

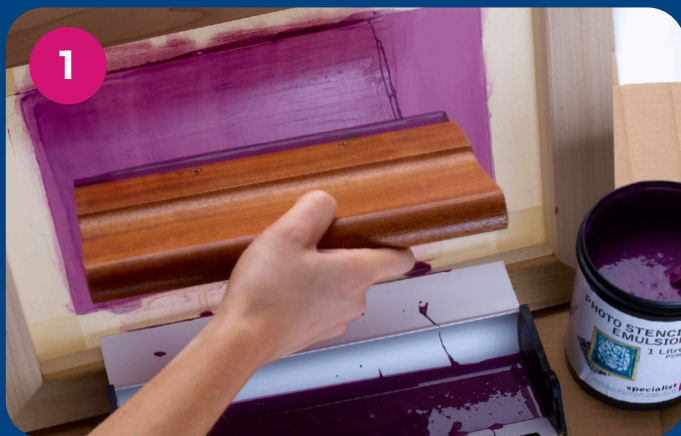
Stencil Emulsion

technique focus

TF0019



Step by step



1

Sensitising: Before coating your screen, ensure it has been cleaned, degreased and thoroughly dried. Prepare your emulsion in darkened conditions: fill the small sensitiser bottle half full with tepid water, replace the lid and shake, leave for 1 hour. Empty the contents of the sensitiser bottle into the larger tub of screen emulsion and stir well until the colour is uniform. Allow standing time for any air bubbles to disperse before use. Pour some emulsion into a coating trough and, holding the trough handle in one hand and the screen in a vertical position in the other, draw the emulsion up the screen to coat. Use a squeegee to remove excess emulsion from both sides of the screen until the coating is completely even. Place the frame mesh side up, making sure the mesh is not touching anything, in a dark, light-proof place where warm air can circulate for 24 hours or until thoroughly dry.



2

Preparing your positive: Prepare your design positive on acetate or clear film. The aim of the positive to block light from getting to certain parts of the photo-sensitised screen. The solid areas of your design will become your print. You can draw a design by hand using a black permanent marker or brush on Indian ink. You may need to retrace your design on the reverse of your acetate sheet to create a denser design. Laser and inkjet acetate sheets are also available to print a design directly onto.

What you'll need

PR551...De-Coating Agent PR103... Wooden Pre-Meshed Frame PR150... Stencil Film
PR074C Portable Exposure Unit CU553 Screen Cleaning Brush PR550 Photo Stencil Emulsion



Preparing your screen ready for exposure: Place your screen mesh side down onto a piece of black, non-reflective card, and position your positive on top of it. Cover the positive with a piece of glass to hold it in place. The first step is to expose your final stencil. This is vital in order to achieve a strong positive and also, so that you do not over-expose, resulting in the emulsion curing to a hard, plastic finish which may be difficult to remove. Exposure times can vary considerably, depending on the type, wattage and age of your light source. With a Portable Photostencil Exposure Unit, begin your test strip at around 15 minutes. For larger units times start from 10 seconds. The emulsion that has cured to a rubbery finish with clean, crisp lines has received the correct exposure time.



Developing: Once you have established the correct exposure time for your stencil, expose a new, coated screen for this length of time. Once the screen is exposed, it must be washed out immediately. Wet the screen well on both sides. Loosen the soft, unexposed emulsion by rinsing the areas with cold water. If the screen is properly exposed, the unexposed areas will be a different colour to the exposed emulsion, and will wash away revealing the clean mesh beneath. Once dry, it is ready to screen print with. Store the screen in a dark place when not in use. The exposed screen will still be sensitive to light, so in light conditions it will continue to react and the coat of emulsion will harden over time. If this occurs, the screen will need to be re-meshed or jet washed to remove the emulsion and reclaim the screen.



Reclaiming your screen using De-Coating Agent: If the stencil emulsion has cured to a rubbery finish, then De-Coating Agent can be applied to reclaim the screen. Brush the agent on to the screen making sure that the entire stencil is covered. Lay the screen into a tray containing De-Coating agent and allow to soak with the mesh fully submerged for 15 minutes. This process is important because, once the agent is applied, it will begin to thin the emulsion by reacting with, and dissolving, the surface layer. If the stencil is left exposed to the air at this stage of the process, the emulsion will begin to dry and solidify. Once this happens the stencil is difficult to remove and may need jet washing. With the screen still submerged in the de-coating agent, brush vigorously with a Screen Cleaning Brush until the emulsion is frothing off the screen. Do not use any water until this is evident. Next, wash under the tap while continuing to brush. Eventually the emulsion will begin to 'peel' off like thin rubber. Keep scrubbing until the mesh is clear.



Reclaiming your screen using a Pressure Washer: When the stencil emulsion has cured to a hard, plastic finish, then a Pressure Washer must be used to reclaim the screen. Position the screen upright in a spray booth or other suitable location where the water jet will not damage the surroundings and can drain away. Wedge it in to a corner for added support, as the power of the pressure washer can move it around. The water jet needs to pass through the screen from the opposite side to the stencil. The high-pressure water passes through the mesh and shatters the hard stencil, cleaning it away. The washer nozzle will need to be guided up and down the screen to remove the entire stencil from inside the mesh holes and may need more than one pass. By holding the screen up to the light you will be able to determine if you have any blocked holes remaining. There may be a 'shadow' of the stencil left on the surface of the mesh and this can sometimes make it difficult to see whether the entire stencil has gone. To test this, carry out a screen print onto white paper. The print should be solid colour if it has all been removed.