

Alki-Foam

SDS Revision Date (mm/dd/yyyy): 04/15/2015

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SAFETY DATA SHEET

SECTION 1. IDENTIFICATION Product identifier used on the label · Alki-Foam : AKF1 (P/N 475117); AKF5 (P/N 475121); AKF55 (P/N 475124) Product Code(s) Recommended use of the chemical and restrictions on use : Professional Use Only: Refrigeration coil cleaner **Chemical family** : Mixture. Name, address, and telephone number Name, address, and telephone number of of the supplier: the manufacturer: Parker Hannifin Corporation - Sporlan Division Refer to supplier 206 Lange Drive Washington, MO, U.S.A. 63090 Supplier's 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 of the chemical

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) (Hazcom 2012). OSHA 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

The following label information is applicable only to the United States according to OSHA Regulations (29 CFR 1910.1200) (Hazcom 2012):

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.



The following label information is applicable only to Canada according to the Canadian Controlled Products Regulations (CPR/WHMIS):

DANGER!

May be corrosive to metals. Contact with metals may release small amounts of flammable hydrogen gas. Corrosive material. May cause severe burns to all routes of exposure. May cause severe irritation to the nose, throat and respiratory tract.

Use in a well-ventilated area. Wear protective gloves/clothing and eye/face protection. Do not ingest. Do not breathe vapours or spray mist. Keep away from bases, metals and other incompatibles. Keep containers tightly closed when not in use. Wash thoroughly after handling.

If inhaled: Remove person to fresh air and keep comfortable for breathing. If breathing stopped, apply artificial respiration. If breathing is difficult, administer oxygen. If swallowed: Rinse mouth. Do NOT induce vomiting. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTRE or doctor/physician.



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. May cause respiratory tract irritation.



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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS # | Concentration |
|--------------------------|------------|---------------|
| sodium hydroxide | 1310-73-2 | 30.0 - 40.0 |
| C8-10 Alkylpolyglycoside | 68515-73-1 | 1.0 - 3.0 |
| Sodium metasilicate | 6834-92-0 | 0.5 - 1.0 |

SECTION 4. FIRST-AID MEASURES

| Description of first aid meas | ures |
|--|--|
| 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. |
| Most important symptoms a | nd 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 |
| Indication of any immediate | immedical attention and special treatment needed Immediate medical attention is required. Causes burns. Treat symptomatically. |
| Indication of any immediate SECTION 5. FIRE-FIGHT | Immediate medical attention is required. Causes burns. Treat symptomatically. |
| SECTION 5. FIRE-FIGHT Extinguishing media | : Immediate medical attention is required. Causes burns. Treat symptomatically. ING MEASURES |
| SECTION 5. FIRE-FIGHT | : Immediate medical attention is required. Causes burns. Treat symptomatically. ING MEASURES dia : 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 |
| SECTION 5. FIRE-FIGHT Extinguishing media Suitable extinguishing me | : Immediate medical attention is required. Causes burns. Treat symptomatically. ING MEASURES dia : 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. |
| SECTION 5. FIRE-FIGHT Extinguishing media | : Immediate medical attention is required. Causes burns. Treat symptomatically. ING MEASURES dia : 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. |
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| SECTION 5. FIRE-FIGHT Extinguishing media Suitable extinguishing me Unsuitable extinguishing a Special hazards arising from | Immediate medical attention is required. Causes burns. Treat symptomatically. ING MEASURES 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. India Do not use direct stream of water, which can result in a dust cloud and explosion hazard. Inte substance or mixture / Conditions of flammability Not considered flammable. Burning produces obnoxious and toxic fumes. OSHA 29 CFR 1910.106) |
| SECTION 5. FIRE-FIGHT Extinguishing media Suitable extinguishing me Unsuitable extinguishing for Special hazards arising from Flammability classification (| Immediate medical attention is required. Causes burns. Treat symptomatically. ING MEASURES 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. In the substance or mixture / Conditions of flammability Not considered flammable. Burning produces obnoxious and toxic fumes. OSHA 29 CFR 1910.106) Non-flammable. |
| SECTION 5. FIRE-FIGHT Extinguishing media Suitable extinguishing me Unsuitable extinguishing for Special hazards arising from Flammability classification (| Immediate medical attention is required. Causes burns. Treat symptomatically. ING MEASURES 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. media Do not use direct stream of water, which can result in a dust cloud and explosion hazard. the substance or mixture / Conditions of flammability Not considered flammable. Burning produces obnoxious and toxic fumes. OSHA 29 CFR 1910.106) Non-flammable. o Mechanical Impact / Static Discharge: |
| SECTION 5. FIRE-FIGHT Extinguishing media Suitable extinguishing me Unsuitable extinguishing me Special hazards arising from Flammability classification (Explosion Data: Sensitivity t | Immediate medical attention is required. Causes burns. Treat symptomatically. ING MEASURES Idia 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. Indexide media Do not use direct stream of water, which can result in a dust cloud and explosion hazard. Inte substance or mixture / Conditions of flammability Not considered flammable. Burning produces obnoxious and toxic fumes. OSHA 29 CFR 1910.106) Non-flammable. Mechanical Impact / Static Discharge: Not expected to be sensitive to mechanical impact or static discharge. |
| SECTION 5. FIRE-FIGHT Extinguishing media Suitable extinguishing me Unsuitable extinguishing for Special hazards arising from Flammability classification (| Immediate medical attention is required. Causes burns. Treat symptomatically. ING MEASURES Idia 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. Indexide media Do not use direct stream of water, which can result in a dust cloud and explosion hazard. Inte substance or mixture / Conditions of flammability Not considered flammable. Burning produces obnoxious and toxic fumes. OSHA 29 CFR 1910.106) Non-flammable. Mechanical Impact / Static Discharge: Not expected to be sensitive to mechanical impact or static discharge. |



