

# Miracleclean SS Etch

Liquid Acidic Compound  
*Technical Data*

## GENERAL DESCRIPTION

**Miracleclean SS Etch** is a liquid acidic compound designed to etch and condition stainless steel surfaces prior to brazing, rubberizing, or resin coatings.

**Miracleclean SS Etch** is stabilized to deliver a uniform and specific etch rate over a long period of time.

## CHARACTERISTICS

Use caution, this material is acidic and should be added to water. Never add water to acid.

Composition	Aqueous mixture of ferric chloride, nitric acid, and hydrofluoric acid.
Odor	Mild.
Concentration	100%.
Temperature	70 – 90° F (21 – 32° C).
Specific Gravity	1.24 at 68° F (20° C).
pH	1 – 2.
Flash Point	None
Foaming Tendency	None
Solubility	Complete

## NORMAL USE

**Miracleclean SS Etch** is used primarily on 300 Series and precipitation hardenable stainless steels. **Miracleclean SS Etch** can be used 24/7 or intermittently on a continual basis.

Etch rate using a standardized coupon determines the condition of the bath. The bath is dumped after the etch rate falls below the minimum value due to the sludge, smut, and heavy metals in the bath.

## PROCESS

1. Alkaline Clean
2. Rinse
3. **Miracleclean SS Etch**
4. Rinse
5. **Inhibited B** or **Miracleclean SS Deoxidizer**
6. Rinse
7. Ultrasonic Rinse (warm)

## HANDLING AND SAFETY CONSIDERATIONS

**Warning:** This product contains hydrofluoric acid. Avoid contact with skin and eyes, wear proper protective safety gear for handling hydrofluoric acid.

Consult MSDS sheet on this product for handling considerations, hazard information, and first aid procedures.

## OTHER INFORMATION

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