The ArmaKleen Company

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Product Info Sheet

Paint & Ink Remover

General Description

ArmaKleen™ Paint & Ink Remover is a non-hazardous, low-temperature, highly concentrated liquid cleaner designed to remove a variety of paints, inks, adhesives and other coatings from many types of substrates including steel, cast iron and aluminum. This product is effective at removing most paints used in industrial spray painting, powder coating, E-coat and other coating processes. It is also effective in removing most inks used in lithographic, flexographic, Gravure, screen and other commercial printing presses. ArmaKleen Paint & Ink Remover has also proven effective in removing adhesives, asphalt/tar and other manufactured coatings.

ArmaKleen Paint & Ink Remover is designed for use in automated immersion, spray* and ultrasonic cleaning equipment. **Continuous agitation is needed in order for the product to mix and perform properly.** ArmaKleen Paint & Ink Remover is **NOT** recommended for hand-wipe cleaning applications. Certain contaminants, such as dirt, grease and oil, can reduce performance of this product. It is recommended that dirty parts be cleaned and rinsed prior to using with the ArmaKleen Paint & Ink Remover. Equipment for use with ArmaKleen Paint & Ink Remover should be constructed of general-purpose construction steel or stainless steel.

**When using enclosed (cabinet style) spray washers the system must be vented unless the unit is completely closed (not designed to ventilate).*

Features	*Benefits*
Non Hazardous	Reduces hazardous waste and improves worker safety
Automated	Reduces labor and increases productivity
Safe on Most Metals	Can simultaneously clean steel, aluminum and other alloys
Low Impact on surface finish	Reduces scrap and minimizes rework on parts
Low Temperature	Reduces energy costs associated with high temperature processes
Highly Effective	Two-part Aqueous phase & Organic phase chemistry quickly removes most ink, paints and other coatings

Operating Parameters

ArmaKleen Paint & Ink Remover is a two-part chemistry. The use solution is made from a 1:1 mix of ArmaKleen Paint & Ink Remover Part A and ArmaKleen Paint & Ink Remover Part B. (Do not dilute with water)

pH of mixed two-part working solution: 10.0 – 11.0

Equipment Type	**Washer Temperature**
Immersion Washer	120°F to 170°F
Spray Washer	120°F to 170°F
Ultrasonic Washer	120°F to 170°F

Safety-Kleen Part Numbers

ArmaKleen™ Paint & Ink Remover Part A (55 Gallon Drum) SK P/N:	6463
ArmaKleen™ Paint & Ink Remover Part A (5 Gallon Pail) SK P/N:	6363
ArmaKleen™ Paint & Ink Remover Part B (55 Gallon Drum) SK P/N:	6464
ArmaKleen™ Paint & Ink Remover Part B (5 Gallon Pail) SK P/N:	6364

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, cast iron, aluminum, copper and brass are compatible. For sensitive aluminum alloys, testing a small part prior to full scale operation is recommended. Discoloration may be seen on sensitive aluminum alloys. This product can be used on zinc, zinc casings and zinc plated parts if service interval (bath life) is not over extended. Over extension of the service interval (bath life) can cause corrosion inhibitors to be depleted and zinc to be attacked. Testing before use on zinc is recommended. Do not use on magnesium.

Compliance Information

SDS Information

SK P/N 82978 Mixed English
SK P/N 82978 FR Mixed French
SK P/N 82976 Part A English
SK P/N 82976 FR Part A French
SK P/N 82977 Part B English
SK P/N 82977 FR Part B French

Bath Control Information

In order to maintain the most efficient functioning of the ArmaKleen Paint & Ink Remover the two parts of the cleaner must be kept in the correct proportion. The correct proportion is a 1:1 mixture or 50% Part A and 50% Part B.

The first step is to perform a total alkalinity titration on the mixed Paint & Ink Bath. This titration will determine the concentration of the Part B in the bath.

Alkalinity Titration for Part B Content

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

Procedure

1. Fill graduated cylinder with 2 mL of well mixed ArmaKleen Paint & Ink Remover 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 Part B 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.

The below table demonstrates the % Part B in the mixed Paint & Ink Remover bath. The table also tells how many gallons of Part B are required for an 80 gallon parts washer sump to restore the Part B to the proper operating level. Before making the addition of Part B to the sump make sure there is sufficient room in the sump for the additional volume.

TITRATION TABLE																						
% PART B CONCENTRATION																						
Cleaner	mls	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Sample		DROPS OF ACID REQUIRED FOR COLOR CHANGE																				
Mixed Paint & Ink Remover	2	0	2	4	5	6	8	10	11	12	13	14	15	16	18	20	22	24	26	28	29	30
		GALLONS OF Part B per 80 Gallons to Correct																				
Volume to Correct		30	27	24	21	18	16	12	9	6	3	0	0	0	0	0	0	0	0	0	0	0

After the bath has been tested and correct for Part B content you will need to conduct a bath split test. The split test will determine the concentration of the Part A in the mixed Paint & Ink Remover bath.

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ArmaKleen Paint & Ink Remover Split Test

1. Fill a 100 ml graduated cylinder to the 100 ml mark with well mixed Paint & Ink Remover bath.
2. Let the cylinder sit for a minimum of 30 minutes (1 hour is preferred) to allow the organic and aqueous phases to fully separate.
3. Determine the volume in ml of both the top and bottom layers.
4. Refer to the table below to determine the amount of Part A and Water needed to replenish the bath.

Split Test Results		**Gallons needed to Correct**	
Top Layer (Aqueous) in ml	**Bottom Layer (Organic Layer) in ml**	**Gallons of Part A Needed per 100 gallons of P&I Bath**	**Gallons of Water Needed per 100 gallons of P&I Bath**
90	10	50	0
85	15	45	0
80	20	40	0
75	25	35	0
70	30	30	0
65	35	25	0
60	40	20	0
55	45	15	0
50	50	10	0
45	55	5	0
40	60	0	0
35	65	0	5
30	70	0	10
25	75	0	15
20	80	0	20
15	85	0	25
10	90	0	35
5	95	0	45

Before making the addition of Part A or water to the sump make sure there is sufficient room in the sump for the additional volume.

Precautions

Most ink and paint stripping applications require fresh water rinsing, hand-wiping with rags or some brushing to get parts completely clean.

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.