



Acti-Klean

AK1 (P/N 475107); AK5 (P/N 475111);
AK55 (P/N 475114)

MSDS Preparation Date (mm/dd/yyyy): 09/20/2011

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MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product identifier : **Acti-Klean**

Product Code(s) : AK1 (P/N 475107); AK5 (P/N 475111); AK55 (P/N 475114)

Product Use : Refrigeration coil cleaner.

Chemical Family : Mixture.

Supplier's name and address: **Manufacturer's name and address:**

Parker Hannifin Corporation - Sporlan Division **Refer to Supplier**

206 Lange Drive
Washington, MO, U.S.A.
63090

Information Telephone # : (636) 239-1111

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.).

SECTION 2 - HAZARDS IDENTIFICATION

Classification : WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR). WHMIS classification:
Class D1A (Materials Causing Immediate and Serious Toxic Effects, Very Toxic Material);
Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material);
Class D2B (Materials Causing Other Toxic Effects, Toxic Material);
Class E (Corrosive Material) .

OSHA: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200). Hazardous classification:
Acute Health Hazard;
Chronic Health Hazard;
Corrosive .

Emergency Overview : Green liquid. Bland odour.
DANGER! POISON! May be fatal if inhaled. Harmful or fatal if absorbed through the skin. May be harmful if swallowed. May cause nausea, vomiting, headache and other central nervous system effects. May cause severe irritation or burns to the eyes and skin. May cause respiratory irritation. Contains material which can cause damage to the blood system, the liver and the kidneys. Contains material which may cause cancer, based on animal data.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

Inhalation : May cause severe irritation to the nose, throat and respiratory tract. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Inhalation in very high concentrations may result in blood system effects, such as red blood cell fragility. Liver and kidney injuries may occur. May result in unconsciousness and possibly death.

Skin : Severely irritating or corrosive. May be absorbed and cause symptoms similar to those for inhalation.

Eyes : Direct eye contact may produce severe irritation with possible eye damage.

Ingestion : May cause severe irritation and corrosive damage in the mouth, throat and stomach. Ingestion may cause symptoms similar to inhalation.



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Effects of long-term (chronic) exposure

: Prolonged or repeated contact may cause drying, cracking and defatting of the skin. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.

Carcinogenic status

: Possible cancer hazard. See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards

: See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects

: See ECOLOGICAL INFORMATION, Section 12.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>Wt.%</u>
2-butoxyethanol	111-76-2	1.00 - 5.00
Dodecylbenzenesulfonic acid	27176-87-0	1.00 - 5.00

SECTION 4 - FIRST AID MEASURES

Inhalation

: Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Seek immediate medical attention/advice.

Skin contact

: Remove/Take off immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Seek immediate medical attention/advice.

Eye contact

: Immediately flush eyes with running water for at least 20 minutes. Seek immediate medical attention/advice.

Ingestion

: Seek immediate medical attention/advice. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Notes For Physician

: Immediate medical attention is required. Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability

: Not flammable under normal conditions of use. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Flammability classification (OSHA 29 CFR 1910.1200)

: Combustible Liquid Class III B.

Oxidizing properties

: None known.

Explosion data: Sensitivity to mechanical impact / static discharge

: Not expected to be sensitive to mechanical impact or static discharge.

Suitable extinguishing media

: Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

Hazardous combustion products

: Carbon oxides; Sulphur oxides; hydrogen sulphide; Phosphorus compounds; Other unidentified organic compounds.

NFPA Rating

0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe
 Health: 3 Flammability: 1 Instability: 0 Special Hazards: None.



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SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions** : All persons dealing with the clean-up should wear the appropriate chemically protective equipment. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.
- Spill response/cleanup** : Ventilate area of release. Remove all sources of ignition. Absorb material with inert absorbent, and place into labelled containers for disposal. Refer to Section 13 for disposal of contaminated material. Notify the appropriate authorities as required.
- Prohibited materials** : None known.
- Special spill response procedures** : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
 US CERCLA Reportable quantity (RQ): Dodecylbenzenesulfonic acid (1000 lbs / 454 kg)

SECTION 7 - HANDLING AND STORAGE

- Safe Handling procedures** : Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. Keep away from acids and incompatibles. Always replace cap after use. Wash thoroughly after handling. Keep out of the reach of children.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.
- Incompatible materials** : Acids; Strong bases; Strong oxidizing agents.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
	2-butoxyethanol	20 ppm	N/Av	50 ppm (Skin)
Dodecylbenzenesulfonic acid	N/Av	N/Av	N/Av	N/Av

- Ventilation and engineering measures** : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.
- Respiratory protection** : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Advice should be sought from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.
- Skin protection** : Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.
- Eye / face protection** : Chemical splash goggles are recommended. A full face shield may also be necessary.



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Other protective equipment : Wear resistant clothing and boots. An eyewash station and safety shower should be made available in the immediate working area.

