



SCREEN PRINTING TEXTILE INK

POLYWORKS

Low-odour, physically drying ink : POLYWORKS is designed for direct or transfer printing on fabrics for bags, covers, cases, awnings, windbreakers, umbrellas and workwear. POLYWORKS is characterized by good opacity and great flexibility for folding and turning operations.

Technical specifications

- **Composition** : Free of heavy metal salts.
- **Aspect** : Satin.
- **Colors** : POLYWORKS inks can be color matched according to the Pantone® colors. Our Color Matching System software is available directly on our website www.tiflex.com.
- **Average yield** : 49 t/cm screen : 25 sqm/kg.
- **Washing resistance** : Very good, including industrial washing at 90°C. The use of hardener is imperative and washing must be carried out at least 72 hours after printing.
- **Ironing** : On the reverse side.
- **Shelf life** : Refer to the product labelling.



Use

- **Drying** :
 - 30 minutes in open air (20°C).
 - 2 minutes at 60°C in forced-air dryer.
- **Screens** :
 - Up to 90 t/cm.
- **Printing** :
 - Manual, semi-automatic and automatic carousels.
- **Emulsions** :
 - Solvent-resistant emulsions like Tiflex emulsions : 19S, 149S, UST, 400ST, 200S.
 - Depending on exposure system.
- **Squeegee*** :
 - 3C Green (**245604**) or Green 75° recommended.
- **Adhesives for paletts** :
 - Aerofix S (**25D1815**), Takter 4000 (**25D1830**), Takter 1 (**25D1720**).
 - Adhesive 0381 (**3344079**) for roller application, Water-based adhesive (**25D3911**) for spray application.
- For time saving, you can apply an adhesive Tape on to the paletts (**25D9900**).
- **Cleaning** :
 - Manual : Solvents 2891, 2895, 2899, NS-81, NS-85, NS-91, NS-99, NS-55.
 - Washer : Solvents 2881, NS-81, NS-85, NS-91, NS-95, NS-99.

* This information is given as an indication and may vary according to the material used.

Use

■ Additives and thinners :

Hardener XF 822 (3470503) or Hardener GE (3981297) :
Add 10% to obtain optimum properties (adhesion, flexibility, weathering resistance).

Flexible hardener 3600 (3470805) : For specific applications - consult us. Add up 13%.

Bonding agent (3472090) : Add 3% to improve adhesion on primed substrates or fabrics with adhesion problems.
Do not use systematically.

Gelling agent (3952061) : Increase of deposit and viscosity. Add 1 to 2%.

⚠ Mechanical agitation required. This effect is optimal 24 hours after mixing ; it is recommended to prepare small quantities.

Thinner 4908 (3142020) : Reduced ink viscosity.

Retarder 4966 (3112030) : Delayed drying in the screen under certain conditions of use (high working temperatures).

Retargel (3392070) : Maintain viscosity. Add 10%.

■ **Pot life ink + hardener :** 12 hours.

Direct printing

■ Preparation :

Stir the ink first, add Hardener XF 822 (**3470503**) or Hardener GE (**3981297**) if necessary, then appropriate thinners. The use of hardener is recommended in most cases. Add 10%.

■ Flash cure :

Simultaneous flashing and blowing recommended («continuous» position on Tiflex Flash units).

■ Drying :

- 30 minutes in open air (20°C).
- 2 minutes at 60°C in forced-air dryer.

⚠ Definitive resistance of « ink + hardener » are achieved 72 hours after printing.

Transfer printing

■ Transfer media :

Polyester sheet for matte transfer available in various formats :

- 35 x 50 cm - 100 sheets (**2543850**).
- 50 x 70 cm - 100 sheets (**2543870**).
- 70 x 100 cm - 250 sheets (**2543750**).

Put your blank transfer media in Infrared dryer before printing to remove moisture. Protect your transfer media after each pre-gelling to avoid moisture pick-up again. These are harmful to color registration.

