

**ARMAKLEEN™ MM-DIP
Cleaning Solution**



MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ARMAKLEEN MM-DIP Cleaning Solution

SYNONYM(S): Not available.

PRODUCT PART NUMBERS: 6316

PRODUCT USE: For removing grease, carbon, and varnish deposits from metal parts. If this product is used in combination with other products, refer to the Material Data Sheets for those products.

24-HOUR EMERGENCY PHONE NUMBERS

These numbers are for emergency use only. If you desire non-emergency product information, please call a phone number listed below.

MEDICAL:	TRANSPORTATION (SPILL):
1-800-468-1760	

MANUFACTURER:
The ArmaKleen Company
469 North Harrison Street
Princeton, NJ 08543
USA
(609) 683-5900

SUPPLIER:
Safety-Kleen Systems, Inc.
2600 North Central Expressway, Suite 400
Richardson, TX 75080
USA
(800) 669-5740

TECHNICAL INFORMATION: 1-800-332-5424

SAFETY-KLEEN MSDS FORM NUMBER: 82758
THE ARMAKLEEN COMPANY MSDS NUMBER: 806

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PREPARED BY: ArmaKleen MSDS Coordinator

APPROVED BY: The ArmaKleen Company

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

WT%	NAME	SYNONYM	CAS NO.	OSHA PEL		ACGIH TLV®		LD ^a	LC ^b
				TWA	STEL	TWA	STEL		
<1	Potassium Hydroxide	Caustic potash	1310-58-3	N. Av.	N. Av.	2mg/m ³ (ceiling)	N. Av.	214	N. Av.
<1	Silicic acid, sodium salt	Sodium silicate	1344-09-8	N. Av.	N. Av.	5mg/m ^{3,c}	N. Av.	1153	N. Av.

N.Av. = Not Available
^aEven though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of product.
^aOral-Rat LD₅₀ (mg/kg)
^bInhalation LC₅₀
^cmanufacturer recommended ceiling limit as respirable mist

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE

Liquid, clear, light straw color, mild detergent odor.

WARNING!

HEALTH HAZARDS

When heated above 120°F (49°C), may cause serious thermal burns.
 May burn respiratory tract (nose, throat, and lungs), eyes, skin, and digestive tract.
 Contains material which can cause eye, skin, and digestive tract damage.

POTENTIAL HEALTH EFFECTS

INHALATION (BREATHING): Vapor or mist may irritate the respiratory tract (nose, throat, and lungs). Vapor or mist may cause sore throat, coughing, shortness of breath, and/or mucous membrane burns.

EYES: May cause irritation, redness, pain, blurred vision, burns, and/or damage. This product may be heated during use. Contact with hot product can cause serious thermal burns.

SKIN: May cause irritation, redness, pain, blistering, and/or burns. This product may be heated during use. Contact with hot product can cause serious thermal burns. Not likely to be absorbed through the skin in harmful amounts.

INGESTION (SWALLOWING): May be harmful or fatal if swallowed. May cause painful swallowing, nausea, vomiting, and/or stomach pains. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

MEDICAL CONDITIONS AGGRAVATED BY Individuals with pre-existing liver, kidney, respiratory tract (nose, throat, and lungs), eye, and/or skin disorders may have increased

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EXPOSURE: susceptibility to the effects of exposure.

CHRONIC: Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis); and/or burns.

CANCER INFORMATION: No known carcinogenicity. For more information, see **SECTION 11: CARCINOGENICITY**.

Also see SECTION 15: CALIFORNIA.

POTENTIAL ENVIRONMENTAL EFFECTS

Not available. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

SECTION 4: FIRST AID MEASURES

**INHALATION:
(BREATHING)** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

EYES: If irritation or redness from exposure to vapor develops, move away from exposure into fresh air and flush eyes with water for 5 minutes. Upon direct contact with liquid, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

SKIN: Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists.

