



Product Info Sheet



General Description

ArmaKleen™ M-Aero is an aqueous cleaner designed primarily to meet the stringent anti-corrosion requirements found in aerospace cleaning specifications. As such, M-Aero not only conforms to a wide array of aerospace specifications but can also be used effectively in general automotive and industrial cleaning processes or applications where corrosion is a major concern. . M-Aero is a versatile cleaner used primarily in spray washers but is effective in immersion and ultrasonic parts washers as well. It also has application in hand held pressure washers and steam generators. ArmaKleen M-Aero is safe to use on aluminum, magnesium, steel, stainless steel, copper, brass, iron and cleans a wide variety of contaminants like machining oils, stamping lubricants, rust preventatives and other commercial and industrial soils.

When left on metal surfaces, ArmaKleen M-Aero provides temporary indoor rust protection during storage and between operations. The amount of rust protection is dependent on many variables including the environmental conditions of the storage facility.

<i>Features</i>	<i>Benefits</i>
Low foaming	Will not foam in spray applications as low as 120°F
Multi-metal safe	Can simultaneously clean steel, aluminum, brass and copper
Versatile	Effectively cleans in spray, immersion and ultrasonic parts washers. Can also be used in hand held pressure washers and steam generators
Cleaner/Rust Preventative	Cleans metals and provides short term rust protection
Non-flammable	Improves worker safety
Low VOCs	Meets Air Quality standards for VOC emissions

Specification Conformance

ArmaKleen M-Aero conforms to the following specifications

- Boeing BAC 5763 Emulsion cleaning and aqueous degreasing, Type II, Class 1 & 2, Grade B
- Boeing BAC 5749 Alkaline cleaning, Boeing PS 12024 cleaning, aqueous degreasing
- Boeing D6-17487 Exterior and general cleaners and liquid waxes
- Boeing PS-12024 cleaning, aqueous degreasing
- AMS 1526B Cleaner for aircraft exterior surfaces water-miscible, pressure spraying type
- Douglas Aircraft CSD #1 General purpose cleaner
- Pratt & Whitney PMC 1440 Aqueous metal cleaner
- Rolls Royce CSS200 Control procedures for the purchase and supply of consumable materials used during manufacture
- GM FID #334052
- Ford Tox #151174
- Chrysler NPM #12-270-2834



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Operating Parameters

pH of Concentrate: 11.6
 pH of 10% by volume dilution: 11.1

Equipment Type	M-Aero Conc.	Washer Temperature
Spray Washer	10%	120°F to 160°F
Immersion Washer	10%	120°F to 160°F
Ultrasonic Washer	10%	120°F to 160°F
Hand Held Pressure Washer	10% to 20%	65°F to 160°F
Steam Generator	3% to 10%	Steam

Safety-Kleen Part Numbers

ArmaKleen™ Product (55 Gallon Drum) SK P/N: 6430
 ArmaKleen™ Product (5 Gallon Pail) SK P/N: 6330

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)

Soil Compatibility

Grease, oil, lubricants, machining fluids, rust preventatives, metal working compounds and other commercial and industrial soils.

Substrate Compatibility

Steel, stainless steel, aluminum, copper, brass, magnesium, titanium and other alloys

Compliance Information



SDS Information
SK P/N 82796 Concentrate English
SK P/N 82796 FR Concentrate French
SK P/N 820221 Cleaning Solution English
SK P/N 820221 FR Cleaning Solution French



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Titration Information

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

Procedure

1. Fill graduated cylinder with 10 mL of ArmaKleen M-Aero 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.

Cat.# 27501-00 Titration Guide Rev. 6, 9/10

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-Aero	5	2	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	21	22	23	25	30

Precautions

Foaming may occur in air or aggressively agitated systems at operating temperatures below 120°F. Prior to Black Light Non-Destructive Testing (NDT), cleaned parts must be rinsed with hot water before drying.

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.