

SCREEN MAKING PROCESS

Silkscreening is highly suitable for home printing, whether it is a series on paper, a set of T-shirts, team jackets or vinyl printing on plastic. It is possible to temporarily create a home print shop for a single project.

A silkscreen can easily be built and stretched and coated on a kitchen table. The sink or bathtub can be the rinse tub for the emulsion. A clothesline stretched from wall to wall can be a drying rack for the printed objects. A standard 150 watt light bulb can be the activating light source for the emulsion.

THE STEPS NECESSARY TO CREATE A SILKSCREEN AT HOME ARE DETAILED IN THIS SECTION

A silkscreen begins with a photo positive of the image at its real size on a transparent sheet. Transparent sheets are available for ink jet or laser printers as well as photo-copiers. When printing an image on a transparency from your computer, have it print in “registration” color, rather than black. Registration provides more ink on the sheet. When using a copy machine, make at least two copies which can be taped together for opacity. Often, without a professionally prepared transparent positive image, the printed image is not hardy enough to transfer clearly to the silkscreen. Always include registration marks on your art to insure proper alignment of multiple screens.

A few basic tools will be needed. Other tools can be improvised from household items.

1. Photo Emulsion

Which emulsion you use depends on what you are printing – consult our technical department.

2. Clamp Hinges

For registration of multiple screens

3. Rubber Gloves

4. Heavy Duty Stapler

For attaching fabric

5. Frame

6. Scoop Coater

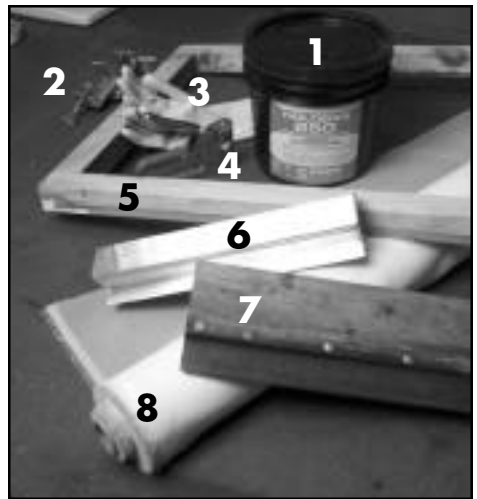
Helps you put an even coat of emulsion on your screen

7. Squeegee – For printing

8. Screen Fabric

Which fabric you use depends on what you are printing – consult our technical department.

Image detail, printing ink and surface dictate the mesh count.



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STRETCHING THE SCREEN

The first step is preparing the screen.

The **inside** dimension of your frame needs to be 3" larger than your art on all sides to leave room for a clean stroke.

The screen fabric is pulled tight across the frame and stapled to the frame. Staple at a slight angle so that your holes are not lined up with the mesh. Use enough staples, about one every half inch, so that there will be a uniform tension.



This traditional method is for home printing or small shops. Standard Screen provides screens that are pneumatically stretched screens to exact specifications and tautness for the high volume screen printing shop.

(see our **FRAMES** and **SCREEN MAKING SERVICES** sections)

After you have stretched the screen, trim off excess fabric along the outer edge of the frame with a razor blade or matte knife.

After you have exposed your screen, you will tape over the staples for a smooth finish. Taping should also be done on the inside so that the ink does not build up between the screen and the frame.



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COATING WITH EMULSION

The scoop coater is designed to help in this process. Pour a little emulsion in the coater, maybe an inch worth, depending on screen size. You want a very thin coat, and you do not want the can of emulsion exposed to the light. The coater works as a holder for the emulsion and then as a squeegee to apply it.



Hold the scoop coater at an angle to apply a thin coat to the outside of the screen. Overlap strokes from the bottom to the top.

Allow the emulsion to dry to the touch. The time required, with a fan, should be about 20 to 30 minutes.

Repeat the coating process one more time. Only coat the outside of the screen.



EXPOSING THE EMULSION

When the emulsion has dried, tape on your film positive. If multiple screens are to be used, center the registration marks so that they will match the next screen.

Remember, you will be screening from the inside of the screen so your image will be backwards here.



Expose to light source.
A 150 watt bulb can be used for 10 to 15 minutes.
Exposure times vary. Do a test.



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WASHING OUT THE SCREEN

You can wash out your screen in a bathtub or sink. The areas that were not exposed to the light will wash away, leaving open mesh for the ink to go through.



FIXING PIN HOLES

Pin holes are openings that are not a part of the image. They are common and are easily fixed by brushing on a little sensitized emulsion. Hold your screen up to the light and see where they are. Again, use a very thin coating and be careful not to spill into open areas.

TAPING THE SCREEN

Taping the screen before printing will make your clean-up after printing easier as well as add to the life of your screen.

SRT Tape should be applied both inside and out.



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PRINTING

When printing, the most direct method is drawing the squeegee down across the image, pushing the ink ahead, supplying an even pressure, and completing the print in a single stroke. The hinge clamps will allow you to lift the screen up without shifting its positioning, to ensure accurate registration. Then draw the ink back up to the top for the next stroke.

Hold the squeegee blade at a 45° angle to the screen when printing.

Different inks are available that have different characteristics – see ink section.

Check with the technical department to determine the appropriate hardness of the squeegee for the specific application.



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