



Polyplast PY EL System Extra Light Resistant Screen Inks for Plastics

Polyplast PY EL is a system of inks and overprint varnish designed for long life outdoor applications on a wide range of flexible and rigid plastics.

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 usually 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 after several weeks. It is essential to check compatibility between ink and plastic to guard against this problem.

Outdoor Use

To achieve maximum outdoor durability, PY EL colours must be overprinted with PY433 EL Overprint Varnish. Printing recommendations for PY433 are the same as for inks.

Accelerated Weathering:

Tests have been carried out on prints produced using Polyplast PY EL colours (unvarnished) and Polyplast PY EL colours overprinted with PY433 EL Overprint Varnish in a Marr weatherometer on the BS 3900 F3 Cycle. Under these conditions, Polyplast PY EL withstood in excess of 3,000 hours before significant colour change was evident. The use of PY433 EL Overprint Varnish enhances colour and gloss retention.

Outdoor Exposure:

Standard Colours (excluding Metallics):

Tests have been carried out on outdoor exposure in the UK climate in accordance with BS 3900 Part F6 on unvarnished and varnished prints. These tests indicate that vertically mounted prints of Polyplast PY EL colours (unvarnished) should not significantly change colour during a period of less than six years in such a climate.

Vertically mounted prints varnished with PY433 EL Overprint Varnish should not deteriorate significantly during a period of less than seven years. For optimum outdoor durability, PY433 EL Overprint Varnish must be used over PY EL colours.

Metallics:

Vertically mounted prints of the 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 five years.

Outdoor life of Polyplast PY EL varnished with VA401 APR Varnish is considerably shorter than unvarnished inks and the use of this varnish is not recommended for outdoor exposure beyond two years. The above recommendations all apply to prints exposed vertically in the UK, a temperate climate. Durability will be less in more severe climates and more detailed information can be supplied on request.

Tape Acceptance

Polyplast PY colours exhibit excellent acceptance of most application and pre-space tapes. PY EL colours overprinted with PY433 EL Overprint Varnish are also suitable for use with such tapes.

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

Main Characteristics

Finish

High Gloss

Drying

Jet drying: 55-65°C, 15-25 seconds. Overprints may require longer. Air drying: 10-20 minutes

Thinning

Ink and Varnish: 15-25% ZV557.
Hot shop conditions use ZV558.
High speed printing use ZV556.

Wash-up

Seriwash Universal Screen Wash or Actisol Superjet Screen Spray.

Mesh

No. 90 monofilament or coarser.

Stencil Type

Any type except solvent adhering film and Stenplex Amber.
Recommended:
Dirasol 902, Dirasol 916. Indirect or 25/35 Micron Capillary Film

Coverage & Mesh No.

45 m²/kg./90.

Applications

Rigid PVC, self-adhesive cast vinyl, polycarbonate, acrylic.

Colour Range

15 shades including Seritone Matching System and metallics.

Properties

Up to seven years outdoor life in temperate climate.
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 Overprint Varnish have good resistance to a wide variety of products including petrol, alcohol and battery acid.

The use of VA401 APR Varnish is not recommended over PY EL inks for prolonged outdoor exposure.

Guarantees:

Guarantee of the outdoor life in a temperate climate of Polyplast PY EL colours over-varnished with PY-433 is available, on request. To be valid, the guarantee must be obtained in writing prior to first use. Specific enquiries regarding outdoor durability in non-temperate climates should be made via your Sericol supplier.

IMPORTANT:

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

Acrylic Signs

Polyplast PY EL inks are suitable for acrylic sheet, however, when used on reverse printed, enclosed acrylic signs, with or without back illumination, the durability of the ink may be affected. Customers are requested to contact their Sericol supplier before such use.

Spraying and Brushing

Suitably thinned with ZV556, Polyplast PY EL inks may be used for brushing or spraying. Care must be taken to ensure a uniform and adequate film thickness of ink and varnish is applied to optimise outdoor life.

Special Recommendations

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

1. The 13 colours which comprise the EL System and Polyplast PY383 Varnish may be:
 - a) printed over and under each other.
 - b) intermixed for matching purposes provided that:
 - i) the combined proportion by weight of PY021 White, PY030 Tinting White and PY383 Varnish does not exceed 80% of the total colour match mix.
 - ii) 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 EL System colours or to Polyplast PY Varnish.
3. No colour, other than the EL System, must be added.
4. The EL System must be printed on to suitably durable and compatible substrates. These include 'Hi-S Cal 5000 Series', 'Fascal 800 and 900', 'Macal 6600 Series', 'Scotchcals' and 'Meyercord Vinyl 72A' and acrylic sheet such as 'Perspex' and 'Plexiglass'.
5. Because of different pigmentation, the five EL Seritone colours may vary in shade from the same named colours in the standard Polyplast PY range.
6. Finishing processes which include heating may adversely affect colour. Please check prior to production.

Colour Range

The Polyplast PY EL System consists of five special EL Seritone base colours designed for use in colour matching in conjunction with four standard Polyplast PY Seritone bases and Polyplast PY010 Tinting Black and PY030 Tinting White for colour matching.

Where a 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 recommended for mixing into colour matches, whilst PY433 EL Overprint Varnish should be used for over-printing.

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 Vermillion/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 5 and 1 kg containers.

PY383	Polyplast PY Varnish
PY433	EL Overprint Varnish

Available in 5 and 1 ltr containers.

Solvents

ZV557	Thinner
ZV556	Fast Thinner
ZV558	Retarder

Available in 25, 5 and 1 ltr containers.

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, with the number and type of mesh to be used, as well as other relevant printing data, should be attached to orders. Where a 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.

Safety and Handling

Polyplast PY EL System:

- Is formulated to be free from any (toxic) carcinogenic, mutagenic or reprotoxic chemicals.
- Is formulated free from lead and other heavy metals and is tested to comply to the EN71-3: 1988 Toy Safety Standard.

Comprehensive information on the safety and handling of Polyplast PY screen inks and solvents is given in the appropriate Sericol Safety Data Sheet, available upon request.

Environmental Information

Polyplast PY EL:

- 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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