



# PRODUCT INFORMATION

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DATE: DECEMBER 5, 2012

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REF. # MFC-001003

## MARTRON 561-L LIQUID MINERAL ACID REPLACEMENT

### 1. GENERAL DESCRIPTION

**Martron 561-L** is a blend of acids, activators, and surfactants, which can be used as a replacement for liquid acids or dry acid salts in most applications.

Wetted acid salts help to improve activation and pickling efficiency by accelerating the undercutting of scale and improving the removal of other soils from surfaces. In lines where poor cleaning is evident, the wetted versions can be beneficial.

Overall, **Martron 561-L** is ideal for activating many types of substrates including iron, steel, brass, copper, zinc die castings, and also many of the "exotic" alloys frequently used in the electronics and printed circuit board industries.

#### Typical Application or Substrate Examples

Brass or copper alloys  
Zinc die castings  
Carbon Steel – low carbon  
Carbon Steel – high carbon  
Powder Metal - Ferrous  
Tool Steel, HSLA, etc.  
Stainless Steel, Type 200 & 400  
Cast Iron, Malleable Iron  
Leaded alloys  
Rust, heat & welding scale - oxides removal  
Stripping chromium coatings  
Brazed or tubular steel  
Copper or nickel plating activation  
Electrolytic Activator/Pickle

Please check with **Martron Inc.** for other applications.

#### Product Features and Benefits

Eliminates the handling and safety problems related to the use of liquid mineral acids. There are no totes or carboys that require deposits or return to the supplier for credit.

Minimizes plating room hazes and fumes at room temperature which further reduces equipment corrosion

Solutions provide activation without generating smut, and with minimal attack on most base metals. This becomes especially important when processing substrates where preserving a bright, polished surface finish is required or an advantage.

Versatile chemistry which can used either as immersion activators or with cathodic or anodic current for improved activation of many difficult substrates.

Less contamination of plating solutions due to cleaner smut-free surfaces which results in less down time, lower labor costs to carbon treat plating solutions and lower brightener additive costs

## 2. MAKE-UP and MAINTENANCE OF THE OPERATING BATH

### Solution Composition

MARTRON 561-L	
Operating Concentration Range	5 – 25% by volume
Operating Temperature Range	Room to 130°F (54°C)
Immersion Time Range	30 seconds to 5 minutes

### Make Up Procedure

1. Fill tank ½ full with water and if necessary begin heating up to operating temperature.
2. Add the required amount of **Martron 561-L** to the solution while mixing.
3. Add water to final operating level, continue mixing, and allow the solution to equalize to the proper operating temperature.
4. The **Martron 561-L** is ready for processing.

## 3. ADDITIONS

### Control Replenishment

Analyze the working solution frequently enough so that large additions can be avoided. For consistent results, keep the **Martron 561-L** concentration within about 10% of the desired value. Activating solutions in use become ineffective because of accumulated dirt loads and other contaminants. At some point it becomes more economical to replace the activating solution rather than make additions. A general recommendation regarding how often to dump and remake is not possible since it depends on many particular conditions of each installation so it is recommended to involve your local Coventya representative to provide additional input.

### Titration:

1. Pipette 10 mL sample of **Martron 561-L** solution into flask and dilute with 50 mL of DI water.
2. Add 5 to 10 drops of Bromocresol green indicator.
3. Titrate with 1.0 N sodium hydroxide (NaOH) from yellow to blue.
4. Record number mL of NaOH.

### Calculation:

Number ml 1.0N NaOH X 2.5 = % by volume **Martron 561-L**

## 4. EQUIPMENT

### Equipment

#### **Tank**

Room temperature operation Koroseal, rubber, polyethylene, polypropylene, or PVC or tanks with proper linings for heated applications. Chemical lead I recommended for temperatures exceeding 180°F (82°C). Providing skimming and overflow devices are suited for best results.

#### **Heating**

Karbate, graphite, or Teflon. Heating capacity to attain 140°F (60°C) should be provided if required.

#### **Electrodes**

Graphite/carbon. Use nickel or Monel hooks. Bolt graphite electrodes above the solution level and fasten hook rigidly to the anode bar. The lives of the electrodes are dependent upon the amount of current (ampere hours used). Electrode to work ratio Area 2:1. Voltage 2 - 8 volts (voltage control desired), Current Density, Cathode (work) 0.5-2 amp/sq. dm (5-20 amp/sq. ft) CD, Anode (electrodes) 1-3 amp/sq. dm (10-30 amp/sq. ft) [use ½ anode area when calculating surface area].

#### **Ventilation**

Recommended for heated and electrolytic solutions but otherwise not required for room temperature operation.

**Agitation**

Solution movement is beneficial for efficiency of activation; - avoid using excessive air agitation or vigorous solution movement since high foaming will likely result.

**5. WATER CARE and WASTE MANAGEMENT****General Comments**

Local waste treatment regulations vary considerably from area to area. Consequently, it is not possible to state the proper waste treatment procedure that will meet all requirements. Contact **Martron Inc.** for additional information on the best way for you to meet your local effluent requirements.

**6. HEALTH and SAFETY****Safe Handling**

Please review Safety Data Sheets (SDS) for the appropriate health and safety warnings before use of this product. The **Martron 561-L** solutions are acid corrosive and can cause burns.

Avoid contact with the skin and eyes. Wear protective clothing and safety gear when handling this material. In the event of any contact, flush affected area with a large volume of cold water and contact a physician, if necessary.

**First Aid**

- After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.
- After contact with skin, wash immediately with plenty of water.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- If swallowed, seek medical advice immediately and show container or label.

**Storage Considerations**

**Martron 561-L** offers excellent shelf life (24 months) but should be protected from high humidity and moisture but it is recommended that the customer check the use-by date on the label while enforcing proper inventory rotation methods... It is recommended to store products in closed packages, away from heat sources, protected from moisture and light sources.

**7. WARRANTY****Product Information**

Product name	<b>Martron 561-L</b>
Package sizes	5 & 55 Gallons

**IMDS Number**

N/A

**Disclaimer of Responsibility**

The data set forth in this bulletin is believed by **Martron Inc.** to be true, accurate, and complete, but is not guaranteed. Our sole warranty is as stated in our Standard Terms and Conditions of Sale. We cannot warrant that our customers will achieve the same results from any process, chemical or product described in this bulletin because we do not have control over the conditions of use; nor can we assume any responsibility for our customer's use of any of our products in a manner which infringes the patents of third parties.

**Date:** February 3, 2010  
**Revision:** December 5, 2012