



ALKI-FOAM

AKF1 (P/N 475117); AKF5 (P/N
475121); AKF55 (P/N 475124)

MSDS Revision Date (mm/dd/yyyy): 11/14/2013

Page 1 of 9

MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product identifier : **ALKI-FOAM**

Product Code(s) : AKF1 (P/N 475117); AKF5 (P/N 475121); AKF55 (P/N 475124)

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 E (Corrosive Material).

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

Emergency Overview : Purple liquid. Bland odour.
DANGER!
Contact with some reactive metals may produce flammable hydrogen gas. May be corrosive to metals. Corrosive material. Causes eye, skin and digestive tract burns. Severe respiratory irritant. Could result in pulmonary edema (fluid accumulation).

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

- Inhalation* : If mists are formed, 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.
- Skin* : Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring.
- Eyes* : Causes severe burns. Contact may lead to permanent injury and blindness.
- Ingestion* : 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.

Effects of long-term (chronic) exposure

- : Chronic skin contact with low concentrations may cause dermatitis.
- Carcinogenic status** : See TOXICOLOGICAL INFORMATION, Section 11.
- Additional health hazards** : See TOXICOLOGICAL INFORMATION, Section 11.
- Potential environmental effects** : See ECOLOGICAL INFORMATION, Section 12.



ALKI-FOAM

AKF1 (P/N 475117); AKF5 (P/N 475121); AKF55 (P/N 475124)
 Page 2 of 9

MSDS Revision Date (mm/dd/yyyy): 11/14/2013

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Ingredients</u> | <u>CAS #</u> | <u>Wt.%</u> |
|--------------------------------|--------------|---------------|
| sodium hydroxide | 1310-73-2 | 15.00 - 40.00 |
| Polyglycidyl Decyl Ether | 68515-73-1 | 1.00 - 5.00 |
| Sodium Gluconate | 527-07-1 | 0.50 - 1.50 |
| Sodium metasilicate, anhydrous | 6834-92-0 | 0.50 - 1.50 |

SECTION 4 - FIRST AID MEASURES

- Inhalation** : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. Keep warm and in a quiet place. If breathing is difficult, give oxygen by qualified medical personnel only. Seek immediate medical attention/advice.
- Skin contact** : Immediately remove contaminated clothing and shoes. Flush affected skin with gently flowing lukewarm water for at least 20 minutes. Seek immediate medical attention/advice. Wash contaminated clothing before re-use. Leather and shoes that have been contaminated with the solution may need to be destroyed.
- Eye contact** : Immediately flush eyes with running water for at least 20 minutes. Protect unharmed eye. Seek immediate medical attention/advice.
- Ingestion** : Do NOT induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice.
- Notes For Physician** : Immediate medical attention is required. Corrosive. Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

- Fire hazards/conditions of flammability** : Not flammable under normal conditions of handling. Closed containers are contained under pressure and may explode if exposed to excess heat for a prolonged period of time. Contact with metals may release small amounts of flammable hydrogen gas.
- Flammability classification (OSHA 29 CFR 1910.1200)** : Non-flammable.
- 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. Some chemical extinguishing agents may react with this material.
- 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. 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. Avoid spreading burning liquid with water spray used for cooling purposes.
- Hazardous combustion products** : Carbon oxides; Hydrogen; Sodium oxides.
- NFPA Rating** : 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe
 : *Health:* 3 *Flammability:* 0 *Instability:* 1 *Special Hazards:* None.



ALKI-FOAM

AKF1 (P/N 475117); AKF5 (P/N 475121); AKF55 (P/N 475124)

MSDS Revision Date (mm/dd/yyyy): 11/14/2013

Page 3 of 9

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Restrict access to area until completion of clean-up. Keep all other personnel upwind and away from the spill/release. Individuals involved in the cleanup must wear appropriate personal protective equipment. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.
- Spill response/cleanup** : Ventilate area of release. Stop the spill at source if it is safe to do so. 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). Recovered solutions can be carefully diluted with water and then neutralized with acids, such as acetic acid (vinegar) or hydrochloric acid. Flush any residue in the spill area with water. Do not flush into surface water or sanitary sewer system. Notify the appropriate authorities as required.
- Prohibited materials** : None known or reported by the manufacturer.
- 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

