

#### ACTI-KLEAN

Parker Hannifin Corporation Sporlan Division 206 Lange Drive Washington, MO 63090 U.S.A.

AK1 (P/N 475107); AK5 (P/N 475111); AK55 (P/N 475114) Page 1 of 10

MSDS Revision Date (mm/dd/yyyy): 11/27/2013

# MATERIAL SAFETY DATA SHEET

<b>SECTION 1 - IDENTIFICA</b>	ATION		
Product identifier	: ACTI-KLEAN		
Product Code(s) Product Use Chemical Family Supplier's name and address:	<ul> <li>AK1 (P/N 475107); AK5 (P/N 475111); AK55 (P/N 475114)</li> <li>Refrigeration coil cleaner.</li> <li>Mixture.</li> </ul> Manufacturer's name and address:		
Parker Hannifin Corporat 206 Lange Drive Washington,MO, U.S.A. 63090	ion - Sporlan Division Refer to Supplier		
Information Telephone # 24 Hr. Emergency Tel #	<ul> <li>: (636) 239-1111</li> <li>: Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.).</li> </ul>		
SECTION 2 - HAZARDS I	DENTIFICATION		
Classification	<ul> <li>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);</li> <li>Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material);</li> <li>Class D2B (Materials Causing Other Toxic Effects, Toxic Material);</li> <li>Class D2B (Materials Causing Other Toxic Effects, Toxic Material);</li> <li>Class E (Corrosive Material).</li> </ul>		
	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.



#### ACTI-KLEAN

AK1 (P/N 475107); AK5 (P/N 475111); AK55 (P/N 475114) Page 2 of 10

MSDS Revision Date (mm/dd/yyyy): 11/27/2013

Effects of long-term (chronic) ex	pos	sure
	:	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

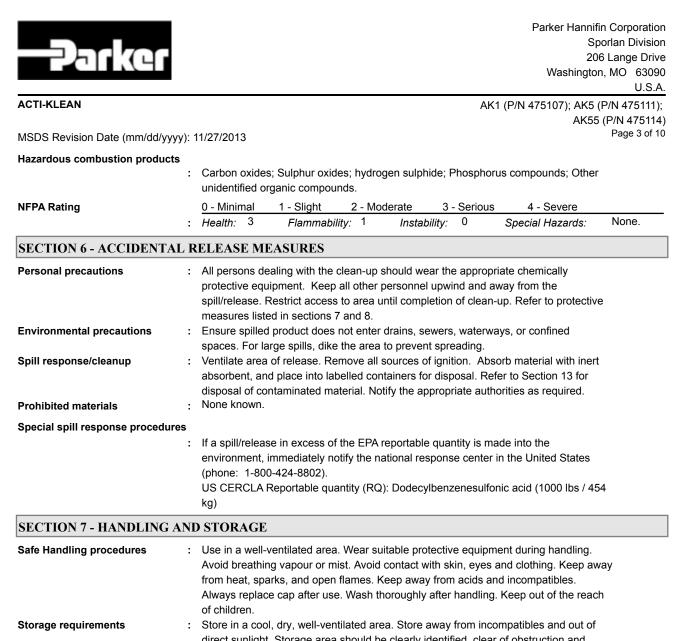
Ingredients	CAS #	Wt.%
2-butoxyethanol	111-76-2	1.00 - 5.00
Dodecylbenzenesulfonic acid	27176-87-0	1.00 - 5.00
Poly(oxy-1,2-ethanediyl), alpha- (dodecylphenyl)-omega-hydroxy-	9014-92-0	1.00 - 5.00
sodium hydroxide	1310-73-2	0.10 - 1.00
Fetrasodium ethylenediamine etraacetate	64-02-8	1.00 - 5.00
Distillates, petroleum, hydrotreated light	64742-47-8	1.00 - 5.00

