

Permaprint
Premium

Drying	Thinning & Wash-up	Mesh Range	Stencil Type	Coverage & Mesh	Applications	Substrates	Colour Range
For optimum fastness Permaprint™ Premium should be air dried, or may be jet dried at maximum airflow. If drying in the screen too quickly, add 1-2% Permaset™ Print Retarder G.	If necessary, thin with up to 1-3% water. Wash screens out with water & detergent. Dried in ink may be washed out with conventional or eco-friendly screenwash.	Monofilament Polyester 32-120T (83-305 tpi) depending on application for standard and process colours. 34-100T (85-255 tpi) for Pearls. Nylon mesh is NOT recommended. It is water sensitive and screen tensions can be affected with water-based inks. Polyester mesh is recommended.	MUST be water resistant, fully dried and cured. Check first! Emulsion: Recommend: KIWO POLYCOL® MULTI-TEX / VERSA-TEX™ or Fujifilm Diraso® 916 or ULANO® 925WR or Chromaline® CP-TeX™ or MacDermid Autotype PLUS 6000 or Murakami TXR®/T9.	15-21m ² /L with 62T mesh. 612-857 square feet per gallon with 155 tpi mesh.	High lay-down hand printed wallpaper & art reproduction, through to skateboards, stickers, posters and backlit displays. Packaging, wrapping paper, notebooks & book covers, cork mats & coasters.	Sealed paper, cardboard, Tyvek®, polyesters (Mylar®), polycarbonates (Lexan®), some coated metals, polystyrene, PMMA (Perspex®), Corflute® / Coroplast®. Care should be taken with some vinyls as plasticizer migration may soften the ink over time. Care should also be taken with some uncoated papers as cockling may occur.	9 Aquatone™ Colours + Aquatone™ Black, White + Extender, Opaque White, Clear (Gloss Varnish) + Matting Agent. Also, Process set (CMY+K), 8 Glow + 4 Pearl colours.
Properties Gloss Finish. Solvent-free. Low odour. Intermixable, light fast,* non-bleeding colours.				Product Resistance After air dry, prints exhibit very good water resistance.			

PRINTING

Screen meshes of 32-120T (83-305 tpi) monofilament polyester are suitable for most **Permaprint™ Premium** applications. Ensure that there is adequate ink on the screen for an even print. Between prints, ensure that ink is flooded over the entire image area to prevent drying-in. Ensure that screen emulsions and blackout are water-resistant and fully cured.

IMPORTANT: When printing with Permaprint™ Premium, it is essential to flood the image area after lifting the screen following each print stroke. Thin deposits of ink retained in the mesh will dry very fast. By flooding straight away, fresh ink will wet out these deposits and prevent premature drying in.

Mesh: **Permaprint™ Premium** is used commercially with mesh counts ranging from 32T metric (83 tpi) for high lay down on hand printed wallpaper and art reproduction through to 120T (305 tpi) on applications such as stickers, posters and backlit displays where maximum detail and transparency is required. General purpose work is best with meshes from 77T (195 tpi) to 100T (255 tpi). Polyester mesh is recommended as nylon is water sensitive and screen tensions can be affected with water-based inks.

Squeegee: Sharp square urethane squeegees from 55 to 75 Shore hardness are recommended for best image reproduction.

Stencil: Water resistant stencils are essential with **Permaprint™ Premium**. Dual cure direct emulsions such as KIWO POLYCOL® MULTI-TEX / VERSA-TEX™, ULANO® 925WR, MacDermid Autotype Plus 6000, Murakami TXR®/T9 or Fujifilm Diraso® 916 are recommended for long runs and maximum print resolution. Care

should be taken to ensure that stencils are properly dried and exposed as under-exposure will render most direct emulsions sensitive to premature breakdown with water-based inks.

Drying: **Permaprint™ Premium** inks can be rack or jet-air dried and are also suitable for R.F. or Microwave dryers. **Permaprint™ Premium** dries by simple evaporation over 20-30 minutes, depending on ambient temperature and humidity or can be jet dried at 65-75°C (149-167°F) for approximately 30-45 seconds using maximum air flow. In the case of porous substrates, drying is aided by absorption. Drying rates in all cases will be affected by ink thickness. Testing under print shop conditions on common substrates is recommended before commencing any production print run.

Ensure that adequate ventilation is provided during drying and that cooling is allowed before stacking to prevent blocking problems.

Whilst the information above is a guide, any heating schedule used should be chosen to suit the heat resistance of the substrate being printed. Care must be taken with IR dryers. When printing on synthetic substrates, lower temperatures and longer drying times are recommended. If your drying conditions fall outside these recommendations, please contact your local representative for technical assistance.

