



ARMAKLEEN™ LF-37 SOLUTION

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Date of Issue: 04/18/2023

Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: ARMAKLEEN™ LF-37 SOLUTION

SDS No: 820477

Intended Use of the Product

Industrial Bio Based Cleaner. For professional use only.

1.3. Name, Address, and Telephone of the Responsible Party

MANUFACTURER

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

SUPPLIER (in the U.S.A.)

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

SUPPLIER (in Canada)

Safety-Kleen Canada Inc.
25 Regan Road
Brampton, Ontario L7A 1B2
Canada
Phone: 1-800-669-5740

Emergency Telephone Number

Emergency Number : Medical: 1-888-234-1828 Chemical: 1-800-255-3924 (VelocityEHS)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS-US/CA Classification

Not Classified

Label Elements

GHS-US/CA Labeling

No labeling applicable according to 29 CFR 1910.1200 and the Hazardous Products Regulations (HPR) SOR/2015-17.

Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US/CA)

No additional information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

| Name | Synonyms | Product Identifier | % * | GHS Ingredient Classification |
|-----------------------------|--|---------------------|----------|---|
| Water | water / AQUA | (CAS-No.) 7732-18-5 | 80 - 100 | Not classified |
| Trisodium citrate dihydrate | 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, trisodium salt, dihydrate / Citric acid, trisodium salt, dihydrate / 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, sodium salt, hydrate (1:3:2) / Sodium citrate, dihydrate / Trisodium 2-hydroxypropane-1,2,3-tricarboxylate dihydrate / Sodium citrate dihydrate / Trisodium citrate / Trisodium 2-hydroxypropane-1,2,3-tricarboxylate dihydrate / trisodium citrate dihydrate | (CAS-No.) 6132-04-3 | 0.1 - 1 | Combustible Dust |
| Sodium n-octanoate | Sodium caprylate / Caprylic acid sodium salt / Octanoate, sodium / Octanoic acid, sodium salt / Sodium octanoate / Sodium octanate / Octanoic acid, sodium salt (1:1) / SODIUM CAPRYLATE | (CAS-No.) 1984-06-1 | 0.1 - 1 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 |

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| | | | | |
|--|--|----------------------|----------------|---|
| Oxirane, methyl-, polymer with oxirane, mono(2-ethylhexyl) ether | Oxirane, methyl-, polymer with oxirane, monoether with 2-ethylhexanol / Oxirane, 2-methyl-, polymer with oxirane, mono(2-ethylhexyl) ether / PPG-9-Ethylhexeth-5 / 2-Ethylhexan-1-ol, ethoxylated propoxylated / PEG-3 PPG-7 ETHYLHEXYL ETHER / PEG-6 PPG-7 ETHYLHEXYL ETHER / PPG-9 ETHYLHEXETH-5 / PEG-14 PPG-7 ethylhexyl ether | (CAS-No.) 64366-70-7 | 0.1 - 1 | Eye Irrit. 2A, H319 |
| Amines, tallow alkyl, ethoxylated | Ethoxylated tallow amine / Polyoxyethylene glycol tallow amine / PEG-15 TALLOW AMINE / Polyoxyethylene (15) tallow amine / Polyoxyethylated tallow amine / PEG-11 tallow amine / Imbentin TAM / PEG-11 TALLOW AMINE / PEG-2 TALLOW AMINE / PEG-20 TALLOW AMINE / PEG-22 TALLOW AMINE / PEG-25 TALLOW AMINE / PEG-30 TALLOW AMINE / PEG-7 TALLOW AMINE / Ethoxylated tallow alkylamines / Tallow amine ethoxylated / Polyoxyethylene tallow amine / Polyethoxylated tallow amine / PEG tallow amine / Tallow amine ethoxylate / Tallow amine, ethoxylated | (CAS-No.) 61791-26-2 | 0.1 - 1 | Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 |
| Cyclohexylamine | Aminocyclohexane / Cyclohexanamine / Hexahydroaniline / Hexahydrobenzenamine / CYCLOHEXYLAMINE / Cyclohexan-1-ylamine | (CAS-No.) 108-91-8 | 0.0005 – 0.001 | Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1, H314 Eye Dam. 1, H318 Repr. 2, H361 |

Full text of H-statements: see section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%). The actual concentration of ingredient(s) is withheld as a trade secret in accordance with the Hazardous Products Regulations (HPR) SOR/2015-17 and 29 CFR 1910.1200.

SECTION 4: FIRST AID MEASURES

Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

Most Important Symptoms and Effects Both Acute and Delayed

General: Not expected to present a significant hazard under anticipated conditions of normal use.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: Prolonged exposure may cause skin irritation.