General hygiene considerations : Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Wash hands thoroughly after using this product, and before eating, drinking or smoking.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid	Appearance	: Green liquid.
Odour	: Bland odour.	Odour threshold	: N/Av
pH	: 12		
Boiling point	: 110°C (230°F)	Specific gravity	: 1.02
Melting/Freezing point	: -5°C (23°F)	Coefficient of water/oil distribution	: N/Av
Vapour pressure (mmHg @ 20° C / 68° F)	: same as water	Solubility in water	: miscible
Vapour density (Air = 1)	: > 1	Evaporation rate (n-Butyl acetate = 1)	: as water (water = 1)
Volatile organic Compounds (VOC's)	: N/Av	Volatiles (% by weight)	: 90.5%
Flash point	: > 100°C (> 212°F)	Auto-ignition temperature	: N/Av
Flash point Method	: Seta Flash CC	Upper flammable limit (% by vol.)	: N/Av
Lower flammable limit (% by vol.)	: N/Av	Flashback observed	: N/Av
Flame Projection Length	: N/Av		
Viscosity	: > 5 cPs		
Absolute pressure of container	: N/Av		

Section 10: Stability And Reactivity

Stability and reactivity	: Stable under the recommended storage and handling conditions prescribed. After prolonged storage, may release explosive peroxides in the presence of air. Exposure to sunlight accelerates decomposition. Contact with metals may release small amounts of flammable hydrogen gas.
Hazardous polymerization	: Hazardous polymerisation does not occur.
Conditions to avoid	: Avoid heat and open flame. Keep away from direct sunlight. Ensure adequate ventilation, especially in confined areas.
Materials To Avoid And Incompatibility	: See Section 7 (Handling and Storage) for further details.
Hazardous decomposition products	: Peroxides. Refer to Section 5 for additional 'Hazardous combustion products'.

SECTION 11 - TOXICOLOGICAL INFORMATION

Target organs	: Eyes, skin, respiratory system, central nervous system, blood system, liver, brain and kidneys.
Routes of exposure	: <i>Inhalation:</i> YES <i>Skin Absorption:</i> YES <i>Skin & Eyes:</i> YES <i>Ingestion:</i> YES
Toxicological data	: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

	LC ₅₀ (4hr)	LD ₅₀
Ingredients	inh. rat	(Oral, rat) (Rabbit, dermal)



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2-butoxyethanol	450 ppm	530 mg/kg	400 - 500 mg/kg
Dodecylbenzenesulfonic acid	N/Av	650 mg/kg	N/Av

- Carcinogenic status** : Contains the following chemicals listed as confirmed animal carcinogens (A3) by ACGIH: 2-butoxyethanol. No other components are classified as carcinogenic by IARC, ACGIH, OSHA or NTP.
- Reproductive effects** : Not expected to cause reproductive effects.
- Teratogenicity** : Not expected to be a teratogen.
- Mutagenicity** : Not expected to be mutagenic in humans.
- Epidemiology** : None known or reported by the manufacturer.
- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : None known or reported by the manufacturer.
- Irritancy** : Severely irritating or corrosive.
- other important hazards** : CNS depression may result from extreme exposures.
- Conditions aggravated by overexposure** : Pre-existing skin, eye, respiratory or blood system disorders.

SECTION 12 - ECOLOGICAL INFORMATION

- Ecotoxicity** : No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.
- Mobility** : No data is available on the product itself.
- Persistence** : No data is available on the product itself.
- Bioaccumulation potential** : No data is available on the product itself.
- Other Adverse Environmental effects** : No data is available on the product itself.

SECTION 13 - DISPOSAL CONSIDERATIONS

- Handling for Disposal** : Handle waste according to recommendations in Section 7. Empty containers retain residue (liquid and/or vapour) and can be dangerous.
- Methods of Disposal** : Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14: TRANSPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	None	Not regulated.	not regulated	none	
TDG Additional information	None.				
49CFR/DOT	None	Not regulated.	Not regulated	none	



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49CFR/DOT Additional information	None.				
ICAO/IATA	None	Not regulated.	Not regulated	none	
ICAO/IATA Additional information	None.				

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): Dodecylbenzenesulfonic acid (1000 lbs / 454 kg)

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Fire Hazard; Immediate (Acute) health hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above de minimus concentrations.

US State Right to Know Laws:

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

Other U.S. State "Right to Know" Lists: The following chemicals are specifically listed by individual States: 2-butoxyethanol (CA, MA, MN, NJ, PA, RI); Dodecylbenzenesulfonic acid (CA, MA, NJ, PA).

International Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16 - OTHER INFORMATION

HMIS Rating : * - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe
Health: *3 *Flammability:* 1 *Reactivity:* 0

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
 CA: California
 CAS: Chemical Abstract Services
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
 CFR: Code of Federal Regulations
 CNS: Central Nervous System
 DOT: Department of Transportation
 HMIS: Hazardous Materials Identification System
 HSDB: Hazardous Substances Data Bank



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IARC: International Agency for Research on Cancer
Inh: Inhalation
LC: Lethal Concentration
LD: Lethal Dose
MA: Massachusetts
MN: Minnesota
MSHA: Mine Safety and Health Administration
N/Ap: Not Applicable
N/Av: Not Available
NFPA: National Fire Protection Association
NJ: New Jersey
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2012.
- 2. International Agency for Research on Cancer Monographs, searched 2012.
- 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2012 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.
- 5. US EPA Title III List of Lists - July 2011 version.
- 6. California Proposition 65 List - July 20, 2012 version.

<p>Prepared for: Parker Hannifin Corporation - Sporlan Division 206 Lange Drive; Washington, MO 63090, U.S.A. Telephone: (636) 239-1111 www.sporlan.com Direct all enquiries to: Parker Hannifin Corporation - Sporlan Division.</p>	
<p>Prepared by: ICC The Compliance Center Inc. http://www.thecompliancecenter.com</p>	

DISCLAIMER OF LIABILITY



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