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SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label			
	: 🖊	ALKI-Foam	
Product Code(s)	: A	AKF1 (P/N 475117); AKF5 (P/N	475121); AKF55 (P/N 475124)
Recommended use of the ch	nemic	al and restrictions on use	
	Ū	Refrigeration coil cleaner Jse pattern: Professional Use C Restriction on use: None known	
Chemical family	: N	/lixture.	
Name, address, and telep of the supplier:	hone	e number	Name, address, and telephone number of the manufacturer:
Parker Hannifin Corporat	ion -	Sporlan Division	Refer to supplier
206 Lange Drive Washington,MO, U.S.A. 63090 Supplier's Telephone #		636)-239-1111	
	`	,	in Continental U.S.); Chemtrec 703-527-3887
24 Hr. Emergency Tel #		Outside U.S.).	
SECTION 2. HAZARDS IDENTIFICATION			

Classification of the chemical

Purple liquid. Bland odor.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification Corrosive to metals: Category 1 Eye damage/irritation: Category 1 Skin corrosion/irritation: Category 1 Specific target organ toxicity, single exposure: Category 3

Label elements

Hazard pictogram(s)



Signal Word

DANGER! Hazard statement(s)

> May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation.



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Precautionary statement(s)

Keep only in original container. Wash thoroughly after handling. Do not breathe mists. Use only outdoors or in a well-ventilated area. Wear protective gloves/clothing and eye/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Absorb spillage to prevent material damage.

Store in corrosive resistant container with a resistant inner liner. Store locked up. Store in a well-ventilated place. Keep container tightly closed.

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

Other hazards

Other hazards which do not result in classification:

Ingestion may cause severe irritation to the mouth, throat and stomach. Contact with metals may release small amounts of flammable hydrogen gas. Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	Common name and synonyms	<u>CAS #</u>	Concentration (% by weight)
sodium hydroxide	Caustic soda	1310-73-2	32.30
C8-10 Alkylpolyglycoside	Polyglycidyl Decyl Ether	68515-73-1	2.10
Sodium metasilicate	Sodium Metasilicate Anhydrous	6834-92-0	1.00

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

Ingestion	 Do NOT induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Seek immediate medical attention/advice. Never give anything by mouth if victim is unconscious.
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	 Take off all contaminated clothing immediately. Immediately flush skin with gently flowing, running water for at least 20 minutes. Do not rub area of contact. Seek immediate medical attention/advice. Wash contaminated clothing before reuse.
Eye contact	: Immediately flush eyes with running water for at least 20 minutes. Seek immediate medical attention/advice.



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Most important symptoms and effects, both acute and delayed

: May cause serious eye irritation or damage. Symptoms may include redness, pain, tearing and conjunctivitis. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death. May cause severe irritation to the nose, throat and respiratory tract. Symptoms may include coughing, choking and wheezing. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Indication of any immediate medical attention and special treatment needed

: Immediate medical attention is required. Causes burns. Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

shored in the righting	Gillisones
Extinguishing media Suitable extinguishing media	
:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.
Unsuitable extinguishing med	ia
:	Do not use direct stream of water, which can result in a dust cloud and explosion hazard.
Special hazards arising from the	ne substance or mixture / Conditions of flammability
	Not considered flammable. Burning produces obnoxious and toxic fumes.
Flammability classification (OS	
	Non-flammable.
Hazardous combustion produc	ts
. :	Carbon dioxide and carbon monoxide. Aldehydes Sodium oxides Silicon oxides Hydrogen
Special protective equipment a	ind precautions for firefighters
Protective equipment for fire-	
:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Special fire-fighting procedure	
	Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Dike for water control. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

	:	All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional
		information on acceptable personal protective equipment.
Environmental precautions	:	Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.
		For large spills, dike the area to prevent spreading.
Mathemate and material features	- 4 -	in a section of the s

Methods and material for containment and cleaning up



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: Remove all sources of ignition. Ventilate area of release. Stop spill or leak at source if safely possible. Dike for water control. Recovered solutions can be carefully diluted with water and then neutralized with acids, such as acetic acid (vinegar) or hydrochloric acid. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13).

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): sodium hydroxide (1000 lbs / 454 kg)

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

	:	Use in a well-ventilated area. Wear chemically resistant protective equipment during handling. See Section 8 for additional personal protection advice when handling this product. Do not ingest. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Keep away from bases, metals and other incompatibles. Keep container tightly closed when not in use. Wash thoroughly after handling.
Conditions for safe storage Incompatible materials	:	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. Store in corrosion-resistant containers. Acids; Strong oxidizing agents;Metals (e.g. Aluminum, brass, copper).