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Eye Contact: May cause slight irritation to eyes.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, or dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Nitrogen oxides. Sodium oxides. Hydrogen cyanide.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray).

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Collect spillage.

Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Precautions for Safe Handling: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

Specific End Use(s)

Industrial Bio Based Cleaner. For professional use only.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

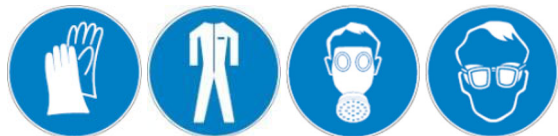
For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

| Cyclohexylamine (108-91-8) | | |
|----------------------------|-------------------------|--|
| USA ACGIH | ACGIH OEL TWA [ppm] | 10 ppm |
| USA ACGIH | ACGIH chemical category | Not Classifiable as a Human Carcinogen |
| USA NIOSH | NIOSH REL (TWA) | 40 mg/m ³ |
| USA NIOSH | NIOSH REL TWA [ppm] | 10 ppm |
| Alberta | OEL TWA | 41 mg/m ³ |
| Alberta | OEL TWA [ppm] | 10 ppm |
| British Columbia | OEL TWA [ppm] | 10 ppm |
| Manitoba | OEL TWA [ppm] | 10 ppm |
| New Brunswick | OEL TWA | 41 mg/m ³ |
| New Brunswick | OEL TWA [ppm] | 10 ppm |
| Newfoundland & Labrador | OEL TWA [ppm] | 10 ppm |
| Nova Scotia | OEL TWA [ppm] | 10 ppm |
| Nunavut | OEL STEL [ppm] | 15 ppm |
| Nunavut | OEL TWA [ppm] | 10 ppm |
| Northwest Territories | OEL STEL [ppm] | 15 ppm |
| Northwest Territories | OEL TWA [ppm] | 10 ppm |
| Ontario | OEL TWA [ppm] | 10 ppm |
| Prince Edward Island | OEL TWA [ppm] | 10 ppm |
| Québec | VEMP (OEL TWA) | 41 mg/m ³ |
| Québec | VEMP (OEL TWA) [ppm] | 10 ppm |
| Saskatchewan | OEL STEL [ppm] | 15 ppm |
| Saskatchewan | OEL TWA [ppm] | 10 ppm |
| Yukon | OEL STEL | 40 mg/m ³ |
| Yukon | OEL STEL [ppm] | 10 ppm |
| Yukon | OEL TWA | 40 mg/m ³ |
| Yukon | OEL TWA [ppm] | 10 ppm |

Exposure Controls

Appropriate Engineering Controls: Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection. Safety glasses with side-shields.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Safety glasses with side-shields.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

| | |
|--|-----------------------|
| Physical State | : Liquid |
| Appearance | : Pale yellow / clear |
| Odor | : Mild |
| Odor Threshold | : No data available |
| pH | : 9.2 |
| Evaporation Rate | : No data available |
| Melting Point | : No data available |
| Freezing Point | : No data available |
| Boiling Point | : ≈ 212 °F (100 °C) |
| Flash Point | : No data available |
| Auto-ignition Temperature | : No data available |
| Decomposition Temperature | : No data available |
| Flammability | : Not applicable |
| Lower Flammable Limit | : No data available |
| Upper Flammable Limit | : No data available |
| Vapor Pressure | : 17 mm Hg |
| Relative Vapor Density at 20°C | : No data available |
| Relative Density | : No data available |
| Specific Gravity | : > 1 |
| Solubility | : No data available |
| Partition Coefficient: N-Octanol/Water | : No data available |
| Viscosity | : No data available |
| VOC content | : 0.85 g/L |

SECTION 10: STABILITY AND REACTIVITY

Reactivity:

Hazardous reactions will not occur under normal conditions.

Chemical Stability:

Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, and incompatible materials.

Incompatible Materials:

Strong acids, strong bases, strong oxidizers.