For thermal burns caused by contact with hot product, remove affected clothing and shoes. Wash skin thoroughly with cool water. Apply cool-packs or ice. Get medical attention immediately.

**INGESTION:
(SWALLOWING)** Do NOT induce vomiting. Immediately get medical attention. Call medical emergency telephone number (1-800-468-1760) for additional information. Give water to drink. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything to an unconscious person by mouth.

NOTE TO PHYSICIANS: Treat symptomatically and supportively. Ingesting large amounts may cause systemic alkalosis. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760.

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SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: greater than 212°F (100°C)

FLAMMABLE LIMITS IN AIR: Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

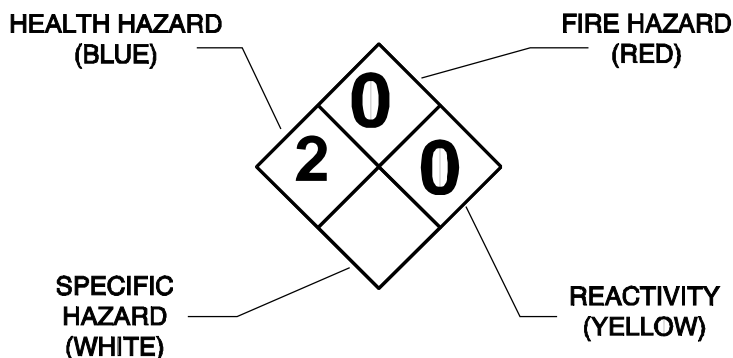
HAZARDOUS COMBUSTION PRODUCTS: Product itself does not burn, but may decompose upon heating to produce carbon monoxide, carbon dioxide, sulfur oxides, and nitrogen oxides.

CONDITIONS OF FLAMMABILITY: Product will not burn.

EXTINGUISHING MEDIA: Not applicable.

NFPA 704

HAZARD IDENTIFICATION: This information is intended solely for the use by individuals trained in this system.



FIRE FIGHTING INSTRUCTIONS: Keep storage containers cool with water spray. A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

FIRE AND EXPLOSION HAZARDS: Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Not sensitive to mechanical impact or static discharge.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Avoid eye and skin contact with hot product. Spilled product is slippery. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. Contain away from surface waters and sewers. Contain spill as a liquid for possible recovery or sorb with compatible sorbent material and shovel with a clean tool into a sealable container for disposal.

Additionally, for large spills: Dike far ahead of liquid spill for collection and later disposal.

There may be additional regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION**.

SECTION 7: HANDLING AND STORAGE

HANDLING: Use clean tools. Product may be hot. If handling hot product, wear protective equipment as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. When diluting, cautiously mix product and water together with stirring. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes.

SHIPPING AND STORING: Keep container tightly closed when not in use and during transport. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Empty product containers may retain product residue and can be dangerous.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use general ventilation, process enclosures, local exhaust ventilation, or other engineering controls to control air-borne levels.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: Use NIOSH-certified, combination N-, P-, or R- series particulate filter respiratory protective equipment when concentration of vapor or mist exceeds applicable exposure limits. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

EYE PROTECTION: Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

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SKIN PROTECTION: Where skin contact is likely, wear nitrile, neoprene, or equivalent protective gloves; use of polyvinyl alcohol (PVA), natural rubber, or equivalent gloves is not recommended.

Where skin contact with hot product is likely, wear thermal protective gloves, sleeves, and apron.

To avoid skin contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

PERSONAL HYGIENE: Use good personal hygiene. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with the product.

OTHER PROTECTIVE EQUIPMENT: Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE, APPEARANCE, AND ODOR: Liquid, clear, light straw color, mild detergent odor.

ODOR THRESHOLD: Not available.

MOLECULAR WEIGHT: Not applicable.

