



## Safety Data Sheet

Material Name: ARMAKLEEN™ BIO 24 SOLUTION

SDS ID: 820236

### Section 1 - PRODUCT AND COMPANY IDENTIFICATION

**Material Name**

ARMAKLEEN™ BIO 24 SOLUTION

**Product Code**

Not applicable.

**Product Use**

Cleaner. ArmaKleen BIO 24 Solution is certified by California’s South Coast Air Quality Management District (SCAQMD) as a Clean Air Solvent (CAS). Also see Section 9: Volatile Organic Compounds. If this product is used in combination with other products, refer to the Safety Data Sheet for those products.



*This product is a USDA Certified BioPreferred Product. Diluted for Use Product (5 and 10% solutions) meet Green Seal™ Standard GS-34 based on effective performance and protective limits on: VOCs, ozone depleting chemicals, and human & environmental toxicity. GreenSeal.org.*

**Restrictions on Use**

For commercial use only.

**Details of the supplier of the safety data sheet**

**MANUFACTURER**

Church & Dwight  
The ArmaKleen™ Company  
469 North Harrison Street  
Princeton, NJ 08543  
Phone: (800) 332-5424  
[www.churchdwight.com](http://www.churchdwight.com)

**SUPPLIER**

Safety-Kleen Systems, Inc.  
2600 North Central Expressway  
Suite 200  
Richardson, TX 75080  
Phone: 1-800-669-5740  
[www.safety-kleen.com](http://www.safety-kleen.com)

**IMPORTER/DISTRIBUTOR**

Safety-Kleen Canada Inc.  
25 Regan Road  
Brampton, Ontario, Canada L1A 1B2  
Phone: 1-800-669-5740

**Emergency Telephone Number**

Medical: 1-888-234-1828 Chemical: 1-800-424-9300 (CHEMTREC)

**Issue Date**

May 31, 2017

**Supersedes Issue Date**

New Issue SDS

**Original Issue Date**

May 31, 2017

### 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

None needed according to classification criteria

**GHS Label Elements**

**Symbol(s)**

None needed according to classification criteria

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## Signal Word

None needed according to classification criteria

## Hazard Statement(s)

None needed according to classification criteria.

## Precautionary Statement(s)

### Prevention

None needed according to classification criteria.

### Response

None needed according to classification criteria.

### Storage

None needed according to classification criteria.

### Disposal

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

### Other Hazards

None known.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7732-18-5	Water	>98
68-04-2	Trisodium citrate dihydrate	0.5-0.6
1984-06-1	Sodium caprylate	0.4-0.5
68987-81-5	Poly ethoxylated alcohol	0.1-0.2
61791-26-2	Poly ethoxylated tallow amine	0.1-0.2

## Section 4 - FIRST AID MEASURES

### Inhalation

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

### Skin

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. This product may be heated during use. Contact with hot product can cause serious thermal burns.

### 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. This product may be heated during use. Contact with hot product can cause serious thermal burns.

### Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

### Most Important Symptoms/Effects

#### Acute

May cause irritation.

#### Delayed

No information on significant adverse effects.

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## Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

## Section 5 - FIRE FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water spray, water fog, Water or foam may cause frothing.

#### Unsuitable Extinguishing Media

Do not use high-pressure water streams.

### Special Hazards Arising from the Chemical

Negligible fire hazard. Avoid friction, static electricity and sparks.

### Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce oxides of carbon.

### Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out.

### 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. Avoid release to the environment.

### Methods and Materials for Containment and Cleaning Up

Remove all ignition sources. 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 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, spark proof 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 specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see SECTION 15: REGULATORY INFORMATION.

## Section 7 - HANDLING AND STORAGE

### Precautions for Safe Handling

Keep away from heat, sparks and naked flames. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools and explosion-proof equipment. When transferring large volumes of product, metal containers, including trucks and tank cars, should be grounded and bonded. Use in a well ventilated area. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling.

### Conditions for Safe Storage, Including any Incompatibilities

None needed according to classification criteria. 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 containers away from flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous.

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## Incompatible Materials

Strong oxidizing materials, acids, combustible materials, halocarbons, metals, halogens, peroxides, metal salts, bases, reducing agents.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### Component Exposure Limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

### 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

No respiratory protection is normally required. Use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. 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.

#### Glove Recommendations

Wear appropriate chemical resistant gloves.

