

## PLUS 8000 Data Sheet

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### Diazo Sensitised Water & Solvent Resistant Direct Emulsion

#### PRODUCT DESCRIPTION

PLUS 8000 is a high quality, 38% solids, pigmented aqueous emulsion of water soluble dispersible polymers and monomers, supplied with diazo powder sensitiser.

#### APPLICATIONS

Resistance to a wide range of water, solvent and co-solvent inks makes PLUS 8000 a suitable direct photostencil for most screen printing applications.

PLUS 8000 is particularly recommended for applications where the very highest print durability and print quality is required, whilst remaining decoatable after printing.

#### HAZARDS

The sensitiser powder is classified as 'harmful' by ingestion. Avoid breathing in dust. Rubber gloves and eye protection (goggles) should be worn, and if large quantities are handled, wear a dust mask. The product may be irritating to the skin, eyes or respiratory tract. Attention should be given to these safety precautions which isolate the user from any hazards. Keep in a dry, cool place away from heat, ignition and children's reach.

The emulsion is non-classified (both before and after sensitising), and there are no hazards associated with the normal use of this product. However, the product contains Chloromethylisothiazolinone (a biocide), which may produce an allergic reaction in some individuals. Splashes in the eyes may be irritating and very sensitive skin may need to be protected. Wear gloves and goggles as appropriate.

#### WARNINGS

Emulsion: May product an allergic reaction  
Sensitiser: Harmful if swallowed

## WORKING INSTRUCTIONS & SAFE HANDLING

### Sensitising of Emulsion

NOTE: NEW 'DIRECT ADDITION' OF DIAZO

Handle PLUS 8000 under yellow fluorescent tubes or low wattage Tungsten light. PLUS 8000 is supplied as a two pack kit comprising the emulsion and powder sensitiser in a sachet.

Prior to sensitising read 'Health and Safety Information'. Mix the two components as follows:

1. Cut the powder diazo sachet open using a pair of scissors (DO NOT OPEN WITH TEETH).
2. Add the powder 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 2-3 minutes to ensure emulsion is sensitised throughout.
4. Allow the emulsion to de-gas for at least 15 minutes before use.

### Mesh Preparation

Unused polyester/nylon  
Used polyester/nylon  
Stainless Steel

Autoprep Gel and Universal Mesh Prep  
Universal Mesh Prep  
Universal Mesh Prep

### Coating & Drying

Stand the screen on edge, angled away from the operator and, using a good quality coating trough, proceed as follows:

1. Apply 2 coats to the underside 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 coatings may be applied to the underside 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 MacDermid Autotype Limited Exposure Calculator for test exposures to ascertain correct timing. Exposure times below should be used as a guide:-

#### Exposure Time (minutes)\*

LAMP	DISTANCE	0	1	2	3	4	5	6	7	8	9	10
2kW metal halide	120 cm											
3kW metal halide	120cm											
5kW metal halide	120cm											
125W mercury vapour	50cm											
UV fluorescent tubes	10cm											
Thorn Graph X	120cm											

\* 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 with newsprint or a leather and dry at a maximum temperature of 30°C (86°F).

Spot out blemishes with sensitised emulsion.

#### Stencil Removal

Remove ink from the screen, with Autosolve screen cleaner. Apply Autostrip to both sides of the screen. Leave standing for 5 minutes. The stencil can then be removed with a strong water jet or high pressure stripper. If a stain or ghost image still remains, use Autokleen Plus.

#### FIRE PRECAUTIONS

The sensitizer powder will burn liberating toxic oxides of nitrogen. If burning extensively, breathing apparatus should be worn. Fires may be extinguished with water or foam.

#### SPILLAGE

Diazo sensitizer should be collected for authorised chemical disposal. The emulsion may be flushed to waste with extensive dilution. Large spillage should be absorbed in sand or sawdust and transferred to a safe area for disposal.

#### FIRST AID

Eyes: Irrigate with water for 15 minutes. Get medical advice.  
 Skin: Wash thoroughly with soap and water.  
 Ingestion: Wash out mouth. Administer emetic. Get medical attention.



## SHELF LIFE & STORAGE

The unsensitised emulsion and sensitiser should be stored between 3° and 20°C for optimum shelf life.

Shelf life is 24 months.

## ENVIRONMENTAL

This product is a mixture of water dispersible pigmented polymers. The polymers are polyvinylalcohols and/or plasticised polyvinylacetate with an insoluble pigment and surfactants. This product does not contain any materials regarded as ecotoxic or contained on the EC Black/Grey lists. Tests have shown no inhibition of activated sludge at typical effluent concentrations and the product may be regarded as drain safe and biodegradable.

## DISPOSAL

Small quantities can be washed to foul waste. Larger quantities should be disposed of by an authorised industrial waste chemical contractor. Emulsion EWC Code: 08 04 08. Sensitiser EWC Code: 07 07 99.

## PACKAGING

PLUS 8000 is sold in sealed plastic containers.  
Trade packs of 6 x 1 Litres, 4 x 4 Litres, 1 x 200 Litres.

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Note – All data contained herein is based upon limited testing of pre-production material and should not be taken as representative of the eventual mass produced product.

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