#### **SECTION 4 - FIRST AID MEASURES**

Inhalation	<ul> <li>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.</li> </ul>
Skin contact	<ul> <li>Remove/Take off immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Seek immediate medical attention/advice.</li> </ul>
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 flamm	ability
	<ul> <li>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.</li> </ul>
Flammability classification (OSH	A 29 CFR 1910.1200)
	: Combustible Liquid Class III B.
Oxidizing properties	: None known.
Explosion data: Sensitivity to me	<ul> <li>chanical impact / static discharge</li> <li>Not expected to be sensitive to mechanical impact or static discharge.</li> </ul>
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.



		direct surlight. 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**

#### **Exposure Limits**

	ACGIH	ACGIH TLV		PEL
Ingredients	<u>TWA</u>	STEL	PEL	<u>STEL</u>
2-butoxyethanol	20 ppm	N/Av	50 ppm (Skin)	N/Av
Dodecylbenzenesulfonic acid	N/Av	N/Av	N/Av	N/Av
Poly(oxy-1,2-ethanediyl), alpha- (dodecylphenyl) -omega-hydroxy-	N/Av	N/Av	N/Av	N/Av
sodium hydroxide	2 mg/m <sup>3</sup> (Ceiling)	N/Av	2 mg/m³	N/Av
Tetrasodium ethylenediamine tetraacetate	N/Av	N/Av	N/Av	N/Av
Distillates, petroleum, hydrotreated light	200 mg/m³	N/Av	N/Av	N/Av



#### ACTI-KLEAN

#### MSDS Revision Date (mm/dd/yyyy): 11/27/2013

Ventilation and engineering mea	asures
	: 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.
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	
	<ul> <li>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.</li> </ul>
<b>SECTION 9 - PHYSICAL A</b>	ND CHEMICAL PROPERTIES

Physical state	: liquid	Appearance	: Green liquid.
Odour	: Bland odour.	Odour threshold	: N/Av
рН	: 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 @ 2	0° C / 68° F)	Solubility in water	: miscible
	: same as water		
Vapour density (Air = 1)	: >1	Evaporation rate (n-Butyl ace	etate = 1)
			: as water (water = 1)
Volatile organic Compounds	. ,	Volatiles (% by weight)	: 90.5%
	: N/Av		
Flash point	: > 100°C (> 212°F)		
Flash point Method	: Seta Flash CC	Auto-ignition temperature	: N/Av
Lower flammable limit (% by	vol.)	Upper flammable limit (% by vol.)	
	: N/Ap		: N/Ap
Flame Projection Length	: N/Ap	Flashback observed	: N/Ap
Viscosity	: > 5 cPs		
Absolute pressure of contain	ner		
	: N/Ap		

# SECTION 10: STABILITY AND REACTIVITIY

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 Incompati	bility
	: See Section 7 (Handling and Storage) for further details.
Hazardous decomposition produc	ts : Peroxides. Refer to Section 5 for additional 'Hazardous combustion products'.



MSDS Revision Date (mm/dd/yyyy): 11/27/2013

ACTI-KLEAN

Parker Hannifin Corporation Sporlan Division 206 Lange Drive Washington, MO 63090 U.S.A.

AK1 (P/N 475107); AK5 (P/N 475111); AK55 (P/N 475114) Page 5 of 10

SECTION 11 - TOXIC	OLOGICAL INFORMATION
Target organs	: Eyes, skin, respiratory system, central nervous system, blood system, liver, brain and kidneys.
Routes of exposure	: Inhalation: YES Skin Absorption: YES Skin & Eyes: YES Ingestion: YES
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)	L	.D50			
Ingredients inh, rat		(Oral, rat)	(Rabbit, dermal			
2-butoxyethanol	450 ppm	530 mg/kg	400 - 500 mg/kg			
Dodecylbenzenesulfonic acid	N/Av	650 mg/kg	N/Av			
Poly(oxy-1,2-ethanediyl), alpha-(dodecylphenyl) -omega-hydroxy-	N/Av	1870 µL/kg	1110 μL/kg			
sodium hydroxide	N/Av	N/Av	N/Av			
Tetrasodium ethylenediamine tetraacetate	N/Av	10 g/kg	N/Av			
Distillates, petroleum, hydrotreated light	N/Av	N/Av	N/Av			
Carcinogenic status	: Contains the following chemica ACGIH: 2-butoxyethanol. No ot IARC, ACGIH, OSHA or NTP.		0 ( ) )			
Reproductive effects	: Not expected to cause reprodu-					
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 real	: Not expected to be a skin or respiratory sensitizer.				
Synergistic materials	: None known or reported by the	None known or reported by the manufacturer.				
Irritancy	: Severely irritating or corrosive.					
other important hazards	: CNS depression may result from	m extreme exposures.				
Conditions aggravated by over	axposure					

