



Product Bulletin

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MI-TIQUE® 1795

2300004
4/25/06

ROOM TEMPERATURE BLACKENING SOLUTION FOR PEWTER, TIN OR LEAD ALLOYS

MI-TIQUE® 1795 liquid concentrate is diluted with water and used at room temperature as an immersion "oxidizing" solution. The depth of black developed and the reaction rate is controlled by varying the concentration and the length of immersion. Prior to charging a production tank, some experimentation should be done with properly prepared sample parts to determine the conditions required to produce the desired depth of black. As a starting point, dilute one (1) part Mi-Tique® concentrate with three (3) parts water and immerse parts for 1 to 2 minutes. Varying the amount of water will shorten or lengthen the immersion time.

EQUIPMENT

Acid resistant tanks, tumbling barrels, baskets and racks must be used with the Mi-Tique® solutions. Plastic, plastic lined, rubber lined, glass or stoneware are suitable. Mild steel may be used for the cleaning, rinsing and sealant tanks.

FINISHING PROCEDURE

1. Thoroughly clean and degrease pieces to be blackened with Hubbard-Hall's Aquaease® SL 80.
2. Rinse with cold water.
3. Remove surface oxide if present with Hubbard-Hall's Acid Salt W.
4. Rinse with cold water.
5. Immerse pieces in Mi-Tique® solution for the length of time necessary to achieve the desired depth of black.
6. Rinse with hot or cold water and force dry.
7. A variety of attractive antiqued or "highlighted" finishes are produced by buffing, scratch brushing, barrel or vibratory burnishing.
8. A protective topcoat of wax or clear lacquer should be applied to enhance the color and give added corrosion resistance and abrasion resistance.

NOTE: If used on plated surfaces, minimum plate thickness should be 3-4 mils.

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SOLUTION REPLENISHMENT

The solution is gradually depleted through use but may be replenished indefinitely with periodic additions of Mi-Tique® concentrate. The strength of solution can be maintained by noting the time of immersion. When the time required to produce the desired depth of black increases, add sufficient concentrate to reduce the time to your established standard. The frequency of additions will depend upon the volume of work processed.

DROPPING BOTTLE CONTROL PROCEDURE FOR MI TIQUE® 1795

EQUIPMENT REQUIRED

- 1 10 ml Graduated Cylinder
- 1 150 ml P.E. Beaker
- 1 2 oz Dropping bottle brom thymol blue indicator
- 1 4 oz Dropping bottle 12.0 Normal sodium hydroxide

PROCEDURE

1. Transfer 5 ml sample of the production bath into the 150 ml beaker.
2. Add 10 ml clean water to this sample.
3. Add 6 drops of the brom thymol blue indicator.
4. Add the 12.0 Normal sodium hydroxide dropwise to the sample solutions while swirling the solution and counting the drops added.
5. The indicator color change is from yellow to blue-green to blue.

$$\% \text{ MI-TIQUE® 1795 BY VOLUME} = \# \text{ DROPS 12 N NAOH} \times 1.94$$

A bath of 1 part **MI-TIQUE® 1795** to 2 parts water is 33% by volume and should require 17 drops.

TREATMENT PROCEDURE FOR DISPOSAL OF MI TIQUE® SOLUTIONS

For disposal purposes, the following method may be used to precipitate the metals leaving a solution with 0 to 1 parts per million total metal concentration. Be sure to follow all city, state and federal regulations concerning permitting and waste treatment.

1. Add sulfuric acid until the solution acquires a pH of 1.4 or less. This quantity will vary, depending upon the extent of depletion and the amount of water used in the original make-up.
2. Shred into hand-size pieces, 5-7 lbs. grade 00 steel wool per 100 gallons of spent solution. Add shredded steel wool to the solution and stir for 20 minutes. Check pH to be sure it has not risen above 2.2. If it has, add more sulfuric acid and stir for a few minutes longer.
3. This is followed by additions of sufficient sodium hydroxide (in liquid form-50% solution may be purchased) to raise the pH to 8.5 - 9.0.
4. The treated solution is then allowed to stand so the insoluble metallics and other solids drop to the bottom of the tank. For collection and disposal, the liquid portion may then be drawn off and disposed of in accordance with state and local regulations. The sludge may be accumulated and disposed of at a later time. The sludge is not soluble in (rain) water thus does not create ground contamination.

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CAUTION

The **MI-TIQUE® 1795** solution is strongly acidic. Avoid contact with eyes, skin and clothing. Wear eye shields, protective gloves and aprons. In case of contact, flush skin with generous amounts of cold water and obtain medical attention. Read and understand OSHA safety data sheet and drum warning labels prior to working with or handling this product.

WARRANTY

THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.