



Product Info Sheet



General Description

ArmaKleen™ M-RP is a water-based rust inhibitor that enhances corrosion protection to metal surfaces during the cleaning process and provides temporary indoor rust protection on parts after cleaning when left on surfaces. The amount of rust protection is dependent on many variables including the environmental conditions of the storage facility. The unique oxidized polymer formula of ArmaKleen M-RP works effectively and often outperforms other water-based rust preventatives without the use of nitrites or amines.

This versatile product can be manually added to all ArmaKleen aqueous cleaners to improve corrosion protection or used as a stand-alone rust preventative in multiple stage parts cleaning systems, or in a bucket or dip tank after the parts cleaning process.

Features	Benefits
No ozone depleting potential	Environmentally friendly
No VOCs	Meets Air Quality standards for VOC emissions
Non-hazardous	No SARA 313 or WHIMS reporting requirements
Non-toxic	No special safety, handling or storage
No glycol ethers	Enhanced worker safety
Non-flammable	Improves employee safety and eliminates fire hazards
Low BOD/COD	Easy disposal
Low foaming	Suitable for use in high-pressure spray equipment
No nitrites or amines	Safer for workers and the environment

Operating Parameters

pH of Concentrate: 11.8
pH of 3% by volume dilution: 10.6

Equipment Type	M-RP Concentration	Washer Temperature
Additive to existing bath	1 pint to 30 gallons of cleaner bath	Ambient to 190°F
Standalone rust preventative immersion bath	2 - 3% by volume	Ambient to 190°F

Safety-Kleen Part Numbers

ArmaKleen™ Product (5 Gallon Pail) SK P/N: 6342

Additives

ArmaKleen M-Defoamer HD SK P/N 6310 (Pints – 8 per case)

ArmaKleen M-RP (for added rust protection) SK P/N 6342 (5-gallon pail)

Substrate Compatibility

Steel, stainless steel, cast iron, aluminum, copper, brass and other alloys.

Compliance Information

SDS Information

SK P/N 82843 Concentrate English
 SK P/N 82843 FR Concentrate French
 SK P/N 82784 Cleaning Solution English
 SK P/N 82784 FR Cleaning Solution French

Titration Information

SK P/N 4623 Total Alkalinity Titration Kit (order through branch SAP)

Procedure

1. Fill graduated cylinder with 5 mL of ArmaKleen M-RP 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 Bromocresol Green-Methyl Red Indicator Solution (small dropper bottle) to the flask and mix to produce a blue color. 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 1.0N Sulfuric Acid (square dropper bottle) one drop at a time to the flask, swirling the flask after each drop. Count the number of drops.
5. When the solution changes to a greenish brown or tan color you are near the end point. Continue adding and counting the number of drops until the solution turns to a peach or bright pink color and the addition of an one more drop does not cause any further color change.
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.

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TITRATION TABLE																						
% CLEANER CONCENTRATION																						
Cleaner	mls	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	25
Sample		DROPS OF ACID REQUIRED FOR COLOR CHANGE																				
M-RP	5	4	8	11	14	17	20	24	27	30	34	37	40	43	46	50	53	56	60	64	68	85

Precautions

Spotting may result at elevated usage concentrations. Water rinsing after M-RP application will remove the protective coating.

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.