



Textile screen printing inks  
for the eco-friendly professional

# Technical Data Sheet



With 45 years of manufacturing experience, Permaset is recognised both by the professional printing trade and the fine artist as the premium producer of textile screen printing inks. Our great heritage continues with a dynamic reengineering of our successful line of quality textile inks. In keeping with this heritage of industry leading products, we have developed a totally water-based textile printing product with superior performance that eliminates the trade-off between softness and durability.

The development of Permaset Aqua represents a revolution in textile screen printing inks. By using advanced polymer technology combined with the purest pigments in a 100% solvent free base, the unique formula of Permaset Aqua offers an environmentally friendly, easy-to-use ink that provides an unsurpassed balance of softness and durability to wash, rub and dry-clean, eliminating the need for additives, together with excellent colour brightness.

Permaset Aqua is a ready to use, 100% solvent free water-based textile ink, designed for direct wet-on-wet printing on a wide range of natural and synthetic fabrics. The environmentally friendly formula provides intense pigment colour that is rich in coverage and produces exceptional colour yield. The resilient base holds fast during rub, wash or dry-clean while having virtually no handle on the printed fabric.

As a water-based product, Permaset Aqua is low odour and equipment is easily cleaned with water. After heat curing, prints exhibit excellent wash, rub and dry-clean resistance. Permaset Aqua performs at a higher standard, with enhanced screen stability allowing exceptional screen open time, to allow cleaner results, longer. Ideal for use on Cotton, Polyester, blends, Silk and most synthetic fibres.

A first rate innovation, Permaset Aqua is the perfect textile printing ink for the broadest range of textile applications.

**Important:** Stir well before use.  
Compatibility with all substrates must be checked before commencing a production run.

## Main Characteristics

Drying	Thinning & Wash-up	Mesh Range	Stencil Type	Coverage & Mesh	Applications	Fabrics	Colour Range
For optimum fastness Permaset Aqua should be heat cured.	If necessary, thin with up to 5% water.  Dried in ink may be washed out with Sericol CPS KA or A8 Screenwash.	Monofilament. 43-120T (110-305 tpi) depending on application for standard and process colours. 34-100T (85-255 tpi) depending on application for SuperCover Metallic, Puff and Phosphorescent	MUST be water resistant, fully dried and cured. Check first! <b>Emulsion:</b> Recommend: Sericol Dirasol 916 or KIWO Polyplus SRX or ULANO LX-660 or CHROMALINE CP-TEX	15-21m <sup>2</sup> /L with 62T (155 tpi) mesh.	T-Shirts. Flags. Banners. Sports and Fashion Wear. Scarves. Swimwear. Upholstery and Window Furnishings.	Cotton. Cotton/ Polyester blends and most synthetic fabrics.  The fastness to wash and dry cleaning on wool may be diminished.	18 Standard Colours plus 2 Whites, Black and Print Paste. 13 Super-Cover Colours plus 2 Whites, Black and Print Paste. 4 Metallics, 8 Standard Glow, 8 Supercover Glow, Process set (CMY+K), Phosphorescent and Puff Bases.
<b>Properties</b> - Matt Finish. Solvent-free. Low odour. Intermixable, light fast, non-bleeding colours. Brilliant transparent shades in standard colours. Excellent opacity with SuperCover Colours. Soft handle. Excellent wash and dry clean resistance. Ironable.				<b>Product Resistance</b> After heat curing, prints exhibit very good resistance to wet + dry rub.			

## Drying and Curing

For optimum wash and colour fastness, prints should be fully heat cured. Whilst the below information is a guide, the curing schedule used should be chosen to suit the heat resistance of the fabric being printed. Care must be taken with IR dryers to ensure that prints are fully cured. When printing on synthetic blends and fabrics, a lower curing temperature and longer drying time is recommended. If your drying conditions fall outside these recommendations, please contact your local representative for technical assistance.

The following curing guidelines are recommendations for ink deposit temperatures, not dryer temperatures. This should be checked with temperature strips to ensure the appropriate temperatures are achieved.

2-3 Minutes @ 160°C (320°F)

5-6 Minutes @ 140°C (285°F)

8-9 Minutes @ 120°C (250°F)

## Fastness

Light Fastness is good. Most colours achieve a rating of 8/8 on the Blue Wool Scale, but all are not less than 6/8. When fully heat cured, prints have excellent wash and dry clean fastness.

