

## ARMAKLEEN™ Rust Remover Aqueous Rust Remover and Acid Cleaner Product Information

### General Description

ARMAKLEEN™ Rust Remover is a liquid acid-based product primarily designed to simultaneously clean and remove rust from steel and iron parts. This product is also effective in removing flux, heat scale and other oxides from steel, stainless steel, cast iron and aluminum in immersion and hand-wipe cleaning applications. ARMAKLEEN™ Rust Remover is also suitable for preparing steel and aluminum surfaces for painting in immersion (Vat) or hand-wipe applications. ARMAKLEEN™ Rust Remover is not recommended for spray applications. Use of ARMAKLEEN™ Rust Remover for cleaning, rust removal or pre-paint preparation must be followed with a fresh water rinse and drying otherwise re-rusting can occur. If used prior to painting, parts should be painted immediately after the drying step.



**NSF Registered:** ARMAKLEEN™ Rust Remover is acceptable for use as an acid cleaner (A3) in and around food processing areas, where its use is not intended for direct food contact. Use of this product in food processing or handling facilities requires that all food products and packaging materials be removed or protected prior to product use. A potable (drinkable) water rinse of cleaned surfaces is required after use of this product. When used at recommended concentrations, ARMAKLEEN™ Rust Remover shall neither exhibit a noticeable odor nor leave a visible residue.

<i><b>FEATURES</b></i>	<i><b>BENEFITS</b></i>
Single-step process	Does not need separate cleaning step prior to rust removal
Versatile	Effective on a variety of metals and soils
Effective	Quickly removes rust and other oxides from metal surfaces
Flexible Use	Can be used in immersion and hand-wipe applications
No VOC	No VOC permits required
Mild Odor	Minimal irritation to operators and other employees

**SK P/N: 6347 (5 gallon)**

### Application

For parts cleaning, rust removal and surface preparation prior to painting in automotive and industrial applications.

### Equipment

Customer Owned Machines Immersion (other common terms - Vats, Dip Tanks, Hot Tanks).

\*Note: Tanks (Vats) should be made of stainless steel (304, 316, or 347), ceramics or other acid proof materials. Heating elements should be made of stainless steel, impervious carbon or graphite. Do not use Monel equipment, lead or rubber lining in tanks.

### Soils

Light to moderate grease and oil. Light to heavy rust, heat scale, flux, and other oxides.

## **Operating Instructions**

Immersion: Use 5% to 25%/volume with water at room temperature to 160°F. Follow the cleaning step with fresh water rinsing and drying. The higher the concentration and heat, the faster the rust removal. Immersion time depends on the degree of soil and amount of rust to be removed.

Hand Wipe: Use 10% to 50%/volume added to water at room temperature to 120°F. Apply with clean rags, wipes or brushes. Allow the Rust Remover to soak on part surfaces for several minutes before wiping or brushing for improved results. Follow with fresh water rinsing then dry the parts.

\*Note: Use acid resistant gloves and safety glasses when handling this product. Refer to the product MSDS for complete safety instructions.

## **Typical Properties**

pH concentrate: <1.0  
pH at 5% by volume: 1.4  
Specific Gravity: 1.43 at 25°C

## **Substrate Compatibility**

Steel, stainless steel, cast iron and aluminum

## **MSDS Information**

SK P/N English – SK PN 82949

French – SK PN 82950

## **Precautions**

- Not intended for spray use.
- Do not use or mix with chlorine containing cleaners or solutions as chlorine gas can be released.
- Will gradually attack steel tanks, heating elements and piping
- This product is highly acidic. The product concentrate causes burns of the eyes and may cause burns of the skin. See MSDS for additional safety information.

## **Titration Procedure (insert “Information”)**

1. Using a pipette, take a 5 ml sample of Rust Remover from the cleaning bath
2. Put the 5 ml sample into the mixing flask
3. Add 10 mLs of water then swirl to mix
4. Add 5 drops of phenolphthalein indicator
5. Counting the drops added, add 10N Sodium Hydroxide one drop at a time until the solution turns from clear to purple. Swirl between drops. The number of drops needed is the concentration of the Rust Remover.

## **Example**

If it takes 10 drops to turn the solution from clear to purple, the concentration of the Rust Remover is 10%/volume.

**Updated January 2008**

*IMPORTANT: The information presented in this product labeling and literature, while not guaranteed, is true and accurate to the best of our knowledge. No warranty, express or implied, is made regarding performance, stability or otherwise. Such information is not intended to be all-inclusive, and the manner and conditions of particular uses may involve other or additional preparatory, performance or safety considerations. While our technical personnel will be happy to respond to questions, safe and effective handling and use remains the responsibility of the user.*