

# PROCION MX DYE

VERSATILITY AND QUALITY

**EMPHASIS IS ON COLOUR AND TEXTURE. TRY DYEING FABRICS WITH INTERESTING WEAVES AND UNUSUAL NATURAL FIBER BLENDS. TRY OVERDYEING PREVIOUSLY DYED OR PRINTED FABRICS. EXPLORE MULTI-COLOUR DYEING OR BATCH DYEING WITH EXPERIMENTATION COMES DISCOVERY AND WITH DISCOVERY LUXURIOUS AND UNIQUE FABRICS ARE CREATED.**

Procion MX Powder Dyes are vibrant and extremely concentrated. They are unique in that the dye molecule forms a chemical bond with the fiber molecule to produce exceptional brilliant shades having excellent light and washfastness. These dyes are highly concentrated in dry powder form. Two ounces (60 g) will dye between 10 and 30 meters of fabric, depending on the colour, the intensity desired and the weight of the fabric. Procion MX dyes are marketed under a variety of other brand names, often elaborately packaged and cut with extending agents. By packaging only the pure dye in bulk form, it becomes one of the most economical dyes available. They are an excellent and versatile fiber reactive dye as they may be used for such diverse techniques as garment dyeing, tie dyeing, handpainting and batik. Procion MX Powder Dyes are simple to use since they require few added chemicals. They are a uniquely comprehensive class of dyes. These are the dyes to choose if you plan to stock only one type of dye and want to be able to use a variety of fibres and techniques.

## FIBER TYPES

Procion MX dyes may be used on the following fiber types: cotton, silk, linen, rayon, ramie, wool, leather, jute, basket reeds, and paper.

## TECHNIQUES

Garment dyeing, batch dyeing (tie dyeing, rainbow dyeing), batik, direct application, warp painting, paper dyeing, and discharge dyeing.

## COLOURS AVAILABLE

Brilliant yellow MX8G, gold yellow MX3R, orange MX2R, scarlet MXBA, fuchsia MX8B, turquoise MXG, royal blue MXG, navy MX2RDA, purple\*, emerald\*, moss green\*, rust MXGRN, brown\*, and black\*. Note: These dyes are completely intermixable. Primary colours in this series are Brilliant Yellow, Fuchsia and Turquoise. \* MX special mix

## WHAT YOU WILL NEED

• Stainless steel, enamel, plastic or glass containers for measuring, mixing and dyeing. Do not use galvanized metal or aluminum for mixing or storage. • MASK and GLOVES • SODA ASH (Sodium Carbonate) – an alkali fixative for reactive dyes. • SALT – a leveling agent (works to produce even dyeing) • UREA – a hydroscopic agent which draws moisture from the atmosphere. This is required for batch dyeing or handpainting. • PROCION MX POWDER DYE • DIRECTIONS

## SAFETY IN USE

Although no chemical is entirely free from hazard, these products will present a low to no health risk, provided that good standards of studio hygiene are observed in their use and storage. All persons handling them should take precautions to avoid accidental ingestion, inhalation, skin/eye contact and should be aware of any limitations of use of specific products. While dyes and the chemicals associated with their use are not highly toxic, they are industrial chemicals and should be handled with care. If chemical products get into the eyes by accident, wash eyes thoroughly with water and obtain medical treatment. Prolonged or repeated contact with skin should be avoided. Wear rubber gloves and use implements to stir solutions and dyebaths. Inhalation of dusts should be avoided. If the dyes are handled where particles may become airborne, a suitable dust respirator should be worn. Obviously, chemicals should not be taken internally, and food, drink and smoking materials should be prohibited where chemicals are employed. The utensils used for dyeing should not be used for other domestic purposes (eg. food). A final suggestion: Children and animal are naturally curious. Do not leave open jars or bottles where little hands and paws may get to them. Safety data sheets on individual products are available upon request.

## PREPARING THE FABRIC

Before dyeing, all fabric must be scoured to remove dust, grease, starches, sizing, etc. which interferes with the dyeing process. You may scour with Synthrapol Soap or Orvus Paste.