- Safe Handling procedures** : Wear chemically resistant protective equipment during handling. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid contact with eyes, skin and clothing. Keep away from extreme heat and flame. Keep away from acids and other 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. No smoking in the area. Inspect periodically for damage or leaks. Store in corrosion-resistant containers. Avoid contact with aluminum.
- Incompatible materials** : Acids; Metals (e.g. tin, aluminum, zinc and alloys containing these metals).
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

| <u>Exposure Limits</u> | | | | |
|--------------------------------|-------------------------------|-------------|---------------------|-------------|
| <u>Ingredients</u> | <u>ACGIH TLV</u> | | <u>OSHA PEL</u> | |
| | <u>TWA</u> | <u>STEL</u> | <u>PEL</u> | <u>STEL</u> |
| sodium hydroxide | 2 mg/m ³ (Ceiling) | N/Av | 2 mg/m ³ | N/Av |
| Polyglycidyl Decyl Ether | N/Av | N/Av | N/Av | N/Av |
| Sodium Gluconate | N/Av | N/Av | N/Av | N/Av |
| Sodium metasilicate, anhydrous | 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.



ALKI-FOAM

AKF1 (P/N 475117); AKF5 (P/N 475121); AKF55 (P/N 475124)

MSDS Revision Date (mm/dd/yyyy): 11/14/2013

Page 4 of 9

- Respiratory protection** : In case of insufficient ventilation wear suitable respiratory equipment. Use NIOSH/MSHA approved full-face respirator with an organic vapour cartridge if the recommended exposure limit is exceeded. 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. Advice should be sought from respiratory protection specialists.
- Skin protection** : Wear impervious gloves, such as butyl rubber. Advice should be sought from glove suppliers.
- Eye / face protection** : Chemical splash goggles must be worn when handling this material. Do not wear contact lenses. A full face shield may also be necessary.
- Other protective equipment** : An eyewash station and safety shower should be made available in the immediate working area. Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact.
- General hygiene considerations** : Do not breathe vapours or spray mist. 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 soiled clothing and wash it thoroughly before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|-----------------|---|------------------|
| Physical state | : Liquid. | Appearance | : Purple liquid. |
| Odour | : Bland odour. | Odour threshold | : N/Av |
| pH | : 13.5 - 14 | | |
| Boiling point | : 100°C (212°F) | Specific gravity | : 1.2 |
| Melting/Freezing point | : N/Av | 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) | : < 1 |
| Volatile organic Compounds (VOC's) | : N/Av | Volatiles (% by weight) | : 80.2% |
| Flash point | : None. | | |
| Flash point Method | : N/Av | Auto-ignition temperature | : N/Av |
| Lower flammable limit (% by vol.) | : N/Av | Upper flammable limit (% by vol.) | : N/Av |
| Flame Projection Length | : N/Av | Flashback observed | : N/Av |
| Viscosity | : < 10 cPs | | |
| Absolute pressure of container | : N/Av | | |

SECTION 10: STABILITY AND REACTIVITY

- Stability and reactivity** : Stable at ambient temperatures and pressures. Closed containers may build up pressure when exposed to heat and flame. Contact with metals may release small amounts of flammable hydrogen gas. May be corrosive to Aluminum.
- Hazardous polymerization** : Hazardous polymerization does not occur.
- Conditions to avoid** : Keep out of direct sunlight. Avoid contact with incompatible materials. Do not use in areas without adequate ventilation.
- Materials To Avoid And Incompatibility** : 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



ALKI-FOAM

AKF1 (P/N 475117); AKF5 (P/N 475121); AKF55 (P/N 475124)
 Page 5 of 9

MSDS Revision Date (mm/dd/yyyy): 11/14/2013

- Target organs** : Eyes, skin, respiratory system and digestive system.
- Routes of exposure** : *Inhalation*: YES *Skin Absorption*: NO *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.

| <u>Ingredients</u> | LC₅₀(4hr) | | LD₅₀ | |
|--------------------------------|-----------------------------|--|------------------------|-------------------------|
| | <u>inh, rat</u> | | <u>(Oral, rat)</u> | <u>(Rabbit, dermal)</u> |
| sodium hydroxide | N/Av | | N/Av | N/Av |
| Polyglycidyl Decyl Ether | N/Av | | N/Av | N/Av |
| Sodium Gluconate | N/Av | | N/Av | N/Av |
| Sodium metasilicate, anhydrous | N/Av | | 600 mg/kg | >4640 mg/kg |