SPECIFIC GRAVITY: 1.01 (water = 1)

DENSITY: 8.43 LB/US gal (1010 g/L)

VAPOR DENSITY: less than 1 (air = 1)

VAPOR PRESSURE: 17.5 mm Hg at 68°F (20°C)

BOILING POINT: 212°F (100°C)

FREEZING/MELTING POINT: 32°F (0°C)

pH: 12.0 (approximately)

EVAPORATION RATE: Less than 1 (butyl acetate = 1)

SOLUBILITY IN WATER: Complete.

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FLASH POINT: greater than 212°F (100°C)

FLAMMABLE LIMITS IN AIR: Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures.

INCOMPATIBILITY: Avoid acids (generates heat), oxidizing agents, reducing agents, reactive halogens.

REACTIVITY: Polymerization is not known to occur under normal temperatures and pressures. Not reactive with water.

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS.**

SECTION 11: TOXICOLOGICAL INFORMATION

SENSITIZATION: Based on best current information, there is no known human sensitization associated with this product.

MUTAGENICITY: Based on best current information, there is no known mutagenicity associated with this product.

CARCINOGENICITY: Based on best current information, there is no known carcinogenicity as regulated by OSHA; as categorized by ACGIH A1 or A2 substances; as categorized by IARC Group 1, Group 2A, or Group 2B agents; or as listed by NTP as either known carcinogens or substances for which there is limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals.

Also see **SECTION 15: CALIFORNIA.**

REPRODUCTIVE TOXICITY: Based on best current information, there is no known reproductive toxicity associated with this product.

Also see **SECTION 15: CALIFORNIA.**

TERATOGENICITY: Based on best current information, there is no known teratogenicity associated with this product.

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**TOXICOLOGICALLY
SYNERGISTIC
PRODUCT(S):** Based on best current information, there are no known toxicologically synergistic products associated with this product.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: High pH (alkalinity) of product may be harmful to aquatic life.

**OCTANOL/WATER
PARTITION COEFFICIENT:** Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding recycling or proper disposal.

**USEPA HAZARDOUS
WASTE CODE(S):** This product, if discarded is not expected to be a characteristic or listed hazardous waste. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

SECTION 14: TRANSPORT INFORMATION

DOT: Not regulated.

TDG: Not regulated.

**EMERGENCY RESPONSE
GUIDE NUMBER:** 154
Reference *North American Emergency Response Guidebook*

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SECTION 15: REGULATORY INFORMATION

USA REGULATIONS

VOLATILE ORGANIC COMPOUNDS (AS REGULATED)

0.08 WT%; 0.0068LB/US gal; 0.83 g/L as per 40 CFR 51.100(s)

Product Vapor Pressure @20°C = 17.5 mmHg

Product does not contain photochemically reactive solvents

SARA SECTIONS 302 AND 304:

This product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA SECTIONS 311 AND 312:

This product poses the following health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):

Immediate (Acute) Health Hazard

SARA SECTION 313:

This product does not contain toxic chemicals subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

CERCLA:

This product contains the following "hazardous substance" listed under the Comprehensive Environmental Response, compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantity (RQ):

<u>Material</u>	<u>CAS</u>	<u>RQ</u>
Potassium hydroxide	1310-58-3	1000 LB (454 kg)

TSCA:

All the components of this product are listed on, or are automatically included as "naturally occurring chemical substances" on, or exempted from the requirement to be listed on, the TSCA Inventory.

CALIFORNIA:

This product does not contain detectable amounts of any chemical known to the State of California to cause cancer.

This product does not contain detectable amounts of any chemical known to the State of California to cause birth defects or other reproductive harm.

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS:

D2B

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CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA):

All the components of this product are listed on, or are automatically included as “substances occurring in nature” on, or are exempted from the requirement to be listed on, the Canadian Domestic Substances List (DSL).

SECTION 16: OTHER INFORMATION

REVISION INFORMATION: Update supplier address in Section 1.

LABEL/OTHER INFORMATION: Not available.

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, The ArmaKleen Company assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either express or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product as supplied to the user.