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## Thiox

Thiourea Dioxide

Please read the directions carefully before starting.

*Use Thiox to strip color and discharge print on cotton, wool or silk. Not all colors strip 100%. We recommend working in a well ventilated area and to wear gloves, safety goggles. A cartridge respirator is recommended. Always do test samples before working on a large project. For additional information visit our web site at [www.prochemical.com](http://www.prochemical.com).*

- ✘ Wear rubber gloves, apron, or old clothes and cover work area with newspapers.
- ✘ Dye and stripping utensils should never be used for food preparation.

### Supplies

#### *Immersion Discharge*

Thiox  
PRO Dye Activator  
or Soda Ash

#### *Discharge Printing (recipe from scratch)*

Thiox  
PRO Thick SH  
PRO Dye Activator or  
Soda Ash  
Metaphos

#### *Discharge Printing (recipe using Print Paste Mix)*

Thiox  
Print Paste Mix SH  
PRO Dye Activator or  
Soda Ash

### Discharge bath for cotton or cellulose fiber

*Immersion discharge on one pound (454 gm) of cotton or cellulose fiber.*

**1. Make the discharge bath** by heating 2½ gallons (10 liters) of water to 175°-180°F (79°-82° C) in a non-reactive metal pot, such as stainless steel or unchipped enamel. Once the water 175°-180°F (79°-82° C), add:

2½ tsp (10 gm) Thiox  
2 Tbl (20 gm) Dye Activator or Soda Ash

**2. Add the fiber.** Immediately after making the above bath, add 1 pound of damp fiber (454 gm or 3-4 yards cotton muslin.) The more stirring the more even the discharge results. Remove the fiber when you've reached the color you want. After 15 to 20 minutes, recharge the discharge bath by adding more Thiox if you need the color lighter. You don't need to add more Dye Activator or Soda Ash. The Thiox is used up if you detect an ammonia odor. You can recharge the bath a couple of times.

**3. Rinse well in several changes of warm water.** The fiber can be over dyed without further treatment. If not enough color is removed, rinse fiber and treat again.

### Discharge bath for wool or silk

*Immersion discharge on one pound (454 gm) of wool or silk.*

**1. Make the discharge bath** by heating 2½ gallons (10 liters) of water to 175°-180°F (79°-82° C) in a non-reactive metal pot, such as stainless steel or unchipped enamel. Once the water has reached 175°-180°F (79°-82° C) add:

2½ tsp (10 gm) Thiox  
1 Tbl (10 gm) PRO Dye Activator or Soda ash

**2. Add the fiber:** Immediately after making the above bath, add 1 pound (454 gm) of fiber. The more stirring the more even the discharge results. Remove the fiber when you've reached the color you want. After 15 to 20 minutes, recharge the discharge bath by adding more Thiox if you need the color lighter. You don't need to add more Dye Activator or Soda Ash. The Thiox is used up if you detect an ammonia odor. You can recharge the bath a couple of times.

**3. Neutralize the wool or silk.** Mix together 1 gallon (4 liters) of warm water and 1 Tbl (15 ml) of Acetic Acid 56% OR 11 Tbl (165 ml) of white distilled vinegar 5%. Soak the wool or silk for 10 minutes. Rinse well in warm water and dry. Fiber can be over-dyed without further treatment. If not enough color is removed, treat again.

## Discharge printing

*Discharge printing on cotton and cellulose fibers, including silk.*

**1. Make the discharge paste.** Choose one of the following recipes below to make one cup (250 ml) of discharge paste.:

### Discharge paste made from scratch

**1.** Measure the following ingredients in the order given:

¾ cup (188 ml) 110° to 120°F (44° to 50°C) water

½ tsp (3.5 gm) Metaphos

¼ tsp (1 gm) Thiox

½ tsp (1.5 gm) PRO Dye Activator or Soda Ash

**2.** Once dissolved, slowly add 2 tsp (3 gm) of PRO Thick SH, while stirring rapidly.

**3.** Let mixture stand for 10 to 15 minutes.

### Discharge paste using PRO Print Paste Mix SH

**1.** Measure 5½ level Tbl (55 gm) of PRO Print Paste Mix SH into a dry container. Measure 1 cup (250 ml) of warm 110°F (44°C) water into a second container.

**2.** Add PRO Print Paste Mix SH to the water while stirring rapidly.

**3.** Continue stirring until a smooth paste is obtained.

**4.** Let stand 1 hour or overnight for smoothest results.

**5.** In a separate container, dissolve ¼ tsp (1 gm) Thiox and ½ tsp (1.5 gm) of PRO Dye Activator or Soda Ash in a little room temperature 75° to 95°F (24° to 35°C) water, each in a separate container.

**6.** When thoroughly dissolved, add both to one cup (250 ml) of prepared Print Paste Mix SH.

**2. Apply the discharge paste to the fabric.** *Do not* allow the discharge paste to completely dry on the fabric before steaming or the Thiox does not strip the color. Steam for 20 to 30 minutes. Discard discharge paste after one day.

**3. Neutralize the silk, after discharging.** Mix together 1 gallon (4 liters) of warm water and 1 Tbl (15 ml) of Acetic Acid 56% OR 11 Tbl (165 ml) of white distilled vinegar 5%. Soak the silk for 10 minutes. Rinse well and wash hot with ½ tsp (1.25 ml) Synthrapol per pound of fiber and dry. You do not need to neutralize cotton, rayon or linen fabric.

By the way, if the color is not discharging rapidly enough then increase the amount of Thiox. You can use up to five times the amount listed in all the recipes above without harming the fabric.