

Safety Data Sheet

Material Name: ArmaKleen™ M-Aero Cleaner Cleaning Solution

SDS ID: 820221

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

ArmaKleen™ M-Aero Cleaner Cleaning Solution

Product Code

Not available.

Product Use

Aqueous alkaline cleaner. If this product is used in combination with other products, refer to the Safety Data Sheet for those products.

Restrictions on Use

For professional use only.

MANUFACTURER

Safety-Kleen Systems, Inc.
42 Longwater Drive
Norwell, MA 02061-9149 U.S.A.
Phone: 1-800-669-5740
www.safety-kleen.com

SUPPLIER

Safety-Kleen Systems, Inc.
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IMPORTER/DISTRIBUTOR

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1-800-468-1760

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January 21, 2025

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May 5, 2021

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November 27, 2001

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with Schedule 1 of Canada's Hazardous Products Regulations (HPR) (SOR/2015-17) and paragraph (d) of 29 CFR 1910.1200 in the United States

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Skin Sensitization - Category 1A

GHS Label Elements

Symbol(s)



Signal Word

Warning

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Hazard Statement(s)

Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.

Precautionary Statement(s)

Prevention

Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage

None needed according to classification criteria. Do not store below 40°F (4.4°C).

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Repeated exposure may cause dryness or cracking. Contact with heated material may cause serious thermal burns.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7732-18-5	Water	93-99
1310-73-2	Sodium hydroxide	0.14-0.16
497-19-8	Disodium carbonate	0.24 – 0.26
1344-09-8	Sodium silicate	0.19-0.21
2687-94-7	2-Pyrrolidinone, 1-octyl	0.19-0.21

Section 4 - FIRST AID MEASURES

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin

IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation occurs: Call a POISON CENTER or doctor. For thermal burns cause by contact with hot product, remove affected clothing and shoes. Wash thoroughly with cool water. Apply cool-packs or ice.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

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Most Important Symptoms/Effects

Acute

Causes serious eye irritation, skin irritation, an allergic skin reaction. Contact with heated product can cause severe burns to the eyes and skin and can result in permanent eye damage.

Delayed

No information on significant adverse effects.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Heated material may cause thermal burns.

Advice for firefighters

Containers may rupture if heated or exposed to continual naked flame.

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Keep storage containers cool with water spray. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact or static discharge.

Special Protective Equipment and Precautions for Firefighters

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Spilled product is slippery. Do not touch or walk through spilled product. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. Contain spill away from surface water 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.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Keep away from naked flame. Avoid breathing dust or vapor. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities

None needed according to classification criteria.

Do not store below 40°F (4.4°C). Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep

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containers away from naked flame. Empty product containers may retain product residue and can be dangerous.

Incompatible Materials

Avoid oxidizing agents and reducing agents.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Sodium hydroxide	1310-73-2
Canada	2 mg/m3 Ceiling
NIOSH	2 mg/m3 Ceiling
ACGIH	2 mg/m3 Ceiling
OSHA	2 mg/m3 TWA

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear safety glasses. Additional protection like goggles, face shields, or respirators may be needed dependent upon anticipated use and concentrations of mists or vapors. Eye wash fountain and emergency showers are recommended. Contact lens use is not recommended.

Respiratory Protection

A respiratory protection program which meets USA's OSHA General Industry Standard 29 CFR 1910.134 or Canada's CSA Standard Z94.4-M1982 requirements must be followed whenever workplace conditions warrant a respirator's use. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

Skin Protection/Glove Recommendations

Where skin contact is likely, wear gloves impervious to product; use of natural rubber (latex) or equivalent gloves is not recommended. To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant face shield, boots, apron, whole body suits or other protective clothing. When product is heated and skin contact is likely, wear heat-resistant gloves, boots, and other protective clothing.

