

Mesh Preparation



How to Guide

This useful How to Guide will show you the best way to maximise stencil adhesion to a mesh to give you the stencil you need for best performance on the press.

Mesh preparation is one of the easiest, quickest and cheapest steps in the screen making process to carry out and can often be overlooked.

Objective - To get the best print life and reliability from your stencil through maximised adhesion to the mesh.

The importance of mesh preparation:

Polyester mesh is the most commonly used mesh today because it is resistant to most screen chemicals and is dimensionally stable in a changing humidity environment. However, the down side of a Polyester mesh is that the untreated fibres also have a very smooth almost glass-like surface. If you then also add greasy ink residues to this surface, you can see that trying to get a water based stencil to adhere is extremely difficult. Therefore, mesh preparation is the key to helping the stencil adhere better to this surface.

What should a prepared screen look like? Luckily it is easy to see how well a screen is prepared by looking at how much water it can retain. As the picture demonstrates, the mesh on the right hand side of the screen has been prepared with Universal Mesh Prep and the left hand side has not. You can clearly see the even layer of water being held on the mesh from the Universal Mesh Prep treated side.



Try this simple test to see if your screens are prepared thoroughly:

- Prepare half of your screen as usual
- Rinse it with a water spray
- Look at how much water it holds

If the water quickly runs off both halves of the screen in 'rivulets', or is very patchy, it is being repelled by grease and other residues on the mesh and it is time for a better mesh preparation product!

Recommendations:

Products to use - If you are using only direct photo-stencil emulsions then we would recommend using Auto Degreaser Concentrate.

Auto Degreaser Concentrate is a concentrated degreaser solution that has been optimised to work brilliantly with the PLUS direct emulsions and is available in three strengths. Simply dilute with water prior to use, for example 1 litre of 1:50 concentrate can make up to 51 litres of degreaser solution.

However, if you are using a Capillex screen film then we recommend using Universal Mesh Prep, which is a combined degreaser and mesh wetting agent. This helps the mesh to hold as much water as possible which is the key to applying Capillex successfully.

Top tip: - Always degrease the mesh after decoating the previous stencil and then store the screens covered so they do not become contaminated again.

Brush Pump - The quickest and easiest way to apply the Auto Degreaser Concentrate solution range is by using the Autotype Brush Pump.

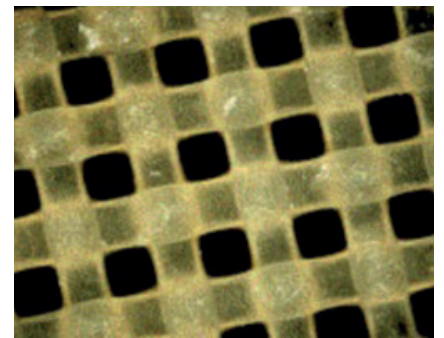
To use the Brush Pump, simply add your chosen Auto Degreaser Concentrate and add the appropriate proportion of water. **Note:** the Brush Pump works with a 25 litre drum so remember to take that into account. To use, simply move the brush up and down the screen to activate the syphon pump which will apply just the right amount of the degreaser solution to the mesh through the brush.

No air or electrical supply is needed to operate the Brush Pump, so it can be used anywhere with no installation needed.

Stencil films - If you are using Capillex or an indirect stencil film such as Five Star, then it is important to abrade/roughen the mesh as well as degreasing it. This will 'key' the smooth mesh fibres allowing the stencil to adhere better. The picture opposite shows the level of micro-abrasion that 'keys' the surface without damaging the fibres

Top tip: To achieve the best results, abrade all new screens and after every fifth stencil.

Autoprep Gel - This ready to use micro-abrading liquid is simply applied to both sides of the wet screen with the Autotype Brush for a perfect result. The Autotype Brush has soft, chemically resistant fibres to give the maximum effect without damaging the mesh. It works equally well with Auto Degreaser Concentrate solution and Universal Mesh Prep.



MacDermid Autotype mesh preparation products	
Universal Mesh Prep	Ready-to-use degreaser/mesh wetting product for use with Capillex stencil film and PLUS emulsions
Auto Degreaser Concentrate 1:10	A concentrated degreaser that can be diluted with up to 10 parts water
Auto Degreaser Concentrate 1:25	A concentrated degreaser that can be diluted with up to 25 parts water. Ideal for use with the Brush Pump and 25 litre Blue drum
Auto Degreaser Concentrate 1:50	A super concentrated degreaser that can be diluted with up to 50 parts water
Autoprep Gel	A ready-to-use roughener gel for use with stencil films
Brush Pump	This manual syphon pump is the easiest and most economical way to apply Auto Degreaser Concentrate solution
25 litre Blue Drum	For use with the Brush Pump

Contact us today and see for yourself how our range of products can help you.

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