Any drying temperature guidelines quoted above are recommendations for ink deposit temperatures, not dryer temperatures. This should be checked with temperature strips to ensure the appropriate temperatures are achieved.

*All Glow colours exhibit diminished light fastness, particularly in direct sunlight.

Permaset

Drying	Thinning & Wash-up	Mesh Range	Stencil Type	Coverage & Mesh	Applications	Fabrics	Colour Range
For optimum fastness Permaset® Aqua should be heat cured. If drying in the screen too quickly, add 1-3% Permaset® Print Retarder G.	If necessary, thin with up to 5% water. Dried in ink may be washed out with conventional or eco-friendly screenwash.	Monofilament. 43-120T (110-305 tpi) depending on application for Permatone™ , Standard and Process colours. 43-90T (110-225 tpi) depending on application for Supercover , Metallic, Puff Paste and Phosphorescent Green.	MUST be water resistant, fully dried and cured. Check first! Emulsion: Recommend: Fujifilm Diraso® 916 or KIWO POLYCOL® MULTI-TEX / VERSA-TEX™ or ULANO® 925WR or Chromaline® CP-TeX™ or MacDermid Autotype PLUS 6000 or Murakami TXR®/T9.	15-21m ² /L with 62T mesh. 612-857 square feet per gallon with 155 tpi mesh.	T-Shirts, Flags, Banners, Sports and Fashion Wear. Scarves, Swimwear, Upholstery & Window Furnishings. Yardage, cushions, table & bed linen, tea towels & tote bags.	Cotton. Cotton/ Polyester blends and most synthetic fabrics. Fastness to wash and dry cleaning on wool may be diminished.	9 Permatone™ colours + Black, White + Extender. 13 Supercover Colours + Black, 2 Whites and Print Paste. 4 Metallics , 8 Standard Glow , 8 Supercover Glow, Process set (CMY+K), Phosphorescent Green and Puff Paste.
Properties Matt Finish. Solvent-free. Low odour. Intermixable, light fast,* non-bleeding colours. Brilliant transparent shades in Permatone™ and Standard colours. Excellent opacity with Supercover Colours. Soft handle. Excellent wash and dry clean resistance. Ironable.				Product Resistance After heat curing, prints exhibit excellent resistance to wet and 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)

If using Retarder G, note that this will also slow dry in the oven. Ensure that a test wash is completed to confirm that cure regime is adequate.

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.

*All Glow colours and Phosphorescent Green exhibit diminished light fastness, particularly in direct sunlight.

Permaset® is a registered trademark. **Permaprint™ Premium** and **Permatone™** are trademarks.

PERMASET®, PERMATONE™ and PERMAPRINT™ PREMIUM inks are manufactured by:

colormaker
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quality coatings through research & innovation

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Prices exclude local taxes.

Permaset

Permaprint
Premium

Permatone

SCREEN PRINTING INKS TRADE COLOUR GUIDE

Premium screen printing inks for the eco-friendly professional





Permatone[®]

PERMATONE™

Yellow GS	Yellow RS	Orange	Red YS
Blue	Violet	Magenta	Red BS
Green	Black	White	Extender

Permaset[®] Aqua

GLOW*

Glow Yellow	Glow Green	Process Yellow	Pearl White
Glow Orange	Glow Blue	Process Magenta	Bright Silver
Glow Red	Glow Violet	Process Cyan	Gold Lustre
Glow Pink	Glow Magenta	Process Black	Copper

*All Glow colours exhibit diminished light fastness, particularly in direct sunlight.

Permaset[®] Supercover

SUPERCOVER

Mid Yellow	Rose
Yellow R	Purple
Orange R	Ultra Blue
Scarlet	Blue B
Bright Red	Light Blue
Mid Red	Green B
First Down White	Mid Green
White	Black

*All Glow colours exhibit diminished light fastness, particularly in direct sunlight.

SUPERCOVER GLOW*

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

Permaprint[™] Premium

AQUATONE™

Yellow GS	Yellow RS	Orange	Red YS
Blue	Violet	Magenta	Red BS
Green	Black	White	Extender
Clear (Gloss Varnish)	Matting Agent	Opaque White	

GLOW*

Glow Yellow	Glow Green	Process Yellow	Pearl White
Glow Orange	Glow Blue	Process Magenta	Pearl Silver
Glow Red	Glow Violet	Process Cyan	Pearl Gold
Glow Pink	Glow Magenta	Process Black	Pearl Copper

*All Glow colours exhibit diminished light fastness, particularly in direct sunlight.