

Thermofax-Information

General remark:

Most black pencils, waxes, powder-toners and several calligraphy-pens contain **carbon** as black pigment. During the exposure with infrared light all printed black areas cause a locally higher temperature by the absorption of the infrared-rays; this higher temperature melts the plastic-coating of the polyester-mesh. This process is called making a thermofax-stencil.

Basic instructions for use:

Insert mesh cut (best is rotary-cutter) to desired size A4 or A5 (by using a template!) on top of the original and insert into front slot. Carrier can be used - but must not be used! There is no jamming inside! At least we never had one during hundreds of exposures!

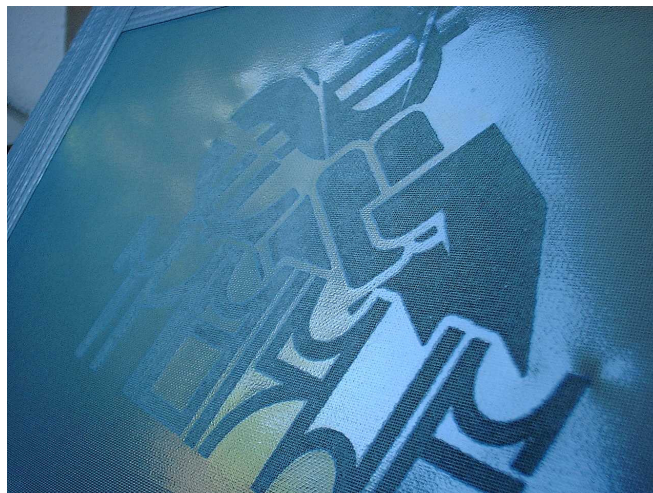
Position coating to coating! Mesh side (squeegee-side) is on top.
(the plastic-coated side shows more luster and is smoother!)

Cover all black areas of your original with the mesh or add a passepartout-like paper to cover these areas so black areas have contact with the mesh only! During the exposure the carbontoner becomes hot and thus might stick to add. layers...or the inside of the carrier! Thus ruining it...

Carbontoner consists of: thermoplastic powders, carbon powder, paraffine ... diff. recipes are used by the diff. manufacturers of copiers. Compare diff. models to find out the most suitable type. We had very good results with Océ-copiers, bad results with Minolta-office-laserprinters (sticking mesh)...

Best results are achieved by carbontoners that **don't stick** to the mesh after exposure! When separating mesh and original there must be a '**crisp**' sound, separation of both layers must be very easy!
Thick black coating of toner on the original doesn't give best results. Dark Grey Tones and even Economy-Toner-Mode might lead to much better results!

After a first exposure on medium setting let mesh cool down, tear off one corner, check result and repeat exposure on same or higher setting a second or third time. If mesh is distorted the speed-setting was too slow (slow numbers) – change to higher speed, aka higher speed-setting-number.



correctly opened mesh after exposure

Trouble-Shooting-section

Sticking of mesh / suitable copier:

Use of a photocopy as ones "original" when imaging a master is perhaps the most popular approach, since you will always be assured of a carbon-based image. Because very little carbon is required to effect proper imaging of a master, you should adjust the exposure setting on the copier to obtain a light image while still retaining all the design detail. However, you may find that in spite of all your good intentions to make a light photocopy for use, the photocopier you are using still applies too much toner to the paper causing the paper or toner particles from the copy to stick to the master when "exposed". In such cases, we have found that by lightly covering the photocopied design with a white chalk-like powder and then wiping off the excess with a tissue, we were able to minimize, if not fully overcome, the problem. The chalk seems to act as a barrier between the toner and the screen allowing full and complete separation of the paper from the master. We obtained the powder by aggressively rubbing a white Conte Crayon over a sheet of paper. The Conte Crayon, similar to a chalk stick, is a pastel that is found in the art section of your Art or Craft store. You may find that common white chalk will also work. Of course, the best solution to the problem is to use another copier that will produce a lighter copy.

Large Solid Areas:

When including a large, bold solid, such as a reversal where the design is really the unprinted part of the work, voids or white areas may appear within the print. The problem is the result of having so much of the heat dissipated by the large amount of carbon on the original that there is insufficient heat to "blast away" all the material that must be removed to allow ink to pass through the master. Try to print a picture with 600 dpi e.g. on a 300 dpi setting of your printer, thus you receive a grid-effect that might improve the printed results of large solid areas. Experienced persons also can use the grid-effects offered by Photoshop® or other software-programs...

Pictures from your Computer

The population of Personal Home Computers is increasing dramatically on a weekly basis. Add to this the proliferation of software packages offering many styles of typeface and clip art designs and you have a wonderful marriage between the Personal Home Computer and your Thermal Imager/Copier. Many of the computers are being connected to high quality laser printers for copy output. Such units produce a carbon based image as required when using the thermal copier. The laser image typically is of very high quality with every detail clearly produced. As a result, you can expect to obtain high quality, fine detail prints when you use it as your original. However, unlike the photocopier, the laser printer does not use high heat to fuse the carbon image to the paper. Consequently, when working with laser printed copies you may experience a problem with the toner lifting off the sheet of paper during the flashing step and transferring to the master. The carbon from the laser print will then block the ink from passing through the opening in the master with the print exhibiting type characters or lines having a hollow appearance. Under such situations you will need to make a light photocopy of the laser printed design. By the way, when using a laser printed original, remember to use a blue filter when "exposing" the master. (remark G.P.: I presently try to find filter-materials as described above)