Hazardous Decomposition Products:

Thermal decomposition may produce: Carbon oxides (CO, CO₂). Nitrogen oxides. Sodium oxides. Hydrogen cyanide.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data:

No additional information available

Skin Corrosion/Irritation: Not classified

pH: 9.2

Eye Damage/Irritation: Not classified

pH: 9.2

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

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Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

| | |
|---|--------------------------------|
| Amines, tallow alkyl, ethoxylated (61791-26-2) | |
| LD50 Oral Rat | 500 mg/kg |
| Cyclohexylamine (108-91-8) | |
| LD50 Oral Rat | 11 mg/kg |
| LD50 Dermal Rabbit | 277 mg/kg |
| LC50 Inhalation Rat | 1000 ppm (Exposure time: 16 h) |
| Cyclohexylamine (108-91-8) | |
| IARC Group | 3 |

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Harmful to aquatic life. Toxic to aquatic life with long lasting effects.

| | |
|---|--|
| Amines, tallow alkyl, ethoxylated (61791-26-2) | |
| LC50 Fish 1 | 0.18 – 0.99 mg/l |
| EC50 - Crustacea [1] | 0.47 mg/l Daphnia |
| EC50 Other Aquatic Organisms 1 | 0.008 mg/l Algae |
| Cyclohexylamine (108-91-8) | |
| LC50 Fish 1 | 44 – 90 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss) |
| LC50 Fish 2 | 470 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static]) |

Persistence and Degradability

| | |
|----------------------------------|---|
| ARMAKLEEN™ LF-37 SOLUTION | |
| Persistence and Degradability | May cause long-term adverse effects in the environment. |

Bioaccumulative Potential

| | |
|---|--------------------------|
| ARMAKLEEN™ LF-37 SOLUTION | |
| Bioaccumulative Potential | Not established. |
| Cyclohexylamine (108-91-8) | |
| Partition coefficient n-octanol/water (Log Pow) | 3.7 at 25 °C (at pH 6.8) |

Mobility in Soil

No additional information available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

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SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

In Accordance with DOT

Not regulated for transport

In Accordance with IMDG

Not regulated for transport

In Accordance with IATA

Not regulated for transport

In Accordance with TDG

Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

| | |
|--|---|
| Water (7732-18-5) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active | |
| Sodium n-octanoate (1984-06-1) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active | |
| Amines, tallow alkyl, ethoxylated (61791-26-2) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active | |
| EPA TSCA Regulatory Flag | XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711). |
| Cyclohexylamine (108-91-8) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active | |
| Listed on the United States SARA Section 302 | |
| SARA Section 302 Threshold Planning Quantity (TPQ) | 10000 lb |
| Oxirane, methyl-, polymer with oxirane, mono(2-ethylhexyl) ether (64366-70-7) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active | |
| EPA TSCA Regulatory Flag | PMN - PMN - indicates a commenced PMN substance. XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711). |

US State Regulations

| |
|---|
| Cyclohexylamine (108-91-8) |
| U.S. - New Jersey - Right to Know Hazardous Substance List |
| U.S. - Pennsylvania - RTK (Right to Know) List |
| U.S. - Massachusetts - Right To Know List |
| U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |

Canadian Regulations

| |
|--|
| Water (7732-18-5) |
| Listed on the Canadian DSL (Domestic Substances List) |
| Sodium n-octanoate (1984-06-1) |
| Listed on the Canadian DSL (Domestic Substances List) |
| Amines, tallow alkyl, ethoxylated (61791-26-2) |
| Listed on the Canadian DSL (Domestic Substances List) |
| Cyclohexylamine (108-91-8) |
| Listed on the Canadian DSL (Domestic Substances List) |
| Oxirane, methyl-, polymer with oxirane, mono(2-ethylhexyl) ether (64366-70-7) |
| Listed on the Canadian DSL (Domestic Substances List) |

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SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest : 04/18/2023

Revision

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) SOR/2015-17.

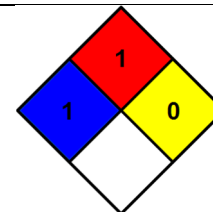
GHS Full Text Phrases:

| | |
|------|---|
| H226 | Flammable liquid and vapor |
| H302 | Harmful if swallowed |
| H311 | Toxic in contact with skin |
| H314 | Causes severe skin burns and eye damage |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H361 | Suspected of damaging fertility or the unborn child |

NFPA Health Hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA Fire Hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA Reactivity Hazard : 0 - Material that in themselves are normally stable, even under fire conditions.



The information contained herein is correct to the best of our knowledge, information, and belief and is designed only as guidance for the handling, use, processing, storage, transportation, disposal, and release of the product. User assumes all risks incident to use of this product and shall determine the quality and suitability of the product for its use. Supplier offers no warranty, express or implied, whatsoever, including warranties of merchantability or fitness for a particular purpose or otherwise, and specifically disclaims any and all liability for incidental, consequential, or other damages arising out the use or misuse of the product. The information provided relates only to the specific material provided and may not be valid if used in combination with any other materials or process, unless specified herein.

NA GHS SDS 2015 (Can, US)