Colour Matches: Note that high temperatures combined with strong detergents can cause colour changes in some colour matches. It is therefore imperative that all formulations are checked for acceptable wash fastness properties prior to production.

## Rub Resistance

After heat curing, prints exhibit very good resistance to wet/dry rub.

## Permaset Aqua Standard Colours

Jet Black	Purple
Transparent White	Junior Navy
Standard White	Blue B
Mid Yellow	Light Blue
Yellow R	Turquoise*
Orange R	Mid Green
Scarlet	Green B
Bright Red	Dark Brown*
Mid Red	Brown R*
Bordeaux*	Venetian Red*
Rose	Print Paste (not in 100mL)

Available in 100mL (\* excepted), 300mL, 1, 4 + 15L containers

## Permaset Aqua Glow Colours

Glow Yellow  
Glow Orange  
Glow Red  
Glow Pink  
Glow Magenta  
Glow Violet  
Glow Blue  
Glow Green

Available in 300mL, 1 + 4L containers.

## Permaset Aqua Bases

Puff Base  
Phosphorescent Green

Available in 100mL, 300mL and 1L container only.

## Permaset Aqua SuperCover Colours

SuperCover Black  
SuperCover White  
SuperCover First Down White  
SuperCover Mid Yellow  
SuperCover Yellow R  
SuperCover Orange R  
SuperCover Scarlet  
SuperCover Mid Red  
SuperCover Rose

SuperCover Burgundy (not in 100mL)

SuperCover Purple

SuperCover Ultra Blue

SuperCover Blue B

SuperCover Light Blue

SuperCover Mid Green

SuperCover Green B

SuperCover Print Paste (not in 300mL or 100mL)

Available in 100mL, 300mL, 1, 4 + 15L containers.

## Permaset Aqua SuperCover Glow Colours

SuperCover Glow Yellow  
SuperCover Glow Orange  
SuperCover Glow Red  
SuperCover Glow Pink  
SuperCover Glow Magenta  
SuperCover Glow Violet  
SuperCover Glow Blue  
SuperCover Glow Green

Available in 300mL, 1 + 4L containers.

## Permaset Aqua Process Colours

Process Black  
Process Cyan  
Process Magenta  
Process Yellow

Available in 1 + 4L containers

only.

## Permaset Aqua Metallic Colours

Metallic Pearl White  
Metallic Silver  
Metallic Gold  
Metallic Copper

Available in 100mL, 300mL, 1L, 4L + 15L containers only.

## Ancillary Products

Fabrics must be held in place during printing by means of a pressure sensitive adhesive to ensure good definition and registration.

Permaset Table Adhesive and Belt Adhesive are suitable for this purpose.

## Safety and Handling

Permaset Aqua has been formulated to be free of any toxic chemicals. The range has no flash point, and as such is exempt from Flammable Liquids regulations. Permaset Aqua is free from Lead and other heavy metals except Copper. Comprehensive information on the safety and handling of products in the Permaset Aqua range of inks and ancillaries is provided in the appropriate Material Safety Data Sheets (MSDS) which are available on request.

## Environmental Information

Permaset Aqua is formulated to be environmentally friendly with enhanced performance characteristics. Permaset Aqua does not include any CFCs, HCFCs, volatile solvents nor aromatic hydrocarbons. Unlike other inks (e.g. Plastisols) Permaset Aqua is also PVC and Phthalate free.

## Storage

Containers should be kept in a cool place and tightly closed when not in use.

## Suggested Safe Disposal Method

- 1/ Wipe as much excess ink off the screen as possible, first with a squeegee (back to the bucket), then with rags/paper (into bin)
- 2/ Hose out the screens in a contained vessel
- 3/ Capture the liquid waste and allow to settle
- 4/ Strain out solids, dry solids in the sun and dispose of as solid waste.

5/ Aqueous wastes should be disposed of in sealed containers to a certified waste disposal entity.

**Excess ink and wastes from the screen should be disposed of in accordance with the regulations of local regulatory authorities**

The information and recommendations contained in this Technical Data sheet, as well as technical advice otherwise given by our Representatives, Distributors or Agents, whether verbally or in writing, are based on our present knowledge and believed to be accurate at the time of writing. 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 will conduct their own tests to fully satisfy themselves that products will fully meet their particular requirements. Further, our policy of continuous product improvement may render some of the information contained in this Technical Data sheet out of date and users are requested to ensure that they follow current recommendations.

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