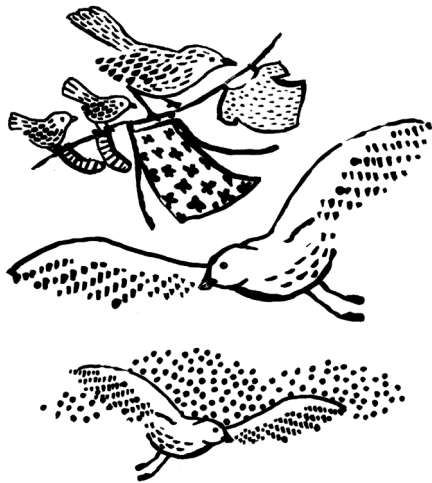


PREPARING AND EXPOSING A SCREEN

Printing screens are typically made using a photo exposure method. At first, the screen mesh is coated with a light-sensitive photo emulsion. After the coating has dried, the screen with a color separation film (design printed with black on a clear film) are exposed to UV light. The clear areas of the film are exposed to the UV light and the emulsion coating under them becomes hardened and insoluble to water. The emulsion coating under the black areas of the film remains unexposed. During the washing process, the unexposed emulsion (under black of the film) is washed off and these areas become the openings through which the print paste will pass to fabric.

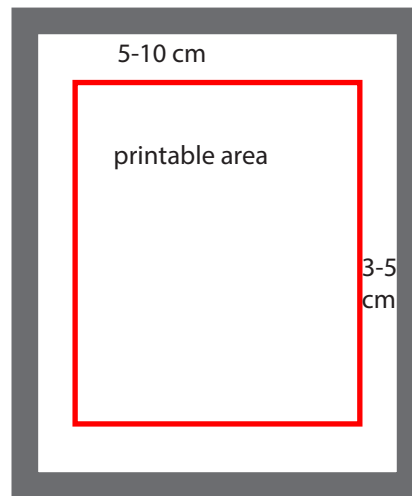


PROCESS OF EXPOSING A SCREEN

1. Make a color separation film by printing your design with pure, opaque black on a clear film (see instructions: Preparing screen files)
2. Remove old design from the screen and wash the screen with degreaser
3. Apply light-sensitive emulsion on the surface of screen – on both sides
4. Leave to dry
5. Place a color separation film on the screen and expose to UV light
6. Wash the screen
7. Check for possible holes and block with emulsion if needed.
8. Add tape to secure the edges

NOTE

- Screen mesh fabrics come in different densities (referred to as mesh counts) - the finer the density, the smaller details can still be exposed on the screen. And the lower the density, the thicker printing paste can be used.
- You cannot fill the whole area of screen with your design, but you need to leave approx. 5-10 cm space (3-5 cm on sides) between the design and edges of the screen to have place for printing paste



REMOVING OLD DESIGN FROM THE SCREEN

- First wet the screen, then apply emulsion remover and let soak for 1-2 minutes. Do not let the screen dry at this point. Wash the screen with pressure washer to remove the emulsion. Wash the screen with degreaser and leave to dry.



COATING THE SCREEN WITH EMULSION

- Activate the emulsion by mixing it with the sensitizer - on this course, this is made in advance for you
- Place your screen in the holder
- Pour emulsion in the scoop coater
- Coat the print side first: Place the edge of the scoop coater against the screen and tilt it towards the screen until the emulsion touches the mesh from the whole width of the scoop coater. Pull the scoop coater up the screen with even pressure. Turn the screen, and coat the squeegee side similarly.



EXPOSING THE SCREEN

- When exposing the screen, the color separation film is placed on the screen and these two are pressed tightly together and exposed to UV light.
- There are different kinds of machines for creating the pressure as well as different kinds of UV light sources - you will be guided to use the equipment of Aalto ARTS during this course.
- Next the unexposed emulsion is washed off with a pressure washer, and the screen is left to dry.
- Lastly, check for possible holes and block with emulsion if needed, and add *screentape* to secure the edges

(Woodhead Publishing Series in Textiles: Number 126: Textiles and Fashion - Materials, Design and Technology. Edited by Rose Sinclair; Maija Pellonpää-Forss: Kankaanpainanta, välineet, suunnittelu, painaminen)