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:				
Chemical Name	ACGIH	TLV	<u>OSHA</u>	PEL
	TWA	<u>STEL</u>	PEL	<u>STEL</u>
sodium hydroxide	2 mg/m³ (Ceiling)	N/Av	2 mg/m³	N/Av
C8-10 Alkylpolyglycoside	N/Av	N/Av	N/Av	N/Av
Sodium metasilicate	N/Av	N/Av	N/Av	N/A∨

Exposure controls

Ventilation and engineering measures

Respiratory protection	 Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Confirmation of which type of respirator is most suitable for the intended application should be obtained from respiratory protection suppliers. 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	Wear protective gloves/clothing. Advice should be sought from glove suppliers.
Eye / face protection	: Wear eye/face protection. Chemical splash goggles must be worn when handling this material. A full face shield may also be necessary.
Other protective equipment	Other equipment may be required depending on workplace standards. An eyewash station and safety shower should be made available in the immediate working area.
General hygiene considerati	IS



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: Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove and wash contaminated clothing before re-use. Do not take contaminated clothing home.

SECTION 9. PHYSICAL A	ND CHEMICAL PROPERTIES
Appearance	: Purple liquid.
Odour	: Bland odor.
Odour threshold	: N/Av
рН	: 13.5-14
Melting/Freezing point	: - 5°C (23°F)
Initial boiling point and boili	ng range
	: 100°C (212°F)
Flash point	Not applicable.
Flashpoint (Method)	Not applicable.
Evaporation rate (BuAe = 1)	
	: Not applicable.
Lower flammable limit (% by	
	Not applicable.
Upper flammable limit (% by	
	Not applicable.
Oxidizing properties	: None known.
Explosive properties	: Not explosive
Vapour pressure	: same as water
Vapour density	: >1
Relative density / Specific gr	ravity
	: 1.2
Solubility in water	: Soluble.
Other solubility(ies)	: None known.
	ol/water or Coefficient of water/oil distribution
	: N/Av
Auto-ignition temperature	: N/Ap
Decomposition temperature	•
Viscosity	: <10 cPs
Volatiles (% by weight)	: 80.2%
Volatile organic Compounds	; (VOC's)
-	: 0
Absolute pressure of contain	ner
	: N/Ap
Flame projection length	: N/Ap
Other physical/chemical con	- P
• · · · · · · · · · · · · · · · · · · ·	: None known or reported by the manufacturer.
SECTION 10. STABILITY	
Reactivity	: Not normally reactive. Contact with metals may release small amounts of flammable
	hydrogen gas. Corrosive in contact with metals
Chemical stability	: Stable under the recommended storage and handling conditions prescribed.
Possibility of hazardous read	Hazardous polymerization does not occur. Contact with metals may release small
	Hazardoas polymenzation does not occur. Contact with metals may release small

Hazardous polymerization does not occur. Contact with metals may release small amounts of flammable hydrogen gas.



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Conditions to avoid

: Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials.

Incompatible materials

: See Section 7 (Handling and Storage) for further details.

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation	:	YES
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Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption

: NO

exposure.

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

	:	Inhalation of high concentrations of fumes or mists may cause severe irritation and corrosive damage to the nose, throat and upper respiratory tract. Symptoms may include coughing, choking and wheezing. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.
Sign and symptoms ingestion	n	
	:	May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.
Sign and symptoms skin	:	Causes severe skin burns and eye damage. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring.
Sign and symptoms eyes	:	Causes serious eye damage. Symptoms may include severe pain, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result.
Potential Chronic Health Effe	ecte	
		Chronic skin contact with low concentrations may cause dermatitis.
Mutagenicity	:	Not expected to be mutagenic in humans.
Carcinogenicity	:	No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
Reproductive effects & Terat	og	
		Not expected to cause reproductive effects.
Sensitization to material	÷	Not expected to be a skin or respiratory sensitizer.
Specific target organ effects	÷	Target Organs:: Eyes, skin, respiratory system and digestive system.
	•	
		This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Specific target organ toxicity, single exposure -Category 3 May cause respiratory irritation.
		The substance or mixture is not classified as specific target organ toxicant, repeated



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Medical conditions aggravated by overexposure

- : Pre-existing skin, eye and respiratory disorders.
- Synergistic materials : Not available.
- **Toxicological data** : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

	LC50(4hr)	LD ₅₀		
Chemical name	<u>inh, rat</u>	<u>(Oral, rat)</u>	(Rabbit, dermal)	
sodium hydroxide	N/Av	N/Av	N/Av	
C8-10 Alkylpolyglycoside	N/Av	N/Av	N/Av	
Sodium metasilicate	>2.06mg/L (no deaths)	1152-1349 mg/kg	>5000 mg/kg	

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

: Harmful to aquatic life. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. See data for individual ingredient ecotoxicity data.

Ecotoxicity data:

Ingredients		1	Foxicity to Fish	
	CAS No	LC50 / 96h	NOEC / 21 day	M Factor None. None.
sodium hydroxide	1310-73-2	N/Av	N/Av	None.
C8-10 Alkylpolyglycoside	68515-73-1	100.81mg/L (Zebra fish)	1.8mg/L (Zebra fish)	None.
Sodium metasilicate	6834-92-0	260-310mg/L (Rainbow trout)	N/Av	None.

