

# 6060-600 One Pot Graphic Emulsion (DLE)

## Technical Data Sheet

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**DLE Screen Emulsion 600** is a pre-sensitized photostencil emulsion designed to offer the optimum exposure speed on Direct Light exposure computer to screen system. It is formulated for use with solvent based and 100% UV ink systems typically used for large format graphics.

- Fast exposure time
- Easy washout and reclaiming
- Excellent resolution and definition

### PHYSICAL DATA:

Ink resistance:	Solvent-based and UV Inks
Colour:	Blue (Fast exposure time) Green (Medium exposure time)
Consistency:	Liquid
Viscosity:	30-35 at 25°C (Spindle 3/ Speed 10)
Solid Content:	34 %
Coated screen life:	1 week at 20°C
Emulsion life:	1 year at 20°C

NOTE: Screens coated in advance will last for approximately 1 week if stored at 20°C and in complete darkness. With longer storage of pre-coated screen, the emulsion can absorb moisture from the environment. It is therefore advisable to dry again prior to exposing.

### INSTRUCTIONS FOR USE:

Handling of **DLE Screen Emulsion** should be carried out in light of low blue and ultra violet content. A photographic safelight is not essential, but it is advisable to use yellow or weak tungsten illumination. A useful form of light for the workroom is provided by gold fluorescent tubes and daylight should be excluded or filtered by a yellow lacquer coating or film over the windows.

### SENSITIZING:

This emulsion is ready to use. There is no need to add sensitizer. Use straight from container.

### PREPARING THE SCREEN:

When degreasing and abrading new mesh by hand, use Mesh Preparation 6050-300. Mesh must be free of dirt, dust, ink residues and ghost images. Wet the screen and apply on a sponge or brush and then rub the mesh in 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 6050-300. Allow the mesh to dry before coating.

### COATING PROCEDURE:

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.

### DRYING OF THE COATED SCREEN:

Dry the screen in a horizontal position, squeegee side up, in darkness or subdued yellow light. 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. Avoid humidity levels above 60% or below 20%. Ensure the screen is thoroughly dried before exposure for maximum print durability.

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### 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 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 DLE Screen Emulsion. For optimum exposure time, White mesh is therefore recommended.

### DEVELOPING:

Gently spray both sides with cold or warm water. Continue washout from print side, using increased water pressure after one minute, if necessary. Continue developing until all parts of the image appear clean and sharp. Screens with a thick emulsion coating can benefit from being left to stand wet for a few minutes prior to washout. Dry the screen completely in a drying cabinet or with the aid of a warm air fan.

### SPOTTING AND MASKING OUT:

Spotting out with a brush using Screen Filler (6050-001) can fill in any small blemishes or pinholes in the stencil. The same filler is recommended for blocking out between the edges of the stencil and the frame.

### RECLAIMING THE SCREEN:

Ensure the screen is completely cleaned of ink residues before decoating. Remove ink residues using cleaning agent (Stain Remover 6070-001), rinse the screen with water and then apply diluted decoating powder (Stripping Powder 6070-200) to both sides of the stencil. Scrub area with a stiff nylon brush to ensure entire surface is wet. Leave for a few minutes but don't allow the stencil remover to dry on the screen. The stencil can then be easily removed using a high pressure water gun. For ghost images, use the manufacturer's recommended chemical (Ghost Remover 6070-100).

### HANDLING AND STORAGE:

- It is recommended to wear suitable protective goggles and gloves. Take particular care to avoid splashes into the eyes and skin contact. If this does occur, rinse immediately with plenty of water. In case of splashes into the eyes, seek medical advice.
- Comprehensive information on the safety and handling of **6060-600 screen emulsion** is given on the appropriate Smiley Material Safety Data Sheet (MSDS), which are available upon request.
- **6060-600 screen emulsion** should be kept in a cool area between 18-25°C, away from heat, light and organic matters (food, drinks, etc.).
- Containers should be tightly closed immediately after use.

### ENVIRONMENTAL INFORMATION:

This product is not considered hazardous in general. The working solution can generally be emptied into the drains however larger quantities should be disposed of according to local regulations.

### PRODUCT OFFERING:

**Packaging: 6060-600 is available in 1 kilo, 5 kilos and 20 kilos containers.**

### ADDITIONAL INFORMATION

For additional product information, please visit our website at <http://www.smiley.co.th>. For further information, please contact SPS personnel at [medhi@smiley.co.th](mailto:medhi@smiley.co.th)

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