



Product Info Sheet

Rust Remover

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, oxides from steel, stainless steel, cast iron and aluminum, hard water deposits, and various other calcium deposits.

ArmaKleen™ Rust Remover can be used in immersion, ultrasonic and hand-wipe cleaning applications.

ArmaKleen Rust Remover should not be used in spray equipment applications. Spraying acid vapors can cause corrosion on surrounding metal surfaces, as well as causing health hazards.

Use of ArmaKleen Rust Remover for cleaning and rust removal 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.

<i>Features</i>	<i>Benefits</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, ultrasonic and hand-wipe applications
Low VOCs	Meets Air Quality standards for VOC emissions at 53% concentration or lower
Mild Odor	Minimal irritation to operators and other employees

Operating Parameters

pH of Concentrate: < 1

Equipment Type	Rust Remover Concentration	Washer Temperature
Immersion Washer	10% to 25% by volume	Ambient to 160°F
Ultrasonic Washer	10% to 25% by volume	Ambient to 160°F
Hand-wipe Cleaning	10% to 50% by volume	Ambient

Safety-Kleen Part Numbers

ArmaKleen™ Product (5 Gallon Pail) SK P/N:6347

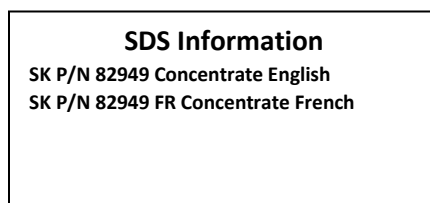
Soil Compatibility

Light to moderate grease and oil. Light to heavy rust, heat scale, flux, hard water deposits, carbonates and other oxides.

Substrate Compatibility

Steel, stainless steel, iron, aluminum.

Compliance Information



Titration Information

Procedure

1. Fill graduated cylinder with 5 mL of ArmaKleen Rust Remover cleaning solution. The bottom curve of the solution should touch the top of the indicated line.
2. Pour the measured amount of cleaning solution from the graduated cylinder into the Erlenmeyer titration flask. Rinse the cylinder with 5-8 mL of water and transfer it to the same flask.
3. Add 5 drops of Phenolphthalein indicator to the flask and mix. The phenolphthalein remains clear when the sample is acidic. Clean water may be added to dirty solutions to see the color change more clearly. Several more drops of indicator solution may also be added if the solution is excessively dirty.
4. Carefully add 10N Sodium Hydroxide one drop at a time to the flask, swirling the flask after each drop. Count the number of drops.
5. When the solution begins to change to a purple color you are nearing the endpoint. Add an additional drop to the solution until the purple color no longer becomes stronger/darkens.
6. Use the titration table to find the cleaner concentration from the number of drops of acid used.
7. Wash the test solution down a sink with water. Rinse the graduated cylinder and mixing flask well before storing in the case.

TITRATION TABLE																						
		% CLEANER CONCENTRATION																				
Cleaner	mls	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	60	65
Sample		DROPS OF ACID REQUIRED FOR COLOR CHANGE																				
Rust Remover	5	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	60	65

The
ArmaKleen
Company™



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Precautions

ArmaKleen Rust Remover is incompatible with all alkaline cleaners. Do not mix Rust Remover with any other ArmaKleen aqueous cleaner. ArmaKleen Rust Remover must not be sprayed. Aerosolized acid vapors are corrosive to metal and injurious to people.

Removal of rust and other corrosion products can liberate other alloy components, such as carbon, from the metal resulting in smut formation on the de-rusted surface.

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, effective handling and use remains the responsibility of the user.