

Printing Opaque Fabric Inks

Opaque inks contain 4 times more pigment than a standard ink, so sometimes it requires a slightly different printing method to ensure all the pigment passes through the screen and does not remain in the mesh.

The common problem faced with opaque ink is that although the first print looks great, each print afterwards starts to get worse [lighter & patchier] as the ink starts blocking the design and drying in the screen - all easily fixed by adjusting the printing technique ever so slightly.

The 6 keys to printing opaque inks

1. Print 'off contact' by elevating the screen 5mm.
2. Keep the squeegee angle upright to print with the sharp edge of the blade
3. Use slightly more pressure on the squeegee
4. Keep the design area clear of ink after each print
5. Increase the number of passes with the squeegee
6. Use table adhesive under your item to hold it flat

Print 'off contact'

Also called 'snap' or 'elevated' printing

Information sheet #08 details this process in depth.

The process involves raising the height of your screen above the item you are printing. The raising of the screen ensures the mesh is not in contact with the item and 'snaps' back after the squeegee has passed over the design.

When the screen is NOT raised you will actually pull a layer of ink back off the item when you lift your screen - this is why the item may appear patchy [as whilst your print was perfect, the wetness of the ink and heavy pigment load sticks to the strands of the mesh].

Raising the screen and 'snapping' back to a height above the item, the screen does not remain in contact with the item, so when it is lifted after printing the mesh is already away from the item and does not stick to the design [leaving all the ink on your item].

A screen printing jig, or jig hinges, makes 'off contact' printing faster, easiest and most importantly accurate as you simply insert a few plastic height adjusters [S-9112] under the frame. The arm of the jig will hold the screen in perfect registration for each print.



Keep the squeegee upright



You will receive a clearer and more detailed image by printing 2-3 times rather than 1 heavy print. The denser pigments in the ink can not all pass through the mesh in 1 pass so by performing 2 passes you put down a set of 2 clearer prints that stack on top each other and give you a clear solid print. You should hear the rippling noise of the blade passing over the mesh strands as you print.

1. Keep the angle of the squeegee upright - the angle should be about 60-70 degrees
 - Lowering the angle does NOT put more ink through the screen
 - Angles too low may force ink through the screen and bleeding may occur
2. Do not press too hard - less pressure is used with the squeegee when printing
 - The blade on the squeegee should NOT flex or bend whilst printing
 - You don't need to push the squeegee through the screen - the ink will naturally be drawn through onto the material below - you just need to guide the squeegee

Use slightly more pressure

This point is used in conjunction with both the previous point of squeegee angle and the next point of keeping the screen clean of ink after printing - it is adjusted to suite your printing technique, the height of the frame above the item and thickness of the ink you are using.



Keep the design area clear of ink

The elevation of the screen, higher angle of the squeegee and increase in pressure on the squeegee blade should ensure that your design is clean after printing with opaque ink.

Keeping the design area of the screen clean after printing is a sign of a good print.

If the design area is not clean then not all the ink has passed onto your design and it's going to look patchy or faint. Ink left in the screen will also dry making subsequent prints worse - ultimately you'll have to clean the screen down in water.

Remember to look at your screen not the print

After printing you will naturally look at the print, however more importantly look at your screen after printing, as it's the health of the screen that is more important to your overall printing.

A clean and healthy screen will continue to give you sharp quality prints.

You will notice problems with your screen before anything happens to the prints on your garments, so acting before things happen will save you troubles, miss prints and valuable time.

What to look for:

1. Part of the design with ink still in it
 - Remove with a clearing print after your passes. If this does not clear the ink you may be required to perform your clearing print onto paper not onto the item after printing [the paper is more absorbent than the 'wet' fabric you have just printed].
 - If ink continues to dry in the screen you must then either adjust the ink [by adding Fabric Ink Retarder] or the printing technique by flood coating the design. Retarder is recommended as the first option as flood coating involves pushing the ink back across the design area after printing to cover the area with wet ink. You are required to have more ink on the screen for this process and works best with thinner/ runny inks [not normally required for opaque Fabric Inks].
2. Excess ink building around the edges of the screen
 - This is a normal part of printing, however you should return the ink to the container and stir to 'work the ink back in'. If you leave it too long it will start to dry and may then thicken your ink supply.
 - If ink continues to build regularly then you may be using too much ink or the pressure of the squeegee is too great as the ink is being forced off the squeegee to the sides.

Increase the number of passes/ prints

Most prints using opaque inks will require 2 or 3 passes of the squeegee for complete coverage.

Remember that 2-3 passes using a consistent and even pressure - not heavy - will produce a clear, solid image.

One heavy pass will flood the screen with ink, blur the design and give you no greater coverage at all.

Items can only absorb a certain amount of ink in 1 pass, so multiple passes with less ink will produce a clearer result, as you layer and blend the ink instead of 'blobbing' it onto the material.

High synthetic materials, such as polyester, may even require a drying between passes. Print the first layer then lift the screen and touch dry, then lower and print again. Note this process only recommended when using a screen printing jig.

Use Table Adhesive

A commonly forgotten aspect part of printing opaque inks is the very important part of holding your item flat when printing - this is achieved by using Table Adhesive under your item when printing.

If you do not use Table Adhesive, although you have raised the height of your screen, the item will lift up and stick to the back of the screen eliminating all the other work you have done.

Table adhesive is an inexpensive and critical part of the process that should not be forgotten.

Table adhesive is applied to the board under your print area to hold your item still whilst printing - avoiding movement, smudges, misprints, blurring, etc.

Simply apply 1 drop every 7-10cm and spread evenly over your printing board and allow to dry.