

## PLUS 8050

### Ultra High Quality Direct Emulsion

#### DESCRIPTION

PLUS 8050 is a 38% solids, pigmented aqueous emulsion of water dispersible polymers and monomers, supplied with Diazo powder sensitiser.

#### Applications

PLUS 8050 has been specifically formulated for ultra high quality applications in cleanroom production areas. Very high dispersion quality, and special filtration during manufacture, ensures no particles or pinholes during stencil production. PLUS 8050 has higher print durability than standard PLUS emulsions, which makes it ideal for other applications such as textile and ceramic printing.

The product is capable of achieving very high resolution and image definition on fine polyester and stainless steel meshes. In addition, it has a wide processing latitude, and is removable after printing if required.

PLUS 8050 is resistant to solvent and radiation curing inks.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

#### FEATURES & BENEFITS

- PLUS 8050 is designed to give the highest quality printing combined with the maximum durability. PLUS 8050 has a solids content of 38% and is highly resistant to the most aggressive solvent, UV curing and water based inks. It has a wide exposure latitude, is easily decoatable and uses direct addition Diazo for maximum consistency of viscosity. The product is capable of achieving very high resolution and image definition on fine polyester and stainless steel meshes. In addition, it has a wide processing latitude and is removable after printing if required.
- PLUS 8050 is resistant to solvent and UV curing inks.
- Reliability for long run printing with a wide range of solvent based, water based and co-solvent inks, the highest print quality from an emulsion.

#### 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 sensitiser 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\***

LAMP	DISTANCE	MINUTES											
		0	1	2	3	4	5	6	7	8	9	10	
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 8050 is supplied in trade packs of 6 x 1 Litres, 4 x 4 Litres, 1 x 20 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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