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Protective equipment for fire-fighters

| SECTION 6. ACCIDENTAL RELI | EASE MEASURES |
|----------------------------------|---|
| : | 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. |
| Special fire-fighting procedures | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. |

Personal precautions, protective equipment and emergency procedures

| Environmental precautions | 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. Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading. |
|-----------------------------------|--|
| Methods and material for containr | nent and cleaning up |
| | : 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 | 6 |
| | 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 | STOPACE |

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

| | 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 |
|-----------------------------|---|
| Conditions for safe storage | thoroughly after handling. 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. |
| Incompatible materials | : Acids; Strong oxidizing agents;Metals (e.g. Aluminum, brass, copper). |

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION



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| Exposure Limits: | | | | | |
|--------------------------|-------------------|-------------|---------|-------------|--|
| Chemical Name | ACGIH T | ACGIH TLV | | OSHA 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/Av | |

Exposure controls

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. 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 chemically protective gloves (impervious), boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear impervious gloves, such as butyl rubber. Unsuitable material: polyvinyl alcohol. Advice should be sought from glove suppliers. | |
| 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 considerations | | |
| | Avoid breathing vapour or 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 and wash contaminated clothing before re-use. Do not take contaminated clothing home. | |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| Appearance | : | Violet liquid |
|--------------------------------------|------|-----------------|
| Odour | : | Mild odor. |
| Odour threshold | : | N/Av |
| рН | : | 13.5-14 |
| Melting/Freezing point | : | - 5°C (23°F) |
| Initial boiling point and boiling ra | ange | e |
| | : | 100°C (212°F) |
| Flash point | : | Not applicable. |
| Flashpoint (Method) | : | Not applicable. |
| Evaporation rate (BuAe = 1) | : | Negligible |
| Flammability (solid, gas) | : | Not applicable. |
| Lower flammable limit (% by vol. | .) | |
| | : | Not applicable. |
| Upper flammable limit (% by vol. |) | |
| | : | Not applicable. |
| Oxidizing properties | : | None known. |
| Explosive properties | : | Not explosive |
| Vapour pressure | : | same as water |
| | | |



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| Vapour density | : | >1 |
|----------------------------------|-------|---|
| Relative density / Specific grav | ity | |
| | : | 1.2 |
| Solubility in water | : | Soluble. |
| Other solubility(ies) | : | None known. |
| Partition coefficient: n-octanol | wate | r or Coefficient of water/oil distribution |
| | : | N/Av |
| Auto-ignition temperature | : | N/Ap |
| Decomposition temperature | : | Not available. |
| Viscosity | : | <10 cPs |
| Volatiles (% by weight) | : | 80.2% |
| Volatile organic Compounds (V | /OC's |) |
| | : | Not available. |
| Absolute pressure of container | r | |
| | : | N/Ap |
| Flame projection length | : | N/Ap |
| Other physical/chemical comm | ents | |
| | : | None. |
| SECTION 10. STABILITY A | ND R | EACTIVITY |
| Reactivity | : | Not normally reactive. Contact with metals may release small amounts of flammable hydrogen gas. Corrosive in contact with metals |
| Chomical stability | : | Stable under the recommended storage and handling conditions prescribed |

| | nydrogen gas. Corrosive in contact with metals |
|-------------------------------|--|
| Chemical stability | : Stable under the recommended storage and handling conditions prescribed. |
| Possibility of hazardous reac | tions |
| | Hazardous polymerization does not occur. Contact with metals may release small amounts of flammable hydrogen gas. |
| Conditions to avoid | Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials. |
| Incompatible materials | : Acids; Strong oxidizing agents; Metals (e.g. Aluminum, brass, copper). |
| Hazardous decomposition pro | oducts |
| | : 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 |
|----------------------------------|----|-----|
| Routes of entry skin & eye | : | YES |
| Routes of entry Ingestion | : | YES |
| Routes of exposure skin absorpti | on | |
| | : | NO |

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.



