



Dirasol DLE Photopolymer Emulsions

Dirasol DLE is a pre-sensitised photostencil emulsion designed to offer the optimum exposure speed on Direct Light Exposure computer-to-screen systems. Dirasol DLE is formulated for use with solvent based and 100% UV ink systems typically used for large format graphics.

Properties

Dirasol DLE

One pot system, ultra-fast exposure speed, easy de-coatability, with resistance to solvent-based and 100% UV inks.

Instructions for Use

Safe-lighting

Dirasol photopolymer emulsions are pre-sensitised, and therefore sensitive to light at all times. All handling of Dirasol emulsions should be carried out in light which is low in blue and ultra-violet content. A photographic safelight is not essential but yellow or weak tungsten illumination is recommended. A useful form of light for the workroom is provided by gold fluorescent tubes. Daylight should be excluded or filtered by a yellow lacquer coating or film applied over windows. Coated screens should be stored in total darkness.

Preparing the Screen

Degrease the mesh in automatic screen cleaning machines using Xtend Prep 300 Sprayable Degreasing Concentrate or by hand with Prep 102 Degreasing and Emulsifying Concentrate. When degreasing by hand using Prep 102, wet the screen and apply with a sponge or brush and then rub the mesh with a light circular motion. Ensure that both sides of the screen are thoroughly treated. Leave to stand for a few minutes and rinse with cold water to remove all traces of Prep. Allow the mesh to dry before coating.

Coating

Automatic Coating

One simultaneous single coat on each side of the screen is recommended, followed by further coats on the squeegee side if required to increase build.

Hand coating:

Apply 1 coat on the print side of the screen and then apply one coat or more wet-on-wet on the squeegee side. The Sericol Coating Trough is particularly recommended.

Sericol Coating Troughs

The troughs are composed of precision extruded aluminium channelling fitted with injection moulded end pieces for accurate and consistent coating of photostencil emulsions. The channelling has a hard anodised finish which effectively seals the surface, easing cleaning and protecting from corrosion. The ends have a special shoulder and slots incorporated, ensuring the coating edge is consistently at the optimum angle to the screen helping eliminate beads. These features permit relatively inexperienced operators to coat screens faster and more accurately. Designed to deposit medium coating thicknesses, it is possible to coat a screen to a given stencil thickness with fewer strokes than would be required with a sharper or less precise edge.

Drying

The wet screen must be dried in darkness or subdued yellow light, ideally in a horizontal position, squeegee side up. A warm air fan or well ventilated heated cupboard (up to 40°C) may be used but care should be taken not to blow dust on to the drying screen. For maximum stencil durability the screen must be thoroughly dry before exposure.

Exposure

Correct exposure is most important to obtain optimum resolution, definition and stencil life. For this reason it must be determined by exposing a tone test strip for a range of exposure speeds. For a durable stencil, the ideal time is the maximum exposure to achieve optimum resolution. If necessary repeat with smaller speed intervals to determine exposure more accurately.

Factors Affecting Exposure speed:

Age of lamp in Direct Light Exposure machine

The lamp systems in DLE machines (also referred to as Digital Mirror Devices DMD) are known to reduce in power with time. Care should therefore be taken to calibrate the lamp on each machine prior to conducting emulsion exposure tests. For more details on power mapping of DLE lamps contact the DLE machine manufacturer.

Mesh colour

The increased light absorption of coloured mesh will significantly increase the exposure time of Dirasol DLE. For optimum exposure time White mesh is therefore recommended.

Developing

Gently spray both sides of the screen with cold or warm water (not above 40°C). For best results, an automated screen developing unit is recommended.

Final Drying and Spotting

Dry with the aid of a fan. Any small blemish or pinholes can be filled in using Universal Filler (FISW1) or emulsion which requires re-exposure..

Reclaiming the Screen

Automatic Screen Cleaning Machines:

Remove ink residues using an Xtend Screen Cleaner and de-coat stencil using diluted Strip Liquid Concentrate.

Manual Screen Cleaning:

Remove ink residues using a wiper soaked with an Xtend Screen Cleaner. Rinse the screen with water and then apply diluted Strip Powder or Strip Liquid to both sides of the stencil. Leave for a few minutes. The stencil can then be easily removed with a strong water jet or high pressure water gun.

Standard Packing

Dirasol DLE

DJDLE/20 Large Jumbo Pack - 20 (4 x 5) ltr Emulsion

DJDLE/5 Individual Pack 1 x 5ltr Emulsion

Storage

Store in original containers with the lid firmly sealed, at the coolest possible room temperature and in no case below 5°C or above 35°C. The emulsions will then remain stable for twelve months.

Fujifilm Sericol UK Limited:

- Has certification to the International Environmental Standard, ISO 14001
- Is committed to minimising the risk to users of our products, and also to minimising the impact of our activities on the environment, from formulation through to production and supply.
- Research & development team, work to an in house Health, Safety and Environmental policy, termed 'Design for Health, Safety and Environment', with the aim of proactively developing products with the least impact on health, safety and the environment.
- Regularly review and monitor our impacts and activities, setting objectives and targets as part of a continual improvement process.
- Is committed to reducing waste through better use of raw materials, energy, water, re-use and recycling.

Safety and Handling

Dirasol Photopolymer Emulsions:

- Are formulated to be free from any toxic, carcinogenic, mutagenic or reprotoxic chemicals.
- Have a flashpoint greater than 55°C and are therefore not classified as "dangerous substance" under the Dangerous Substances and Explosive Atmospheres Regulation.

Comprehensive information on the Safety and Handling of Dirasol emulsions and is given in the appropriate Sericol Safety Data Sheets, available upon request.

Environmental Data

Dirasol Photopolymer Emulsions:

- Do not contain ozone depleting chemicals as described in the Montreal Convention.
- Are free of any volatile solvent and can therefore be considered to have less impact on the environment, when compared with solvent-based products.
- Are free from Phthalate Plasticisers.
- Have a ph of 4-5

The information and recommendations contained in this Product Information Sheet, as well as technical advice otherwise given by representatives of our Company, whether verbally or in writing, are based on our present knowledge and believed to be accurate. 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 shall make their own tests to satisfy themselves that they will meet fully their particular requirements. Our policy of continuous product improvement might make some of the information contained in this Product Information Sheet out of date and users are requested to ensure that they follow current recommendations.

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