

FIBRE REACTIVE DYES (PROCION MX)

Fibre reactive dyes are one of the most commonly used dyes for cellulose fibres (cotton, linen, viscose). They can also be used on silk. These dyes are great for dip dyeing, screen printing, batik, mono printing, and painting onto fabric. Unlike a pigment which just 'binds' to the surface of the fibre. Fibre reactive dyes create a permanent bond between the dye molecule and the fibre. The colours are fast under normal washing & light conditions.

Auxiliary chemicals used for printing with Fibre Reactive Dyes

Soda Ash

(Sodium Carbonate) is used as an alkali fixing agent.

Urea

Urea is an agent that attracts and retains water. Urea improves dye solubility and helps improve colour yield and stability.

Calgon PT

Calgon PT softens water, assisting the dye to react with the fibres and intensifies the colours.

Manutex

Manutex is a seaweed based thickening agent.

Soda Ash Soak

You will need 3 tablespoons of Soda Ash to every litre. Mix the Soda Ash with a little tepid water then top up with the required amount of cold water. Put the fabric into this solution and leave to soak for about 15 minutes. Remove the fabric and drip dry or spin in your machine. Do not put this fabric into the tumble dryer as you could damage both the cloth and the dryer. (Alternatively you can add 1 tablespoon of Soda Ash to each 200ml of thickened dye (Mixing the dye powder and Soda Ash with a little water before adding the thickened Chemical Water). Adding Soda Ash to the dye will limit the shelf life of the dye to about 4 hours.)

Printing with Procion MX dyes

The dyes are mixed with thick 'Chemical Water'

Chemical Water recipe:

1 litre warm water

1 level teaspoon Calgon

10 level tablespoons Urea

Mix the above ingredients together. Don't worry about making too much as they will store indefinitely.

Thickened Chemical Water recipe (for printing):

1 Litre Chemical Water

30g Manutex

Sprinkle Manutex over chemical water and whisk until smooth. Let it stand for at least 1 hour and preferably overnight. (It will become smoother) It will keep for approximately one month if stored in cool, dark place.

Thick Dye recipe:

Mix 1-2 level teaspoons Procion MX powder in a little warm water and add 200ml thickened Chemical Water and stir well.

After painting or printing with these concentrated dyes the fabric should be kept damp by covering with polythene for a minimum of two hours (preferably for 24 hours especially if using blues). This will allow the dye to penetrate and chemical bond to take place. After keeping damp for two hours, simply wash off excess dye with copious amounts of cold water and then subject to a hot machine wash to remove any superficial dye. It is advisable to wash the fabric for the first time with Colsperse or Metapex to prevent back staining.

SAFETY IN USE RECOMMENDATIONS

All persons handling the above products should take precautions to avoid accidental ingestion (swallowing), inhaling of dust and skin and eye contact.

The Following recommendations should be observed:

- Wear rubber (or surgical type) gloves at all times.
- A full front covering apron or lab coat is recommended to protect against spillage.
- Safety spectacles with transparent sides will provide eye protection.
- Wherever possible avoid splashes and skin contact.
- If large quantities of powder dyes are to be dispersed or aerosol mists produced, it is recommended that a filter pad-type nose and mouth mask is worn to avoid inhaling any dust or mist generated.