## DYEBATH METHOD

*This method is good for garment dyeing, fabric dyeing, immersion batik, immersion tie dyeing and yarn dyeing.*

To dye 1 lb. of fabric (approx. 3 adult t-shirts OR 1 pair medium weight pants OR 4 meters medium weight fabric)

COLOUR VALUE	PROCION MX DYE	SALT	WATER	SODA ASH
Pale	3/4 tsp. (3.75 g)	3 Tbsp. (45 g)	2 1/2 gal. (9.5 l)	3 Tbsp. (45 g)
Medium	2 1/4 tsp. (11.25 g)	9 Tbsp. (135 g)	2 1/2 gal. (9.5 l)	3 Tbsp. (45 g)
Dark	6 tsp. (30 g)	1 1/2 cup (360 g)	2 1/2 gal. (9.5 l)	3 Tbsp. (45 g)
Deep	12 tsp. + (60 g+)	2 1/2 cup + (600 g+)	2 1/2 gal. (9.5 l)	3 Tbsp. (45 g)

*Note: You will seldom need to mix the dyes to the deep formula, however to obtain a rich black, this formula is necessary. We recommend mixing 1 part Navy to 3 parts Black.*

The information given herein and otherwise supplied to users is based on our general experience and, where applicable, on the results of tests on samples of typical manufacture. However, because of the many factors which are outside our knowledge and control which can affect the use of these products, we nor the manufacturer can accept liability for any injury, loss or damage resulting from reliance upon such information.

## DIRECTIONS

1. Dissolve dye into a small amount of water. Insure there are no lumps. 2. Into another large container, pour required amount of water (approx. 105 F). Container should be large enough to allow the fabric to float freely. Add dissolved dye solution. 3. Add prewetted fabric to the dyebath and stir well. 4. Dissolve salt completely in warm water. Add salt to dyebath and stir continuously for 10-15 min. Stir occasionally for another 15 min. 5. Dissolve soda ash in warm water. It is important that the soda ash is completely dissolved. Add to the dyebath. Stir continuously for 5 min. Stir occasionally for another 30 min. (For max. permanence and depth of shade, allow fabric to remain in dyebath for 30 min. more). 6. Fabric may be rinsed in a washing machine or utility sink. Rinse the dyed cloth well in cold water, then raise the temperature to hot. Add Synthrapol. Use 10 ml of Synthrapol to 500 g of fabric. Rinse again.

*Note: The rinsing step is one of the most important in the dye process. It is necessary to remove unaffixed dye particles from the fabric. It should not be rushed. Water should run absolutely clear at the last rinse.*

## NOTES

1. Procion MX dyebaths cannot be stored and reused. Once the process has been completed, the dyebath cannot be reactivated. 2. When dyeing turquoise, some dyers prefer to substitute Glauber's Salt (Sodium Sulfate) for plain salt to achieve more brilliant shades. This applies to Turquoise MXG only. 3. The depth of shade is determined by the amount of dye used, not the amount of time in the dyebath. 4. Removing the fabric from the dyebath before the process is complete in an attempt to get lighter shades will only result in decreased wash and lightfastness. 5. To produce darker colours or different shades than originally anticipated, add more dissolved dye to the dyebath prior to adding the soda ash. Once the soda ash has been added, the dye becomes permanent and the colour will not change significantly. 6. Procion MX Powder Dyes are for natural fibers ONLY. They will not dye the polyester in poly/cotton blends. 7. Dyebath method may be done in a washing machine for larger projects. We recommend this procedure be done by those already familiar with the dyeing process.

## WOOL DYEING WITH PROCION MX

Procion MX is not the ideal dye for wool but can be used for some projects. An ideal wool dye is Ciba Washfast Acid. When dyeing wool with Procion MX, substitute acetic acid or vinegar for soda ash. 1. Prepare a dyepot with required amount of water and salt. 2. Add dye. Add fiber. Bring gradually to a simmer, stirring frequently. Add vinegar (250 ml per 4 liters of dyebath). 3. Stir frequently for 30-45 min. more. 4. Remove dyepot from heat and allow to cool to room temperature. Remove fiber from pot. Follow normal final wash-off procedure.

## BATCH DYE METHOD

### FOR HANDPAINTING, DIRECT APPLICATION AND BATIK

*Good for multi-colour tie dyeing, rainbow dyeing, direct application, handpainting, warp painting and batik, batch dyeing is the process of directly applying multiple colours when all over even dyeing is not required. It allows the textile artist great scope for design, but requires using the ingredients in a different order from immersion dyeing.*

## PREPARING THE FABRIC

1. Scour fabric by washing in Synthrapol or Orvus paste. Dry. 2. If tying or binding the fabric, do so now. Ties must be secure and tight for best results. 3. Prepare a Soda Soak Solution: 1/2 CUP SODA ASH, 1 GAL. HOT WATER, LARGE PLASTIC CONTAINER. Dissolve the soda ash in hot water. This solution will keep indefinitely at room temperature and can be reused to soak

more fabric later. Soak the fabric for 30 min. Wring excess solution back into container for reuse. Fabric should be just damp.

