

RISO PRINTING

USING THERMAL COPIERS

The **silk screen technique** (so called because the traditional fabric stretched on the frame was silk) consists of ink being forced through this fabric.

Lines and areas that are not to print are masked out or blocked out with lacquer, glue, paper or photographic emulsion. A special flat squeegee (usually rubber) forces the ink through the unprotected parts of the silk on to the material. Silk screen is used for short runs of printing on practically any material.

Riso is the type of film we use for silk screening. It is a relatively quick and easy way of creating stencils for printing. It is a blue, heat sensitive film. When a photocopied image is placed under the film and exposed to heat (we use an old laminating machine), the darker areas of the image burn through the film. The lighter the image, the less burning of the film occurs. Therefore, in these areas the ink cannot penetrate through the film as much and creates a lighter print. Contrasting images work better.

SUMMARY:

STEPS to making a silkscreen stencil

- Photocopy image making sure it fits within frame.
- Get the teacher to cut blue Riso film to fit the frame.
- Place photocopy face up in carrier (Acetate sheets)
- Place blue Riso film shiny side down onto photocopy.
- Put top layer of acetate down to hold the print & Riso film in place.
- Run through Machine. Make sure it is on the correct setting.
- Remove blue film from photocopy.
- Masking tape blue film to frame so that it is taut.

Printing the Image

- Newspaper on desks
- Gloves & aprons on & make sure room is adequately ventilated
- Choose printing ink colours & remember to keep lids on inks regularly
- Push ink through image with plastic squeegee
- Dry with hairdryer or let dry naturally.
- Iron with hot iron with paper on top before washing.
- Wash tools & screen when you have finished printing.

TYPES OF DYE/FABRIC PAINT: TERMINOLOGY

PIGMENT: The colour. Colour compounds that are not soluble in water that do not chemically combine with the fibre. Used with adhesives for painting or printing.

DYE: An organic compound with colour bearing groups called chromophores. With auxochromes or salt forming groups present, they combine with the fibre chemically to make it permanently coloured.

MORDANT: The fixer. Name derived from the Latin term meaning “to bite”. These are salts of aluminium, iron, tin and chrome that combine with the dye and fibre to make the colour insoluble (don't wash out). Some common mordants are: potash, alum, and caustic soda. The mordant may be added to the dye bath, or applied to the fibre before dyeing.

PERMASET FABRIC INKS:

Suitable for silkscreen (Riso) printing

These inks are water based printing inks generally suited for most fabrics. Permaset ink needs to be exposed to a high temperature to cure. Maximum heat, as hot as the fabric allows, need to be applied to the surface to ensure the print becomes wash, rub and dry-clean resistant. The dye will eventually become permanent if left to naturally cure without being washed.

You can mix individual colours and fluorescent/metallic colours are available but these tend to be much thicker in viscosity.

SAFETY:

- Permaset Inks are hazardous as they contain 30-60% of white spirits so they must be used in a well-ventilated area.
- Lids must be replaced as soon as possible as lung damage may be caused if the inks are swallowed.
- Gloves should be worn to stop ink being ingested into the skin.