: 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.

See the following tables for individual ingredient ecotoxicity data.



#### ACTI-KLEAN

Parker Hannifin Corporation Sporlan Division 206 Lange Drive Washington, MO 63090 U.S.A.

#### MSDS Revision Date (mm/dd/yyyy): 11/27/2013

#### Ecotoxicity data:

			Toxicity to Fish	
<u>Ingredients</u>	CAS No	LC50 / 96h	NOEC / 21 day	M Factor
2-butoxyethanol	111-76-2	1490 mg/L (Bluegill sunfish)	> 100 mg/L (Zebra fish)	None.
Dodecylbenzenesulfonic acid	27176-87-0	3.2 - 5.6 mg/L (Rainbow N/Av trout)		None.
Poly(oxy-1,2-ethanediyl), alpha- (dodecylphenyl) -omega-hydroxy-	9014-92-0	N/Av	N/Av	None.
sodium hydroxide	1310-73-2	125mg/L (Mosquito fish)	N/Av	None.
Tetrasodium ethylenediamine tetraacetate	64-02-8	121 mg/L (Bluegill sunfish)	N/Av	None.
Distillates, petroleum, hydrotreated light	64742-47-8	45 mg/L (Fathead minnow)	N/Av	None.

Ingredients	CAS No	Тох		
		EC50 / 48h	NOEC / 21 day	M Factor
2-butoxyethanol	111-76-2	835 mg/L (Water flea)	100 mg/L (Water flea)	None.
Dodecylbenzenesulfonic acid	27176-87-0	2.5 - 4.5 mg/L (Water flea)	N/Av	None.
Poly(oxy-1,2-ethanediyl), alpha- (dodecylphenyl) -omega-hydroxy-	9014-92-0	N/Av	N/Av	None.
sodium hydroxide	1310-73-2	40mg/L (Water flea)	N/Av	None.
Tetrasodium ethylenediamine tetraacetate	64-02-8	625 mg/L/24hr (Water flea)	N/Av	None.
Distillates, petroleum, hydrotreated light	64742-47-8	N/Av	N/Av	None.

Ingredients	CAS No	Тс	oxicity to Algae	
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
2-butoxyethanol	111-76-2	911 mg/L/72hr (Green algae)	286 mg/L/72hr (Green algae)	None.
Dodecylbenzenesulfonic acid	27176-87-0	65.4 mg/L/72hr (Green algae)	N/Av	None.
Poly(oxy-1,2-ethanediyl), alpha- (dodecylphenyl) -omega-hydroxy-	9014-92-0	N/Av	N/Av	None.
sodium hydroxide	1310-73-2	N/Av	N/Av	None.
Tetrasodium ethylenediamine tetraacetate	64-02-8	N/Av	N/Av	None.
Distillates, petroleum, hydrotreated light	64742-47-8	N/Av	N/Av	None.

: No data is available on the product itself.