Protective Materials

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to regulatory requirements. The following PPE should be considered the minimum required: Safety glasses, Gloves, Lab coat or apron.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear solution	Physical State	Liquid
Odor	soapy odor.	Color	Not available
Odor Threshold	Not available	pH	11.1 (aqueous solution)
Melting Point	0 °C (32°F)	Boiling Point	100 °C (212°F)
Boiling Point Range	Not available	Freezing point	Not available
Evaporation Rate	(equal to water.)	Flammability (solid, gas)	Not available
Autoignition Temperature	Not available	Flash Point	(not flammable)
Lower Explosive Limit	Not available	Decomposition temperature	Not available
Upper Explosive Limit	Not available	Vapor Pressure	17.5 mmHg
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	1.004
Water Solubility	(complete)	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Kinematic viscosity	Not available
Solubility (Other)	Not available	Density	Not available
Molecular Weight	Not available		
	0.76 WT%; 0.067 LB/US gal; 8 g/L as per 40 CFR 51.100(s) Product Vapor Pressure @ 20°C = 17.5 mmHg VOC Content is less than 25 grams/liter:		
Volatile Organic Compounds (As regulated)	This solution is explicitly listed as either an “exempted” or a “Clean Air Solvent” by the South Coast Air Quality Management District (SCAQMD) because it does not contain reactive volatile organic compounds (VOCs) that can react with sunlight and nitrogen-dioxides to create ground-based ozone (smog). Consult with your state/local air pollution control agency and their rules/regulations for specific direction in your specific area. www.aqmd.gov		

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Conditions to Avoid

Avoid naked flame and direct sunlight.

Incompatible Materials

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Avoid oxidizing agents, reducing agents.

Hazardous decomposition products

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

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause irritation.

Skin Contact

Cause skin irritation. May cause allergic skin reaction. Contact with heated product may cause serious thermal burns.

Eye Contact

Causes serious eye irritation.

Ingestion

May cause irritation.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Sodium hydroxide (1310-73-2)

Oral LD50 Rat 325 mg/kg; Dermal LD50 Rabbit 1350 mg/kg

Product Toxicity Data

Acute Toxicity Estimate

Dermal	> 2000 mg/kg
Oral	> 2000 mg/kg

Immediate Effects

Causes serious eye irritation. Causes skin irritation. May cause allergic skin reaction.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

Causes skin irritation. Causes serious eye irritation. Contact with heated material may cause serious thermal burns.

Respiratory Sensitization

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

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA.

Germ Cell Mutagenicity

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

Experimental evidence suggests that this product does not cause mutagenesis.

Tumorigenic Data

No data available

Reproductive Toxicity

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

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Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

Based on available data, the classification criteria are not met.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing respiratory tract (nose, throat, and lungs), eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Sodium hydroxide	1310-73-2
Fish:	LC50 96 h Oncorhynchus mykiss 45.4 mg/L [static]

Invertebrate Toxicity

No additional information is available.

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

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 ArmaKleen regarding proper recycling or disposal.

Section 14 - TRANSPORT INFORMATION

US DOT Information: Not regulated for transport.

IATA Information: Not regulated for transport.

TDG Information: Not regulated for transport.

International Bulk Chemical Code

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Sodium hydroxide	1310-73-2
IBC Code:	Category Y (solution)

Section 15 - REGULATORY INFORMATION

Canada Regulations

CEPA - Priority Substances List

None of this product's components are on the list.

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Ozone Depleting Substances

None of this product's components are on the list.

Council of Ministers of the Environment - Soil Quality Guidelines

None of this product's components are on the list.

Council of Ministers of the Environment - Water Quality Guidelines

None of this product's components are on the list.

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Sodium hydroxide	1310-73-2
CERCLA:	1000 lb final RQ ; 454 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories:

Respiratory/Skin Sensitization

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Sodium hydroxide	1310-73-2	Yes	Yes	Yes	Yes	Yes

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

Not listed under California Proposition 65.

Component Analysis - Inventory

Sodium hydroxide (1310-73-2)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No
KR - REACH CCA			MX	NZ	PH	TH-TECI	TW	VN (Draft)
Yes			Yes	Yes	Yes	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

Other information

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR).

NFPA Ratings

Health: 2 Fire: 0 Instability: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Update to logo and Manufacturer information.

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport;

AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA -

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California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL), KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; KR REACH CCA - Korea Registration and Evaluation of Chemical Substances Chemical Control Act; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; Ne-Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL - Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TH-TECI - Thailand - FDA Existing Chemicals Inventory (TECI); TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

Other Information

Disclaimer:

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