- Carcinogenic status** : No components are listed as carcinogens by ACGIH, IARC, 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** : Not available.
- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : N/Av
- Irritancy** : Corrosive
- other important hazards** : None known or reported by the manufacturer.
- Conditions aggravated by overexposure** : Pre-existing skin, eye and respiratory disorders.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity : See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

| <u>Ingredients</u> | CAS No | Toxicity to Fish | | |
|--------------------------------|---------------|--------------------------------|----------------------|-----------------|
| | | LC50 / 96h | NOEC / 21 day | M Factor |
| sodium hydroxide | 1310-73-2 | 125 mg/L (Mosquito fish) | N/Av | None. |
| Polyglycidyl Decyl Ether | 68515-73-1 | 2.95 mg/L (Zebra fish) | N/Av | None. |
| Sodium Gluconate | 527-07-1 | > 100 mg/L (Japanese ricefish) | N/Av | None. |
| Sodium metasilicate, anhydrous | 6834-92-0 | 210 mg/L (Zebra fish) | N/Av | None. |

| <u>Ingredients</u> | CAS No | Toxicity to Daphnia | | |
|--------------------------------|---------------|----------------------------|-------------------------|-----------------|
| | | EC50 / 48h | NOEC / 21 day | M Factor |
| sodium hydroxide | 1310-73-2 | 40 mg/L (Water flea) | N/Av | None. |
| Polyglycidyl Decyl Ether | 68515-73-1 | 7 - 14 mg/L (Water flea) | 1 - 4 mg/L (Water flea) | None. |
| Sodium Gluconate | 527-07-1 | N/Av | N/Av | None. |
| Sodium metasilicate, anhydrous | 6834-92-0 | N/Av | N/Av | None. |



ALKI-FOAM

AKF1 (P/N 475117); AKF5 (P/N 475121); AKF55 (P/N 475124)
 Page 6 of 9

MSDS Revision Date (mm/dd/yyyy): 11/14/2013

| Ingredients | CAS No | Toxicity to Algae | | |
|--------------------------------|------------|-------------------------------------|-------------------|----------|
| | | EC50 / 96h or 72h | NOEC / 96h or 72h | M Factor |
| sodium hydroxide | 1310-73-2 | N/Av | N/Av | None. |
| Polyglycidyl Decyl Ether | 68515-73-1 | 5 - 12.5 mg/L/72hr (Green algae) | N/Av | None. |
| Sodium Gluconate | 527-07-1 | > 1000 mg/L/72hr (Green algae) | N/Av | None. |
| Sodium metasilicate, anhydrous | 6834-92-0 | N/Av | N/Av | None. |

- 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** : Improper disposal can cause damage to the environment. 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: TRANSPORT INFORMATION

| Regulatory Information | UN Number | Shipping Name | Class | Packing Group | Label |
|---|---|---|-------|---------------|-------|
| TDG | UN1760 | CORROSIVE LIQUID, N.O.S. (sodium hydroxide) | 8 | II | |
| TDG Additional information | May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Under the TDGR, refer to Section 1.17 for additional exemption information, if shipping under this exemption. | | | | |
| 49CFR/DOT | NA1760 | Compound, Cleaning Liquid (sodium hydroxide) | 8 | II | |
| 49CFR/DOT Additional information | May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Refer to 49 CFR Section 173.154. | | | | |
| ICAO/IATA | UN1760 | Corrosive liquid, n.o.s. (sodium hydroxide) | 8 | II | |
| ICAO/IATA Additional information | Refer to the appropriate Packing Instruction, prior to shipping this material. Review all State and Operator Variations, prior to shipping this material. | | | | |
| IMDG | UN1760 | CORROSIVE LIQUID, N.O.S. (sodium hydroxide) | 8 | II | |



ALKI-FOAM

AKF1 (P/N 475117); AKF5 (P/N 475121); AKF55 (P/N 475124)
 Page 7 of 9

MSDS Revision Date (mm/dd/yyyy): 11/14/2013

| | |
|------------------------------------|--|
| IMDG Additional information | May be shipped as Limited Quantity when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. May be shipped as a Limited Quantity according to the IMDG Code Chapter 3.4. |
|------------------------------------|--|