#### ACTI-KLEAN

AK1 (P/N 475107); AK5 (P/N 475111); AK55 (P/N 475114) Page 7 of 10

MSDS Revision Date (mm/dd/y	/yyy): 11/27/2013	Page 7 c
Persistence	: No data is available on the product itself. 2-Butoxyethanol is considered to be readily biodegradable (OECD). Dodecylbenzenesulfonic acid is considered to be readily biodegradable. Distillates (petroleum), hydrotreated light is not considered readily biodegradable.	,
Bioaccumulation potential	<ul> <li>No data is available on the product itself. The log Kow value for 2-butoxyethanol is 0.8, and its bioconcentration factor (BCF) is 0.97. Distillates (petroleum), hydrotreate light has a bioconcentration factor (BCF) in fish of 130 - 159 (IUCLID). The log Pow for Tetrasodium ethylenediamine tetraacetate is 5.01.</li> </ul>	d
Other Adverse Environmental	effects	
	: No data is available on the product itself.	

#### **SECTION 13 - DISPOSAL CONSIDERATIONS**

Handling for Disposal		ccording to recommendations in Section 7. Empty containers retain nd/or vapour) and can be dangerous.
Methods of Disposal		rdance with all applicable federal, state, provincial and local ntact your local, state, provincial or federal environmental agency for
RCRA	iteria of a haza esponsibility of sposal methoo	s supplied, becomes a waste in the United States, it may meet the ardous waste as defined under RCRA, Title 40 CFR 261. It is the the waste generator to determine the proper waste identification and d. For disposal of unused or waste material, check with local, state ironmental agencies.

## **SECTION 14: TRANPORT INFORMATION**

Regulatory nformation	UN Number	Shipping Name	Class	Packing Group	Label
TDG	None	Not regulated.	not regulated	none	$\bigotimes$
TDG Additional information	None.	1			1
49CFR/DOT	None	Not regulated.	Not regulated	none	$\bigotimes$
49CFR/DOT Additional information	None.				1
ICAO/IATA	None	Not regulated.	Not regulated	none	$\bigotimes$
ICAO/IATA Additional information	None.	1	I		1

### SECTION 15 - REGULATORY INFORMATION

#### US Federal Information:

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



#### ACTI-KLEAN

AK1 (P/N 475107); AK5 (P/N 475111); AK55 (P/N 475114) Page 8 of 10

MSDS Revision Date (mm/dd/yyyy): 11/27/2013

la sua di sute		TSCA	Departable	SARA TITLE III: Sec. 302, Extremely	SARA TITLE III: Sec. 313, 40 CFR 372. Specific Toxic Chemical		
<u>Ingredients</u>	CAS #	Inventory	Quantity(RQ) (40 CFR 117.302):	Hazardous Substance, 40 CFR 355:	Toxic Chemical	de minimus Concentration	
2-butoxyethanol	111-76-2	Yes	N/Ap	N/Av	No	No	
Dodecylbenzenesulfonic acid	27176-87-0	Yes	1000 lb/ 454 kg	N/Ap	No	No	
Poly(oxy-1,2-ethanediyl), alpha-(dodecylphenyl) -omega-hydroxy-	9014-92-0	Yes	N/Ap	N/Ap	No	N/Ap	
sodium hydroxide	1310-73-2	Yes	1000 lb/ 454 kg	N/Av	No	No	
Tetrasodium ethylenediamine tetraacetate	64-02-8	Yes	N/Ap	N/Ap	No	No	
Distillates, petroleum, hydrotreated light	64742-47-8	Yes	N/Ap	N/Ap	No	No	

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:

The following chemicals are specifically listed by individual States:

Ingredients	CAS #	Califorr	ia Proposition 65		Stat	e "Right t	o Know" L	.ists	
ingredients	CAS#	Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
2-butoxyethanol	111-76-2	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Dodecylbenzenesulfonic acid	27176-87-0	No	N/Ap	Yes	Yes	No	Yes	Yes	No
Poly(oxy-1,2-ethanediyl), alpha-(dodecylphenyl) -omega-hydroxy-	9014-92-0	No	N/Ap	No	No	No	No	No	No
sodium hydroxide	1310-73-2	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Tetrasodium ethylenediamine tetraacetate	64-02-8	No	N/Ap	No	No	No	No	No	No
Distillates, petroleum, hydrotreated light	64742-47-8	No	N/Ap	No	No	No	No	No	No

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).

