

# PLUS GOLD

## Diazo Sensitised Water & Solvent Resistant Direct Emulsion

### DESCRIPTION

PLUS GOLD is specifically formulated to give the optimum wear resistance, coupled with excellent print quality for printing Solar cells. The unique red colour of this emulsion provides superb contrast on steel mesh for ease of inspection.

### Applications

- PLUS GOLD has been specifically developed for applications where very high print quality and durability is required. The unique colour has been designed to give the best result on Stainless Steel meshes that are typically used for these applications.
- PLUS GOLD has been ultra-filtered for use in a clean room environment to minimise the possibility of pin-holes or repellencies.
- In addition, the resistance to a wide range of water, solvent and co-solvent inks makes it a suitable direct photostencil for many screen printing applications where high quality is required.
- Stencils can be decoated using conventional decoating chemicals such as Autostrip.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

### FEATURES & BENEFITS

- Clean room quality; red colour gives excellent contrast on steel mesh; dual-cure photocuring technology for optimum durability; excellent print reproduction.
- PLUS GOLD is a new clean-room compatible emulsion. This ultra high quality, dual-cure emulsion has been specifically formulated for high tolerance screen printing using steel mesh.
- PLUS GOLD is perfect for Solar Cell printing and other applications where durability and quality are the prime requirements

### WORKING INSTRUCTIONS

#### Sensitising of Emulsion

Handle the emulsion under yellow fluorescent tubes or low wattage Tungsten light. The product is supplied as a two pack kit comprising the emulsion and powder sensitizer in a sachet.



Mix the two components as follows:

1. Cut the Diazo sachet open using a pair of scissors. Do not open with your teeth.
2. Add the Diazo sensitiser DIRECTLY to the emulsion. Do not dissolve the sensitiser in water or add additional water to the emulsion.
3. Stir thoroughly for approximately 2 to 3 minutes to ensure emulsion is sensitised throughout.
4. Allow the emulsion to de-gas overnight before use.

### Mesh Preparation

Unused polyester/nylon	Autoprep Gel and Universal Mesh Prep
Used polyester/nylon	Universal Mesh Prep, Auto Degreaser Concentrate
Stainless Steel	Auto Degreaser Concentrate

### Coating & Drying

Using a good quality coating trough, proceed as follows:

1. Apply 2 coats to the print side of the screen.
2. Apply 2 coats to squeegee side.
3. The screen should be dried horizontally, squeegee side up and stored under dark or yellow light conditions. Dry the screen at a maximum temperature of 30 °C (86 °F).
4. Additional face-coats may be applied to the print side of the screen with intermediate drying.

### Exposure

Correct exposure is essential for optimum stencil performance. Underexposure will give a weak stencil and reduce resistance.

Remove dust from the surface of the stencil and tape positive in position. Place entire screen in a suitable vacuum frame and expose. We recommend use of the Autotype Exposure Calculator for test exposures to ascertain correct timing. Exposure times below should be used as a guide:-

Exposure Time*		MINUTES										
		0	1	2	3	4	5	6	7	8	9	10
LAMP	DISTANCE											
2kW metal halide	120 cm											
3kW metal halide	120 cm											
5kW metal halide	120 cm											
125W mercury vapour	50 cm											
UV fluorescent tubes	10 cm											

\* Based on 2+2 coating on 90/cm (230/inch) dyed monofilament polyester mesh.



**Washout & Drying**

Wash out the screen from both sides with a strong spray of water. Continue the washout until all parts of the image appear clean and sharp. Blot off surplus moisture and dry at a maximum temperature of 30 °C (86 °F).

Spot out pinholes with sensitised emulsion.

**Stencil Removal**

Remove ink from the screen with an Autosolve screen cleaner. Then apply Autostrip to both sides of the screen and leave to stand for 5 minutes. The stencil can then be removed with a strong water jet. If a stain or ghost image still remains, use Autokleen Plus.

For more information on how to use MacDermid Autotype products, go to the How to Guide section at [macdermid.com/autotype](http://macdermid.com/autotype).

**SHELF LIFE & STORAGE**

The unsensitised emulsion and sensitiser should be stored between 5 to 20 °C (41 to 68 °F) for optimum shelf life.

The shelf life is 24 months for unsensitised emulsion and 4 to 6 weeks once sensitised.

**PACKAGING**

PLUS GOLD is supplied in trade packs of 6 x 1 Litres and 4 x 4 Litres, all with Diazo.



**SAFETY & WARNING**

MacDermid Autotype recommends that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use.

**Safety Data Sheets are available from MacDermid Autotype.**

**WASTE TREATMENT**

Prior to using any recommendations or suggestions by MacDermid Autotype for waste treatment, the user is required to know the appropriate local/state/federal regulations for on-site or off-site treatment which may require permits. If there is any conflict regarding our recommendations, local/state/federal regulations take precedent.

**CONTACT INFORMATION**

**To confirm this is the most recent issue, please contact MacDermid Autotype**  
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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product.  
 READ IT THOROUGHLY PRIOR TO PRODUCT USE.

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