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Tie Dye using PRO MX Reactive Dyes

Please read directions carefully before starting.

*Produce simple or elegant patterns on cotton, silk, linen and rayon fabric ranging from T-shirts to silk velvet. Immerse the fabric in the Soak Solution, fold it, then apply dye solution. Leave the wet and dyed fabric to "cure" and wash out. It is important to sample before working on large projects. For additional information, visit our web site at **www.prochemical.com***

- ✘ Wear rubber gloves, apron or old clothes.
- ✘ Utensils used for dyeing should not be used for food preparation.

Supplies

PRO MX Reactive Dye
PRO Dye Activator or Soda Ash
Urea
Synthrapol

Metaphos (optional, but use if you have hard water)
PRO Chem Flakes (optional, but use if you are in a smoggy environment)

Procedure

1. Scour the fabric by machine washing in HOT 140°F (60°C) water, or by hand in a pot on the stove with ½ tsp (2 gm) PRO Dye Activator or Soda Ash and ½ tsp (2.5 ml) Synthrapol per pound of fabric (454 gm, or 3 to 4 yards cotton muslin, or 8 yards 8mm China Silk, or 3 Medium T-shirts, or 1 sweatshirt). Rinse thoroughly. This step does not add the dye fixative to the fabric; it prepares your fabric for dyeing by removing any dirt, oil or sizing.

2. Make the Soak Solution by measuring 1 gallon (4 liters) of warm 110°F (44°C) water in to a 2 gallon bucket. Mix 9 Tbl (80 g) of PRO Dye Activator or Soda Ash into the water. Soak the fabric in this Soak Solution for 10 minutes with occasional stirring. While wearing rubber gloves, wring out the fabric well and **do not rinse**. While the fabric is still wet tie or fold it into the desired pattern. This Soak Solution keeps for a long time at room temperature in a closed container and can be reused to soak more fabric.

3. Make the Urea Water by mixing together the ingredients below. Cool Urea Water to room temperature before using. This Urea Water keeps for a long time at room temperature in a closed container without dye powder. Discard it if you detect an ammonia smell.

- 7 tsp (28 g) Urea
- 1 cup (250 ml) warm 110°F (44°C) water
- 1/4 tsp (0.5 g) PRO Chem Flakes (optional, but use if you live in an area with smog.)
- 1/4 tsp (0.5 g) Metaphos (optional, but use if you have hard water.)

4. Make the Dye Solution by mixing together the ingredients below. For each cup of Urea Water add PRO MX Reactive dye powder to mix the shade desired from the chart below. Shelf life of Dye Solution is 5 to 7 days. However, in the hot summer months it's best to mix the dye solution every day.

	Pale	Medium	Dark	Black
Dye powder	½ tsp (1 gm)	2 tsp (5 gm)	4 tsp (10 gm)	8 tsp (20 gm)

5. Apply the dye. After the fabric or shirt is tied up and while it is still damp, directly apply the dye solution with a sponge brush, squeeze bottles or syringe. Work the dye solution into the shirt or fabric with your gloved fingers to insure thorough saturation. Blend the colors by carefully squeezing, mashing and kneading the shirt or fabric. Check the folds of the fabric to make sure the dye has soaked through. Carefully turn the shirt or fabric over and apply the dye solution to the other side.

It is handy to have a bucket of clear water next to your working area to rinse your hands between color changes. Obtain a fluid color gradation by overlapping one or two colors to produce a third color. Be careful not to apply so much dye that color collects in a pool under the shirt or fabric, as colors run together during the "cure" process. If this happens, gently squeeze out the excess dye solution and move the dyed fabric to a clean area.

6. Fix the dye. Allow the fabric to "cure" for a minimum of 4 hours for pale shades, and up to 24 hours for Turquoise and dark shades. Room temperature must be above 70°F (22°C) for the dyes to fix properly. It is optional to wrap the fabric in plastic during the "cure" time. However, you do not want the fabric to dry. It's fine to let the shirt or fabric sit longer than the minimum time.

7. Rinse the fabric. Untie and unfold the fabric. Rinse the fabric thoroughly in a bucket of room temperature 75° to 95°F (24° to 35°C) water. Change the rinse water 3 to 4 times. Do not stack the rinsed shirts on top of themselves before the HOT Synthrapol wash, because the dye frequently transfers and stains other fabric it touches. Then wash in HOT 140°F (60°C) water, adding ½ tsp (2.5 ml) Synthrapol per pound (454 gm) of fabric. Rinse well and dry.