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**TRU TEMP® MKP/RPL Low Temperature Black Oxide (Patented)**  
Operating Instructions

**PRODUCT DESCRIPTION**

The TRU TEMP® Low Temperature Black Oxide Process operates at 200-210° F and forms a durable black oxide finish on all iron and non-stainless steel surfaces. The TRU TEMP® MKP-RPL Bath System utilizes two separate products for optimum economy, as follows:

The TRU TEMP® MKP make-up solution is a bath-strength liquid, used undiluted, to charge the process tank. It contains all the active components necessary for high quality black oxide finishing, including accelerators, rectifiers and penetrants. Once the bath reaches 200-210° F operating temperature, it is ready for blackening.

As parts are processed, the bath concentration will gradually diminish and will require replenishment with TRU TEMP® RPL Replenisher Concentrate to maintain proper concentration and solution balance. The RPL is a concentrated product with a different chemical balance in order to maintain proper chemical balance.

**OPERATING CONDITIONS**

Bath Make-Up	TRU TEMP® MKP Make-Up Solution, used without dilution. Operate at 200-210° F
Bath Replenisher	TRU TEMP® RPL Replenisher Concentrate
Equipment Construction	Tank: Mild or stainless steel with 2” insulation Heating element: 304 stainless steel - Use 200 watts per gallon of bath. Racks, baskets, barrels: Mild steel or Polypro Avoid stainless steel racks, baskets. Stainless barrels are OK, with 1-2 rpm rotation Desirable. Use a stainless steel pump or impeller Desirable (fumes have no chemical content) DI or RO Purified Water is preferred
Bath Circulation	Keep all forms of copper, brass, zinc & aluminum out of the bath.
Ventilation	
Refill of Evaporative Losses	
CAUTION	

## **BLACKENING PROCEDURES**

1. **CLEAN** the parts in PRESTO KLEEN® HP, mixed at 8 – 12oz/gal and operated at 150° F. Typical immersion time of 8 minutes.
2. **RINSE** in clean, overflowing tap water tank; 30 seconds.
3. **APPLY PRIMER COAT** in OXYPRIME® solution; Room Temp; 2-10 minutes.
4. **RINSE** in clean, overflowing tap water tank; 30 seconds.
5. **BLACKEN** in TRU TEMP® bath at 200-210° F; 15 minutes.
6. **RINSE** in clean, overflowing tap water tank; 30 seconds.
7. **SEAL** with a rust preventive topcoat appropriate to the end use of the article:  
Use DRI TOUCH® AMBER IRP2 water-displacing sealant for dry-to-touch finish;  
or use SHEATH® WS12 water-soluble oil (at 15% by volume; 130° F), for oily finish.

## **BATH MAINTENANCE**

As the TRU TEMP® bath operates, its concentration will gradually diminish. In addition, there will be a significant loss of water to evaporation. Both these components must be replaced in order to keep the bath operating normally. Normal maintenance calls for daily additions of clean water (DI or RO is preferred) with stirring, to restore normal operating levels. Then, the bath can be titrated for total alkalinity to determine the strength of the solution (tested with the Go/No Go Test Kit). All replenishment is carried out with TRU TEMP® RPL Replenisher. Normal tank life is about 6-9 months, depending on maintenance & work loading.

CAUTION: Keep all forms of copper, brass, zinc and aluminum out of the bath.

## **PACKAGING AND STORAGE**

Supplied in 55 gallon plastic, non-returnable drums. 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: [www.birchwoodtechnologies.com](http://www.birchwoodtechnologies.com)**

**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.

TRU TEMP® MKP Makeup Solution  
TRU TEMP® RPL Replenisher Concentrate

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