



Product Info Sheet



General Description

ArmaKleen™ MM-DIP is a multi-metal safe liquid cleaner and rust preventative designed for effective soil removal in immersion and ultrasonic cleaning applications. This high performance cleaner is ideal for cleaning tenacious soils in immersion systems. ArmaKleen MM-DIP splits tramp oils effectively allowing many bath contaminants to be removed with skimming devices.

When left on metal surfaces the ArmaKleen MM-DIP provides temporary indoor rust protection during storage or between operations. The amount of rust protection is dependent on environmental conditions of the facility.

<i>Features</i>	<i>Benefits</i>
Multi-metal compatible	Can simultaneously clean steel, aluminum, brass and copper
No glycol ethers	Enhanced worker safety
Very low VOCs	Meets all Air Quality standards for VOC emissions
No phosphates, nitrites or amines	Safer for workers and the environment
Versatile	Effectively cleans multiple soils
Cleaner/Rust Preventative	Cleans metals and provides short term indoor rust protection

Operating Parameters

pH of Concentrate: 13.7
 pH of 10% by volume dilution: 12.6

Equipment Type	MM-Dip Concentration	Washer Temperature
Immersion Washer	10%	120°F to 190°F
Ultrasonic Washer	10%	120°F to 190°F

Safety-Kleen Part Numbers

ArmaKleen™ MM-DIP (55 Gallon Drum) SK P/N: 6318 (inventory), 6459 (sales)

ArmaKleen™ Product (5 Gallon Pail) SK P/N: 6359 (sales)

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, lapping and drawing compounds, rust preventatives and other commercial and industrial soils.

Substrate Compatibility

Steel, aluminum, brass and copper



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Compliance Information



SDS Information
 SK P/N 82751 Concentrate English
 SK P/N 82751 FR Concentrate French
 SK P/N 82758 Cleaning Solution English
 SK P/N 82758 FR Cleaning Solution French

Titration Information

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

Procedure

1. Fill graduated cylinder with 10 mL of ArmaKleen product 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																				
MM-DIP	5	1	2	3	4	5	5	6	7	8	10	10	11	11	12	13	13	14	14	15	16	20

Precautions

MM-DIP cannot be used in Spray Washers. Product will foam. Product does not contain defoaming agents. In no-rinse applications, spotting or staining may result at elevated usage concentrations.

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.