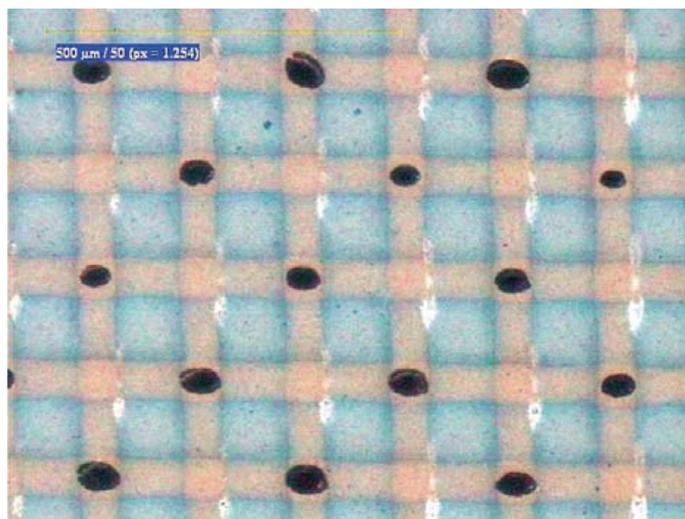


Powdering a baby's bottom should only be the last resort

This month William Shorter, technical sales executive at SPT Sales & Marketing, explains the causes and the ways to resolve inkjet positives sticking to emulsions during contact-exposure.



Stencil coated 1+1 with a sticky surface. Note: The off-setting appears on every second thread crossing



This typical pattern can be found on the inkjet foil within the solid areas

If you haven't moved to direct to screen or computer screen for your stencil making, then you are most likely using an inkjet positive system and at some point, you've probably experienced problems of the positive sticking to the emulsion during contact-exposure.

You've then probably spent time trying to determine what has changed and why you are experiencing this now and subsequently find yourself having to remake the positives as the solid area of the positive is damaged.

There are lots of potential areas that can have an effect and here are some of the causes and remedies.

● **Inkjet positive and ink** – The smoother the inkjet positive film the more likely it is to stick to the emulsion. However, this is a balancing trick, especially as the rougher surfaced films tend to have a higher density and this will increase your chances of under exposure. With regards to the inks, some of the blacks that are sold with inkjet printers may not be suitable and have a higher tendency to stick to emulsions or give you a low-density image area. Where ever possible, I would recommend using an ink that has been designed to create inkjet positives only.

● **Humidity** – In some ways humidity is even more important than temperature in the drying process, as it controls the amount of water that can be absorbed by the air in the dryer. Each summer some printers working in a warm, humid environment suffer screen breakdown during printing which is directly caused by poor screen drying, but it can also cause positives to stick to the emulsion.

Always aim for a relative humidity of less than 50% for drying, as the lower the humidity, the more water the air will hold and the quicker the screen will dry. A digital hygrometer will tell you exactly what the ambient relative humidity (RH) is

and always avoid drying screens from the screen reclaim process in the same drying cabinet as coated screens waiting to be exposed.

● **Rz** – This is the roughness of the stencil and this can be influenced by the mesh count and emulsion coating technique. Coarse mesh will have a high Rz value where as a fine mesh will have a lower Rz value. The smoother the stencil the more likely you are to have tack issues between the positive and the emulsion. Face coating onto dry emulsions with a sharp-edged coating trough will lower the Rz value.

Screens that have been coated more than 1+2 will have a high EOM (emulsion over mesh is a measurement of the stencil thickness measured in microns) and will also have a lower Rz value.

However, you don't need to purchase a Rz meter to determine that Rz could be the cause. If your emulsion is looking really glossy, then it's likely that you have a low Rz value or a very tacky emulsion. If changing your coating technique doesn't resolve the issues related to inkjet positive tack, then look for an emulsion that has a matt finish, as this will have a higher Rz value.

● **Emulsion** – Some emulsions can be more sticky or glossy in comparison to others. Specifically, this can be more apparent with pure photopolymer emulsions or pure diazo emulsions. This can be an even bigger problem if you have a high Rz with an emulsion that has a high tack level. If you are looking to replace your emulsion, look for an emulsion that has a low tack level or a matt finish.

If nothing helps, powder a baby's bottom!

If all of the above fails. You might need to resort to using talcum powder on the surface of your positives or emulsion, before carrying out contact-exposure.