up to 7 years outdoor life in temperate climate), PY EL prints must be over-varnished with PY433 EL Overprint Varnish through 120.34 mesh. Customers should always check with their substrate supplier that they utilise the recommended long life material.

Outdoor Use - APR Varnish

Polyplast PY EL inks have good resistance to a wide range of solvents including petrol and alcohol, however where exceptionally high resistance to petrol is required, overprinting with VA401 APR varnish is recommended. **PY EL prints over varnished with VA401 are not suitable for outdoor use in excess of 2 years.** Where longer outdoor exposure is required, PY433 EL Overprint Varnish is recommended.

Main Characteristics

Finish
High Gloss

Drying
Jet drying: 55-65°C, 15-25 seconds. Overprints may require longer.
Air drying 20-30 minutes.

Thinning
Ink and Varnish: 15-25% ZV557 Standard Thinner
Hot shop conditions: 15-25% ZV558 Retarder
High speed Printing: 15-25% ZV556 Fast Thinner

Wash-Up
Xtend ZT639 Screen Wash Universal. Actisol Surperjet Spray.

Mesh
No. 90 monofilament or coarser.
No. 120.34 monofilament for PY433 EL Varnish (only).

Stencil Type
Dirasol 914, Dirasol 916 or indirect/direct capillary films.

Coverage & Mesh
45-55 m^2/kg. 90 monofilament

Application
Self Adhesive Cast Vinyl, Soft PVC.

Colour Range
15 Shades including Seritone Matching System and Metallics.

Properties
Up to 7 Years outdoor life in zone 1.
Safe, low temperature, jet drying.
Good flexibility and product resistance.
Excellent screen stability and self-solvency.

Product Resistance
Polyplast PY EL inks and PY433 EL Overvarnish have good resistance to a variety of products including Petrol, Alcohol and Battery Acid. If wider chemical resistance is required, the use of APR VA401 Varnish can be used. However, the outdoor exposure will be less than 2 years.

IMPORTANT
Stir well before every use. Always test application fully before beginning a production run, as there are often considerable variances in PVCs from different manufacturers and even between different batches.

Outdoor Use - Written Guarantees

Guarantees of the outdoor life in Zone 1 of Polyplast PY EL are available, on request. To be valid, a guarantee must be obtained in writing prior to first use. Specific enquiries regarding outdoor durability in Zone 2 & 3* climates should be made via your Sericol supplier.
*As defined in the 'Printers guide to weathering' information sheet available at www.fujifilmsericol.com

Product Resistance

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 PY EL prints to mechanical abrasion and similar damage when over-varnished.

Tape Acceptance

Polyplast PY exhibit excellent acceptance of most 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.

Colour Range

The Polyplast PY EL System consists of five special EL Seritone base colours designed for use in conjunction with four standard Polyplast PY Seritone bases, Polyplast Tinting Black and PY030 Tinting White for colour matching.
Where Black or White printing colour is required, the standard PY001 Black or PY021 White should be used as these have higher opacity and colour strength than the Tinting shades.
Also available are two metallics, Silver and Non-Tarnishing Gold, both of which are rub resistant and intermixable.
Polyplast PY383 Varnish is available for mixing into colour matches if required. **PY433 EL Overprint-varnish should be used for overprinting where maximum outdoor life is required.**

Standard Colours

Polyplast PY EL System:

PY001 Black
PY010 Tinting Black
PY021 White
PY030 Tinting White
PY841 EL Light Yellow/Seritone Yellow (Green Shade)
PY843 EL Mid Chrome/Seritone Yellow (Red Shade)
PY802 EL Deep Orange/Seritone Orange
PY821 EL Vermilion/Seritone Red (Yellow Shade)
PY864 EL Seritone Red (Blue Shade)
PY165 Seritone Magenta
PY127 Deep Violet/Seritone Violet
PY230 Seritone Blue
PY325 Seritone Green

Metallics

PY461 Non Tarnishing Gold
PY462 Silver

Available in 5kg and 1kg containers.

Varnishes

PY383 Polyplast PY Varnish
PY433 EL Overprint Varnish

Available in 5 and 1 kg containers.

VA401 APR Varnish – Alcohol / Petrol Resistant Overprint Varnish

Available in 5 kg containers only

Please note: Where PY433 Varnish is used prints should be jet dried.

Solvents

ZV557 Thinner
ZV558 Retarder

Available in 5 and 1 ltr containers.

ZV556 Fast Thinner

Available in 5 ltr containers only

Special Matches

Matches can be supplied against prints, wet ink samples or to PANTONE®* references, British Standards, 'HKS, 'Munsel or Seritone' numbers. A sample of the substrate, with the number and type of mesh to be used, as well as other relevant printing data, should be attached to orders. Where matching is required to have six years' (or seven years' over varnished) outdoor life, this requirement must be specified with or on the order.
Minimum quantity 5 kgs.

Fujifilm Sericol UK Limited

- Has certification to the International Environment 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

Polyplast PY EL System:

- Is formulated to be free from any chemicals toxic to health, carcinogenic, mutagenic or reprotoxic according to Directive 67/548/EC.
- Is formulated free from lead and other heavy metals and is tested to comply with the EN71-3: 1995 Toy Safety Standard.

VA401 APR Varnish:

- Is not routinely tested, but is formulated to comply with the EN71-3 1995 Toy Safety Standard.

Environmental Information

Polyplast PY

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

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The information and recommendations contained in this Product Information sheet, as well as technical advice otherwise given by representatives of our Company, 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.

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