#### 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.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Pale yellow liquid	<b>Physical State</b>	Liquid
<b>Odor</b>	Mild odor	<b>Color</b>	Not available
<b>Odor Threshold</b>	Not available	<b>pH</b>	9.8-10
<b>Melting Point</b>	Not available	<b>Boiling Point</b>	212 °F (100 °C)
<b>Freezing point</b>	Not available	<b>Evaporation Rate</b>	Same as water
<b>Boiling Point Range</b>	Not available	<b>Flammability (solid, gas)</b>	Not available
<b>Autoignition</b>	Not available	<b>Flash Point</b>	None
<b>Lower Explosive Limit</b>	Not available	<b>Decomposition temperature</b>	Not available

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<b>Upper Explosive Limit</b>	Not available	<b>Vapor Pressure</b>	17.45 mmHg at 20 °C
<b>Vapor Density (air=1)</b>	Not available	<b>Specific Gravity (water=1)</b>	1.01
<b>Water Solubility</b>	Soluble	<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Viscosity</b>	Same as water	<b>Solubility (Other)</b>	Not available
<b>Density</b>	1.01 g/mL	<b>Molecular Weight</b>	Not available
<b>Volatile Organic Compounds (As regulated)</b>	Concentrate: 3.63 WT%; 0.33 LB/US gal; 40 g/L 5% Solution: 0.64 WT%; 0.058 LB/US gal; 7 g/L 10% Solution: 1.1 WT%; 0.20 LB/US gal; 12 g/L Product Vapor Pressure @20°C = 17.5 mmHg ; Product does not contain photochemically reactive solvents; Product does not contain any volatile organic compounds as defined per 40 CFR Part 51.100(s)		

## Section 10 - STABILITY AND REACTIVITY

### Reactivity

No reactivity hazard is expected.

### Chemical Stability

Stable under normal temperatures and pressures.

### Possibility of Hazardous Reactions

Will not polymerize.

### Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition

### Incompatible Materials

Strong oxidizing materials, Acids, combustible materials, halocarbons, metals, halogens, peroxides, metal salts, bases, 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

Irritation

#### Skin Contact

Irritation

#### Eye Contact

Irritation

#### Ingestion

Irritation, nausea, vomiting, stomach pain

### 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:

Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

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## Immediate Effects

May cause irritation.

## Delayed Effects

No information on significant adverse effects.

## Irritation/Corrosivity Data

May cause irritation.

## Respiratory Sensitization

No information available for the product.

## Dermal Sensitization

No information available for the product.

## Component Carcinogenicity

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

## Germ Cell Mutagenicity

No information available for the product.

## Tumorigenic Data

No information available for the product.

## Reproductive Toxicity

No information available for the product.

## Specific Target Organ Toxicity - Single Exposure

No target organs identified.

## Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

## Aspiration hazard

Not expected to be an aspiration hazard.

## 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.

## Additional Data

No additional information is available.

## Section 12 - ECOLOGICAL INFORMATION

### Component Analysis - Aquatic Toxicity

Trisodium citrate	68-04-2
Fish:	LC50 96 h Poecilia reticulata 18000 - 32000 mg/L
Invertebrate:	EC50 48 h Daphnia magna 5600 - 10000 mg/L IUCLID

## 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.

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## Section 13 - DISPOSAL CONSIDERATIONS

**Disposal Methods**

Dispose of used and unused product 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.

**TDG Information:** Not regulated for transport.

## Section 15 - REGULATORY INFORMATION

**U.S. Federal Regulations**

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

**SARA Section 311/312 (40 CFR 370 Subparts B and C)**

**Acute Health: No Chronic Health: No Fire: No Pressure: No Reactivity: No**

**U.S. State Regulations**

None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA

**Not listed under California Proposition 65**

**Canadian WHMIS Ingredient Disclosure List (IDL)**

The components of this product are either not listed on the IDL or present below the threshold limit listed on the IDL.

**WHMIS Classification**

Not Classified.

**Component Analysis - Inventory**

**Water (7732-18-5)**

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

**Trisodium citrate (68-04-2)**

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

**Sodium caprylate (1984-06-1)**

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

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## Section 16 - OTHER INFORMATION

### NFPA Ratings

Health: 1 Fire: 0 Reactivity: 0

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

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).

### Summary of Changes

New SDS

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CFR - Code of Federal Regulations (US); CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CPR - Controlled Products Regulations; DOT - Department of Transportation; DSL - Domestic Substances List; EPA - Environmental Protection Agency; F - Fahrenheit; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; 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; NDSL - Non-Domestic Substance List (Canada); NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; RCRA - Resource Conservation and Recovery Act; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; 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.