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| Sign and symptoms 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. | | |
| Sign and symptoms skin | This material is classified as hazardous under OSHA regulations (29CFR 1910.1200 (Hazcom 2012). Classification: Skin corrosion/irritation: Category 1 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 | This material is classified as hazardous under OSHA regulations (29CFR 1910.1200 (Hazcom 2012). Classification: Eye damage/irritation: Category 1 Causes serious eye damage. |)) | |
| Potential Chronic Health Effects | | | |
| | 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 & Teratog | ity | | |
| | Not expected to cause reproductive effects. | | |
| Senitization 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 OSHA regulations (29CFR 1910.120 (Hazcom 2012). Classification: | 0) | |
| | 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 exposure. | d | |
| Irritancy | Corrosive. | | |
| Medical conditions aggravated | verexposure | | |
| | 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) LD50 | | |

| | LC₅₀(4hr) | LD₅ | 0 |
|--------------------------|-----------------------|--------------------|------------------|
| Chemical name | inh, rat | <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

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



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Ecotoxicity data:

| In availante | | Toxicity to Fish | | | | |
|--------------------------|------------|--------------------------------|----------------------|----------|--|--|
| <u>Ingredients</u> | CAS No | LC50 / 96h | NOEC / 21 day | M Factor | | |
| 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 | Το | xicity 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 | Т | oxicity 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. |

Persistence and degradability

: Biodegradation is not applicable to inorganic materials.

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

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. |



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| Information | UN Number | UN proper shipping name | Transport hazard class(es) | Packing Group | Label |
|--|------------------|--|----------------------------------|------------------|-------|
| 49CFR/DOT | UN1824 | Sodium hydroxide solution | 8 | II | |
| 49CFR/DOT Additional information | None. | | | | |
| TDG | UN1824 | Sodium hydroxide solution | 8 | II | |
| TDG Additional information | None. | 1 | - | | ļ |
| ICAO/IATA | UN1824 | Sodium hydroxide solution | 8 | II | |
| ICAO/IATA Additional information | Refer to ICAO/IA | TA Packing Instruction | | | |
| Special precaut Environmental I | | None known. See ECOLOGICAL INFORMATION. Section 12 | | | |

: 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: Se 372, Specific To | |
|--------------------------|------------|-----------|-----------------------------------|---|--|-----------------------------|
| Ingredients CA | | Inventory | 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 | N/Ap |
| C8-10 Alkylpolyglycoside | 68515-73-1 | Yes | N/Ap | N/Av | No | NS |
| Sodium metasilicate | 6834-92-0 | Yes | N/Ap | N/Av | No | N/Ap |

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:



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| Ingredients | CAS # | Californi | | State | e "Right to | o Know" L | ists | | |
|--------------------------|------------|-----------|------------------|-------|-------------|-----------|------|-----|-----|
| <u>ingrouonto</u> | 0.00 # | Listed | Type of Toxicity | CA | MA | MN | NJ | 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.

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 |
|--------------------------|------------|--------------------|-------------------|----------------------|-------------------|--------------------|----------------|-------------------|
| 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 | | | Present | |
| Sodium metasilicate | 6834-92-0 | 229-912-9 | Present | Present | (1)-508 | KE-12354 | Present | HSR003511 |

SECTION 16. OTHER INFORMATION



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| 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 : | |
| | (Chempendium, RTECs, HSDB, INCHEM). |
| | European Chemicals Agency, Classification Legislation, 2015 |
| | Material Safety Data Sheet from manufacturer OECD- The Global Portal to Information on Chemical Substances - eChemPortal, |
| | 2015 |
| Preparation Date (mm/dd/yyyy) | |
| • | 09/06/2012 |
| Reviewed Date SDS (dd/mm/yyyy) | |
| | |
| : Devision No | 15/04/2015 |
| Revision No. : | 2 All (format above) |
| | All (format change) |
| Other special considerations for ha | |
| : | Provide adequate information, instruction and training for operators. |
| HMIS Rating : | *- Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe |
| | Health: 3 Flammability: 0 Reactivity: 0 |
| NFPA Rating | 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe |
| : | Health: 3 Flammability: 0 Instability: 0 Special Hazards: None. |
| | |

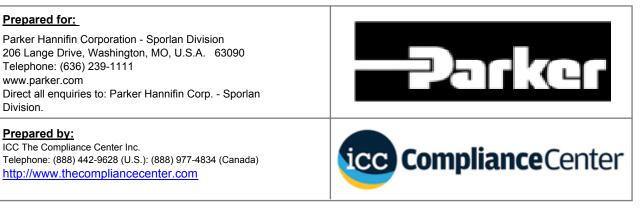


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