#### 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.



#### ACTI-KLEAN

Parker Hannifin Corporation Sporlan Division 206 Lange Drive Washington, MO 63090 U.S.A.

AK1 (P/N 475107); AK5 (P/N 475111); AK55 (P/N 475114) Page 9 of 10

MSDS Revision Date (mm/dd/yyyy): 11/27/2013

# 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.

#### International Information:

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

Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
2-butoxyethanol	111-76-2	203-905-0	Present	Present	(7)-97; (2)-407	KE-04134	Present	HSR001154
Dodecylbenzenesulfonic acid	27176-87-0	248-289-4	Present	Present	(3)-1907; (3)-1884	KE-12947	Present	HSR003407
Poly(oxy-1,2-ethanediyl) , alpha-(dodecylphenyl) -omega-hydroxy-	9014-92-0	N/Av	Present	Present	(7)-172	KE-13016	Present	Not listed
sodium hydroxide	1310-73-2	215-185-5	Present	Present	(2)-1972; (1)-410	KE-31487	Present	HSR001547
Tetrasodium ethylenediamine tetraacetate	64-02-8	200-573-9	Present	Present	(2)-1265	KE-13654	Present	HSR003275
Distillates, petroleum, hydrotreated light	64742-47-8	265-149-8	Present	Present	(9)-1700	KE-12550	Present	Not listed

#### **SECTION 16 - OTHER INFORMATION**

HMIS Rating	+ Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe
5	Health: *3 Flammability: 1 Reactivity: 0
Legend	: ACGIH: American Conference of Governmental Industrial Hygienists
	AICS: Australian Inventory of Chemical Substances
	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
	EINECS: European Inventory of Existing Commercial chemical Substances
	ENCS: Existing and New Chemical Substances
	HMIS: Hazardous Materials Identification System
	HSDB: Hazardous Substances Data Bank
	IARC: International Agency for Research on Cancer
	Inh: Inhalation
	IOC: Inventory of Chemicals
	KECI: Korean Existing Chemicals Inventory
	KECL: Korean Existing Chemicals List
	LC: Lethal Concentration
	LD: Lethal Dose
	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
	NTP: National Toxicology Program
	OSHA: Occupational Safety and Health Administration
	PEL: Permissible exposure limit
	PICCS: Philippine Inventory of Chemicals and Chemical Substances
	RCRA: Resource Conservation and Recovery Act
	RTECS: Registry of Toxic Effects of Chemical Substances



#### ACTI-KLEAN

AK1 (P/N 475107); AK5 (P/N 475111); AK55 (P/N 475114) Page 10 of 10

MSDS Revision Date (	(mm/dd/yyyy): 11/27/2013
----------------------	--------------------------

	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 2013.
	<ol><li>International Agency for Research on Cancer Monographs, searched 2013.</li></ol>
	3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2013
	(Chempendium, HSDB and RTECs).
	4. Material Safety Data Sheets from manufacturer.

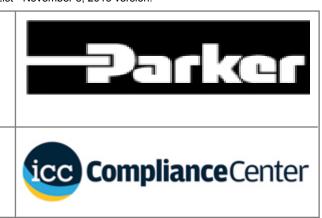
- 5. US EPA Title III List of Lists October 2012 version.
- 6. California Proposition 65 List November 8, 2013 version.

#### 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.

#### Prepared by:

ICC The Compliance Center Inc. http://www.thecompliancecenter.com



#### DISCLAIMER OF LIABILITY

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This Material Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Parker Hannifin Corp.

# Preparation Date (mm/dd/yyyy) : 09/04/2012 MSDS Revision Date (mm/dd/yyyy) : 11/27/2013 Revision No. : 2 Revision Information : (M)SDS sections updated: 3. COMPOSITION/INFORMATION ON INGREDIENTS 12. ECOLOGICAL INFORMATION 15. REGULATORY INFORMATION

END OF DOCUMENT