■ Inks :

The POLYWORKS series can be used in its entirety. It is essential to add 10% XF 822 Hardener (**3470503**) or Hardener GE (**3981297**)

■ Transfer adhesive :

PET Adhesive powder (**3863327**) imperative.

■ Pre-drying on transfer media :

open air (20°C) or 1 minute at 110°C.

■ Heat process :

⚠ Wait 72 hours after completion of printing.

- 15 to 20 seconds at 160-180°C.

The dryer and press conditions must be revalidated by washing tests.

■ Peeling : Cold peel.

Remove polyester when it cold.

Whites

■ White OP (3492012) :

To be used an under base or highlight and for processing of Pantone® colors.

■ Antibleeding white (3492092) :

To be used an highlight. Highly effective against colorant run-off. **Tests are imperative.**

■ High opacity white (3492085) :

To be used an under base or highlight.

Special recommendations

■ Washability :

For printing textiles to be household washing, the use of Hardener XF 822 (**3470503**) or Hardener GE (**3981297**) is imperative. Definitive resistance is achieved 72 hours after printing.

Waterproofing treatments on certain fabrics can prevent ink adhesion and reduce wash fastness.

Poor transfer hold is due to non-compliance with recommended parameters or fabric treatments. In this case, use direct printing.

■ Bleeding :

Bleeding (or dye migration in inks) is visualized by an instantaneous or slow coloration of white (or light) inks. For example, a white print will turn pink on red fabric.

To prevent dye migration, pass the polyester textile through the drying tunnel before printing to evacuate the humidity.

An under base is printed with POLYWORKS Antibleeding white (**3492092**). For long-lasting results, the ink must be sufficiently polymerized.

TIFLEX would like to draw your attention to the following points :


Before starting production, we recommend that you check the ink's various compatibilities and resistances on a textile by washing the finished article under the conditions stipulated on its label.







Compliance

POLYWORKS inks comply with **EN 71-3**, the **ROHS directive** and **REACH/CLP regulations**.

Product range

STANDARD COLORS OP		Ref. 1 kg
	White OP*	3492012
	Antibleeding white	3402092
	Lemon OP*	3492002
	Gold yellow OP*	3492004
	Orange OP*	3492006
	Bright red OP*	3492008
	Carmine red OP*	3492013
	Cyclamen OP*	3492014
	Violet OP*	3492016
	Medium blue OP*	3492022
	Dark blue OP*	3492026
	Medium green OP*	3492033
	Dark green OP*	3492034
	Brown OP	3492042
	Dark OP*	3492072

HIGH OPACITY COLORS	Ref. 1 kg
High opacity white	3492085
High opacity yellow	3492087
High opacity red	3492088

PROCESS COLORS	Ref. 1 kg	
	Process yellow	3492050
	Process magenta	3492052
	Process cyan	3492054
	Process black	3492056
	Process base	3492059

BASES	Ref. 1 kg
Mixing base and overprint varnish*	3492058
Soft base	3492068

SPECIAL EFFECT	Ref. 1 kg
Reflective silver (decorative effect)	3492090

ADDITIVES AND THINNERS		Ref.
Hardener XF 822	100 g	3470503
Hardener GE	250 g	3981297
Flexible hardener 3600	130 g	3470805
Bonding agent	100 ml	3470590
	1 l	3472090
Gelling agent	1 kg	3952061
	1 l	3142020
Thinner 4908	5 l	3144020
	1 l	3112030
Retarder 4966	1 l	3112030
Retargel	1 kg	3392070

TRANSFER ADHESIVE		
PET Adhesive powder	3 kg	3863327



Pantone® Formulation guide online : The inks marked with an asterisk *, can be color matched according to the PANTONE® colors. PANTONE® colors are available directly on our website by using our Color Matching System software.
The colors reproduced on this document are not contractual. Upon request, we can provide you with a color chart reproducing the colors in a more faithful way.