



Birchwood Laboratories LLC
7900 Fuller Road
Eden Prairie, MN 55344
Tel: 952 937 7931
Fax: 952 937 7979
www.birchwoodtechnologies.com

Muriatic Acid Primer
Operating Instructions

DESCRIPTION

A dilute muriatic acid solution is used to activate stainless steel for blackening in Tru Temp® Stainless Low Temperature Black Oxide. Muriatic acid is supplied as a liquid concentrate and should be mixed with water to make a dilute activating solution.

CAUTION: Be very cautious while mixing raw material. Strong acid that causes burns to skin and throat. Wear acid-proof gloves and eye protection. Avoid inhaling fumes. Pour slowly without splashing.

OPERATING CONDITIONS

Bath Make-Up Concentration	10-20% by volume for most applications 20-50% for hard-to-blacken parts
Operating Temperature	Room Temperature
Immersion Time	5-20 minutes, as needed.
Equipment Construction	Tank: plastic or acidproof
Ventilation	Desirable

MIXING INSTRUCTIONS

Wear proper PPE. Acid-proof gloves, eye protection, and long sleeves. Immediately wash skin exposed to chemical splashes. Avoid inhaling fumes.

1. Fill tank halfway with clean water.
2. Add the correct amount of Muriatic Acid for your tank size and desired concentration

Tank Size	10% Concentration	30% Concentration
5 gallons	0.5 gallons	1.5 gallons
40-gallons	4 gallons	12 gallons
100 gallons	10 gallons	30 gallons

3. Top off tank to operating level with clean water.

PROCESS SEQUENCE

The Muriatic Acid Primer/Prep is used as part of a multi-step blackening process, as follows:

1. **CLEAN** the metal parts by soaking in alkaline cleaner like Safe Scrub ST mixed at 10-20% v/v and operated at 150° F; 5-8 minutes.
2. **RINSE** in clean water; 60-90 seconds.
3. **APPLY PRIME COAT** by immersing parts in Muriatic Acid solution (operated at room temp for 5-20 minutes).
4. **RINSE** in clean water; 60-90 seconds.
5. **BLACKEN** in TRU TEMP® Stainless Black Oxide bath (operated at 200-210°F; 30-60 minutes).
6. **RINSE** in clean water; 60-90 seconds.
7. **SEAL** in a rust preventive appropriate to the end-use of the parts, such as DRI-TOUCH® AMBER IRP2 rust preventive for a soft waxy finish
- 8.

BATH MAINTENANCE

The Muriatic Acid solution can be maintained by testing for free acid content, using the Go/NoGo Test Kit, or by conventional titration methods. As the bath works, the acid content will gradually diminish and the solution will dissolve iron from the parts being processed. Normal maintenance calls for periodic additions of Muriatic Acid concentrate. The bath should be changed out every 6-12 months, depending on work load. Your Birchwood Technologies® representative can guide you.

PACKAGING AND STORAGE

1-gallon jug (883050) and 15-gallon pail (883052). Store indoors in closed containers.

Before Using This Product – Please Read, Understand and Follow all the Precautions shown on the Product Label and on the Safety Data Sheet.

The Safety Data Sheet can be found on our website:

<https://www.birchwoodtechnologies.com/Downloads/Safety.html>

Use Appropriate Warning Labels on any Container used to Store or Apply this Product.

NOTE: The information contained herein is provided in good faith and is believed to be correct as of the date below. However, Birchwood Laboratories LLC makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgment in determining its appropriateness for a particular purpose. Accordingly, Birchwood Laboratories LLC will not be responsible for damages of any kind resulting from the use of or reliance upon such information.