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

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

| <u>Ingredients</u> | CAS # | TSCA Inventory | CERCLA Reportable Quantity(RQ) (40 CFR 117.302): | SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355: | SARA TITLE III: Sec. 313, 40 CFR 372. Specific Toxic Chemical | |
|--------------------------------|------------|----------------|--|--|---|--------------------------|
| | | | | | Toxic Chemical | de minimus Concentration |
| sodium hydroxide | 1310-73-2 | Yes | 1000 lb/ 454 kg | N/Av | No | No |
| Polyglycidyl Decyl Ether | 68515-73-1 | Yes | N/Ap | N/Ap | No | No |
| Sodium Gluconate | 527-07-1 | Yes | N/Ap | N/Ap | No | No |
| Sodium metasilicate, anhydrous | 6834-92-0 | Yes | N/Ap | N/Ap | No | No |

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

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

| <u>Ingredients</u> | CAS # | California Proposition 65 | | State "Right to Know" Lists | | | | | |
|--------------------------------|------------|---------------------------|------------------|-----------------------------|-----|-----|-----|-----|-----|
| | | Listed | Type of Toxicity | CA | MA | MN | NJ | PA | RI |
| sodium hydroxide | 1310-73-2 | No | N/Ap | Yes | Yes | Yes | Yes | Yes | Yes |
| Polyglycidyl Decyl Ether | 68515-73-1 | No | N/Ap | No | No | No | No | No | No |
| Sodium Gluconate | 527-07-1 | No | N/Ap | No | No | No | No | No | No |
| Sodium metasilicate, anhydrous | 6834-92-0 | No | N/Ap | No | No | No | No | No | No |

Canadian Information:

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

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

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

International Information:

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



ALKI-FOAM

AKF1 (P/N 475117); AKF5 (P/N 475121); AKF55 (P/N 475124)

MSDS Revision Date (mm/dd/yyyy): 11/14/2013

Page 8 of 9

| <u>Ingredients</u> | <u>CAS #</u> | <u>European EINECS</u> | <u>Australia AICS</u> | <u>Philippines PICCS</u> | <u>Japan ENCS</u> | <u>Korea KECI/KECL</u> | <u>China IECSC</u> | <u>NewZealand IOC</u> |
|--------------------------------|--------------|------------------------|-----------------------|--------------------------|-------------------|------------------------|--------------------|-----------------------|
| sodium hydroxide | 1310-73-2 | 215-185-5 | Present | Present | (2)-1972; (1)-410 | KE-31487 | Present | HSR001547 |
| Polyglycidyl Decyl Ether | 68515-73-1 | N/Av | Present | Present | (5)-287 | KE-10718 | Present | Not listed |
| Sodium Gluconate | 527-07-1 | 208-407-7 | Present | Present | (2)-1410 | KE-17676 | Present | Present |
| Sodium metasilicate, anhydrous | 6834-92-0 | 229-912-9 | Present | Present | (1)-508 | KE-12354 | Present | HSR003511 |

SECTION 16 - OTHER INFORMATION

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

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
- 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/Av: Not Applicable
- N/Av: Not Available
- NFPA: National Fire Protection Association
- NIOSH: National Institute of Occupational Safety and Health
- NOEC: No observable effect concentration
- 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
- 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





ALKI-FOAM

AKF1 (P/N 475117); AKF5 (P/N 475121); AKF55 (P/N 475124)
 Page 9 of 9

MSDS Revision Date (mm/dd/yyyy): 11/14/2013

- References**
- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2013.
 - 2. International Agency for Research on Cancer Monographs, searched 2013.
 - 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 - September 27, 2013 version.

| | |
|--|--|
| <p><u>Prepared for:</u> 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 Corp. - Sporlan Division.</p> |  |
| <p><u>Prepared by:</u> ICC The Compliance Center Inc. http://www.thecompliancecenter.com</p> |  |

DISCLAIMER OF LIABILITY

This Material Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by / obtained from Parker Hannifin Corp and CCOHS' Web Information Service. The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Parker Hannifin Corp expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process.

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)** : 09/06/2012
- MSDS Revision Date (mm/dd/yyyy)** : 11/14/2013
- Revision No.** : 2
- Revision Information** : (M)SDS sections updated:
 3. COMPOSITION/INFORMATION ON INGREDIENTS
 12. ECOLOGICAL INFORMATION
 15. REGULATORY INFORMATION

END OF DOCUMENT