Ingredients	CAS No	Тох	icity to Daphnia	
		EC50 / 48h	NOEC / 21 day	M Factor
sodium hydroxide	1310-73-2	40 mg/L Water flea	N/Av	None.
C8-10 Alkylpolyglycoside	68515-73-1	20mg/L Water flea	1mg/L Water flea	None.
Sodium metasilicate	6834-92-0	1700mg/L Water flea	N/Av	None.

Ingredients	CAS No	То	xicity to Algae	
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
sodium hydroxide	1310-73-2	N/Av	N/Av	None.
C8-10 Alkylpolyglycoside	68515-73-1	27.22mg/L (Green algae)	10mg/L (Green algae)	None.
Sodium metasilicate	6834-92-0	>345mg/L (Green algae)	160 mg/L (Green algae)	None.



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Persistence and degradability

: Biodegradation is not applicable to inorganic materials.

Bioaccumulation potential : No data is available on the product itself.

N/Ap	N/Ap
1.72	N/Av
N/Ap	N/Ap
-	1.72

Mobility in soil : No data is available on the product itself.

Other Adverse Environmental effects

: No additional information.

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.
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. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	NA1760	Compound, Cleaning Liquid, Corrosive	8	11	Real Provide American Science Provide American
49CFR/DOT Additional information	May be shipped exceeding 30 k	as LIMITED QUANTITY when transported in quantit g gross mass.	ies no larger than 1	Litre, in pac	kages not
TDG	UN1824	Sodium hydroxide solution	8	II	
TDG Additional information	None.	1	1		
ICAO/IATA	UN1824	Sodium hydroxide solution	8	II	Real Property in the second se
ICAO/IATA Additional information	Refer to ICAO/	ATA Packing Instruction	<u> </u>	<u> </u>	V



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Environmental hazards

Special precautions for user : None known or reported by the manufacturer. : See ECOLOGICAL INFORMATION, Section 12. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

		TSCA	CERCLA Reportable	SARA TITLE III: Sec. 302, Extremely	SARA TITLE III: So 372, Specific To	
<u>ingreaients</u>	Quantit		Quantity(RQ) (40 CFR 117.302):	Hazardous Substance, 40 CFR 355:	Toxic Chemical	de minimus Concentration
sodium hydroxide	1310-73-2	Yes	1000 lb/ 454 kg	N/Av	No	No
C8-10 Alkylpolyglycoside	68515-73-1	Yes	N/Ap	N/Av	No	No
Sodium metasilicate	6834-92-0	Yes	N/Ap	N/Av	No	No

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:Acute 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.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

Ingredients	CAS#	California	State "Right to Know" Lists							
ingrouiente		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	PA RI	
sodium hydroxide	1310-73-2	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes	
C8-10 Alkylpolyglycoside	68515-73-1	No	N/Ap	No	No	No	No	No	No	
Sodium metasilicate	6834-92-0	No	N/Ap	No	No	No	No	No	No	

Canadian 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.

International Information:

Components listed below are present on the following International Inventory list:



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Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
sodium hydroxide	1310-73-2	215-185-5	Present	Present	(2)-1972; (1)-410	KE-31487	Present	HSR001547
C8-10 Alkylpolyglycoside	68515-73-1	N/Av	Present	Present	No data available.	No data available.	Present	No data available.
Sodium metasilicate	6834-92-0	229-912-9	Present	Present	(1)-508	KE-12354	Present	HSR003511

SECTION 16. OTHER INFORMATION

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 DOT: Department of Transportation EPA: Environmental Protection Agency HMIS: Hazardous Materials Identification System HSDB: Hazardous Substances Data Bank IARC: International Agency for Research on Cancer Inh: Inhalation IUCLID: International Uniform ChemicaL Information Database MA: Massachusetts
	MN: Minnesota MSHA: Mine Safety and Health Administration
	N/Ap: Not Applicable
	N/Av: Not Available
	NFPA: National Fire Protection Association NIOSH: National Institute of Occupational Safety and Health
	NJ: New Jersey
	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 & Pielogical Exposure Indiana for 2016
	Biological Exposure Indices for 2016 2. International Agency for Research on Cancer Monographs, searched 2016
	3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases,
	2016(Chempendium, HSDB and RTECs).
	 Material Safety Data Sheets from manufacturer. US EPA Title III List of Lists - 2016 version.
	6. California Proposition 65 List - 2016 version.
	7. OECD - The Global Portal to Information on Chemical Substances -
Preparation Date (mm/dd/yyy	eChemPortal,2016.
Other special considerations	: 06/13/2016 for bandling
Other special considerations	
	: Provide adequate information, instruction and training for operators.



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