## PREPARING THE DYE SOLUTION

COLOUR VALUE	PROCION MX DYE	SALT	UREA	WARM WATER
Pale	1/2 tsp. (2.5 g)	2 tsp. (10 g)	1/2 tsp. (2.5 g)	1/2 cup (125 ml)
Medium	1 tsp. (5 g)	1 Tbsp. (15 g)	1 tsp. (5 g)	1/2 cup (125 ml)
Dark	2 tsp. (10 g)	2 Tbsp. (30 g)	2 tsp. (10 g)	1/2 cup (125 ml)

Dissolve all ingredients completely in the warm water. Dye solutions may be kept for up to one week in a covered container. The freshest dye solutions will produce the brightest colours.

*Note: Procion MX colours are intermixable. We recommend mixing the primary colours into solution and creating secondary colours from this solution.*

## DIRECTIONS

1. Apply the dye solutions to the fabric. A variety of tools may be used for this (eg. brushes, syringes, bottles, etc.) 2. Cover the fabric with plastic. This may be done by placing smaller pieces in plastic bags or rolling larger pieces between two sheets of plastic. Seal and leave for 24 to 48 hours (the fabric should remain moist during this period). This is called "batch setting". 3. After the "batching" period, leave fabric tied (if this has been done) and rinse thoroughly in lukewarm water. 4. Untie and rinse until water runs clear. SEE DYEBATH METHOD #6 FOR FINAL RINSES.

*Notes: 1. If dye discolours white areas of fabric, the fabric was not rinsed well enough in the final rinse. Repeat step 4 until water runs clear. 2. If colour bleeds into the tied areas, the binding was not tight enough, or an ineffective binding material was used. Plastic Poly Tape, Ikat Tape, or Nylon Cording work well. Tightening or reinforcing existing ties will help. 3. If too much colour rinses out during final rinse, the fabric likely needs a longer batching time. 4. For different effects, you may try tying with fabric damp.*

## THICKENING THE DYE

### FOR HANDPAINTING, SILKSCREENING, OR BLOCKPRINTING

Procion MX dyes may be thickened using sodium alginate, which is a gum derived from seaweed. Consistency can be adjusted for different processes by controlling the amount of sodium alginate that is added to the dye. Sodium alginate can be added directly to the batch dye stock solution or it may be added to water and then added to the dye. To 1 quart (1 litre) of solution add: 2-3 tsp. (10-15 g) of sodium alginate for hand-painting consistency or 4-6 tsp. (20-30 g) for blockprinting or silk-screening. Slowly sprinkle the sodium alginate powder over the solution and stir constantly for 10 min. or place in a studio blender and blend until smooth. Mixture can be used right away, however full viscosity will not be reached for a few hours. Store well labelled in a refrigerator.

## STEAMING

Procion MX dyes may be steamed to render them colourfast as an alternative to batch setting. Presoak the fabric in the Soda Soak Solution. Follow the Batch recipe for mixing the dyes. When painting on the dyes is completed and fabric is dry, it is rolled between sheets of newsprint and placed in a vegetable steamer or home built steamer for 15 to 20 min. of hot, rapid steam. See Procion H data sheet for complete steaming instructions.

# COLOUR MIXING GUIDELINES FOR PROCION MX DYES

The following guidelines can be used to mix colour blends from the standard Procion MX colours. These mixtures are guidelines only. Please keep in mind that colour names are subject to personal perception. In order to reproduce exact colours, careful notes need to be kept on precise amounts of all ingredients.

* Peach	100% rust	
Salmon	75% brilliant yellow	25% scarlet
* Coral	35% gold yellow	65% scarlet
Henna	50% fuchsia	50% brown
Pumpkin	35% orange	65% rust
Wine	50% scarlet	50% royal blue
Mulberry	50% fuchsia	50% brown
Burgundy	50% scarlet	50% navy
Deep Magenta	80% fuchsia	20% black
Red Violet	65% fuchsia	35% navy
Violet	50% fuchsia	50% navy
* Lavender	35% fuchsia	65% royal
Blue Violet	35% fuchsia	65% navy
* Bright Purple	20% fuchsia	80% turquoise
* Periwinkle	80% navy	20% black
Teal	50% turquoise	50% navy
* Lime Green	65% brilliant yellow	35% turquoise
True Green	35% brilliant yellow	65% royal blue
Jade Green	20% brilliant yellow	80% turquoise
Forest Green	50% brilliant yellow	50% navy
Khaki	50% orange	50% turquoise
Steel Gray	50% navy	50% black
Blue Black	35% navy	65% black
Deep Black	25% navy	75% black

\* For colors that are starred, use same ratio of dye to lesser depth of shade:  
ie. PALE instead of MEDIUM

## DISCHARGE DYEING

Procion MX dye may be discharged or removed using chlorine bleach, sodium hydrosulfite, or thiourea dioxide. Each color discharges differently and not all colours reduce completely to leave the cloth white. We recommend testing (see Discharge Data Sheet).

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