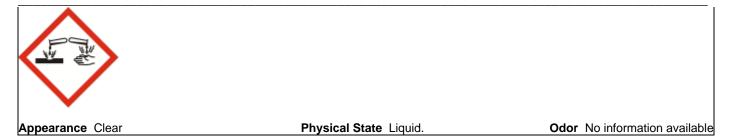
SAFETY DATA SHEET

| Issuing Date 18-Apr-2013 | Revision Date 18-Apr-2013 | Revision Number 0 |
|---|--|---|
| 1. IDENTIFICATION OF T | HE SUBSTANCE/PREPARATION AND TH | IE COMPANY/UNDERTAKING |
| GHS product identifier | | |
| Product Name | ARREX-100 | |
| Other means of identification | | |
| Product Code(s) | ARREX | |
| UN-Number | UN1760 | |
| Synonyms | ARREX | |
| Recommended use of the chemica | al and restrictions on use | |
| Recommended Use | Institutional dish machine detergent | |
| Uses advised against | No information available | |
| Supplier's details Supplier Address Envirochem, Inc 425 Whitehead Ave South River, NJ 08882 TEL: 732-238-6700 | | |
| Emergency telephone number | | |
| Emergency Telephone Number | CHEM-TEL, INC. 24 Hour Emergency Contact 1-800-255-3924 | |
| | 2. HAZARDS IDENTIFICATION | |
| Classification This chemical is considered haza | rdous according to the OSHA Hazard Communicatio | n Standard 2012 (29 CFR 1910.1200) |
| Skin Corrosion/Irritation Serious Eye Damage/Eye Irritation | | Category 1 Subcategory 1B Category 1 |

GHS Label elements, including precautionary statements

Emergency Overview

| Signal Word Hazard Statements | Danger |
|--|--------------|
| Causes severe skin burns and | d eye damage |



Precautionary Statements

Prevention

- Do not breathe dust/fume/gas/mist/vapors/spray
- · Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection

General Advice

• Immediately call a POISON CENTER or doctor/physician

Eyes

• 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.

Skin

• IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

· Wash contaminated clothing before reuse

Inhalation

• IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Ingestion

• IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Storage

Store locked up

Disposal

• Dispose of contents/container to an approved waste disposal plant

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms

ARREX

| Chemical Name | CAS-No | Weight % | Trade secret |
|--|------------|----------|--------------|
| Alkyl Dimethyl Ethylbenzyl Ammonium Chloride | 85409-23-0 | 3 -7 | * |
| Alkyl Dimethyl Benzyl Ammonium Chloride | 68391-01-5 | 3 -7 | * |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of necessary first-aid measures

| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. |
|--------------|---|
| Skin Contact | Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. Immediate medical attention is required. |
| Inhalation | Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician. |
| Ingestion | Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediate medical attention is required. |

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media None

Specific Hazards Arising from the Chemical

No information available

| Explosion Data | | |
|----------------------------------|--|--|
| Sensitivity to Mechanical Impact | | |
| Sensitivity to Static Discharge | | |

None. None

INOI

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| Personal Precautions | Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Stop leak if you can do it without risk. If spilled, take caution, as material can cause surfaces to become very slippery. | |
|---|--|--|
| Environmental Precautions | | |
| Environmental Precautions | Dispose of contents/container to an approved waste disposal plant. | |
| Methods and materials for containment and cleaning up | | |
| Mathada (an Oantainman) | Oten herb if you and do it with each side | |
| Methods for Containment | Stop leak if you can do it without risk | |
| Methods for Cleaning Up | Large spillage: Contain spilled material if possible. Wash away small spills with plenty of water. | |

7. HANDLING AND STORAGE

Precautions for safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing Handling vapors or mists. Use only in area provided with appropriate exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Do not take internally. Wash thoroughly after handling. Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room Storage temperature. Keep from freezing. Keep container closed when not in use. **Incompatible Products** Strong oxidizing agents. 8. EXPOSURE CONTROLS / PERSONAL PROTECTION **Control parameters** This product does not contain any hazardous materials with occupational exposure limits **Exposure Guidelines** established by the region specific regulatory bodies. Appropriate engineering controls **Engineering Measures** Showers Eyewash stations Ventilation systems Individual protection measures, such as personal protective equipment **Eye/Face Protection** Tightly fitting safety goggles. **Skin and Body Protection** Rubber boots. Apron. Rubber gloves. Latex gloves **Respiratory Protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Handle in accordance with good industrial hygiene and safety practice.

Information on basic physical and chemical properties

Hygiene Measures

| Physical State Odor | Liquid No information available | •• | |
|---|--|--|--------------------------|
| Odor <u>Property</u> pH Melting Point/Range Boiling Point/Boiling Range Flash Point Evaporation rate Flammability (solid, gas) Flammability Limits in Air upper flammability limit lower flammability limit Vapor Pressure | No information available <u>Values</u> 7.5 No data available > 100 °C /> 212 °F No data available No data available No data available No data available No data available No data available No data available | Odor Threshold <u>Remarks/ - Meth</u> None known None known None known None known None known None known | No information available |
| Vapor Density Relative Density Specific Gravity Water Solubility Solubility in other solvents Partition coefficient: n-octand Autoignition Temperature | No data available No data available 1.22 100% No data available bl/water No data available No data available | None known None known None known None known None known None known | |

| Decomposition Temperature Viscosity | No data available 5 cps | None known None known | |
|--|--|--------------------------|--|
| Flammable Properties | Not flammable | | |
| Explosive Properties Oxidizing Properties | No data available No data available | | |
| Other information | | | |
| VOC Content (%) | No data available | | |
| | | | |

10. STABILITY AND REACTIVITY

Reactivity

No data available. Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Incompatible products.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product InformationMay causeInhalationMay causeEye ContactCauses seSkin ContactCauses seIngestionMay be had

May cause irritation of respiratory tract. Causes serious eye damage. Causes severe skin burns. May be harmful if swallowed.

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------------------------|-------------------|-------------|-----------------|
| Alkyl Dimethyl Benzyl Ammonium | = 240 mg/kg (Rat) | - | - |
| Chloride | | | |

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

| Sensitization | N |
|-------------------|---|
| Mutagenic Effects | N |

No information available. No information available.

Carcinogenicity

Contains no ingredient listed as a carcinogen.

| Reproductive Toxicity | No information available. |
|--|--|
| STOT - single exposure STOT - repeated exposure | No information available. No information available. |
| Aspiration Hazard | No information available. |

Numerical measures of toxicity - Product

The following values are calculated based on chapter 3.1 of the GHS document:LD50 Oral4800 mg/kg; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

| Chemical Name | Toxicity to Algae | Toxicity to Fish | Toxicity to Microorganisms | Daphnia Magna (Water Flea) |
|-----------------------|-------------------|-------------------------------|-------------------------------|-------------------------------|
| Alkyl Dimethyl Benzyl | | LC50 96 h: 0.223 - 0.46 | | |
| Ammonium Chloride | | mg/L static (Lepomis | | |
| | | macrochirus) LC50 96 h: | | |
| | | 0.823 - 1.61 mg/L static | | |
| | | (Oncorhynchus mykiss) | | |
| | | LC50 96 h: = 2.4 mg/L semi- | | |
| | | static (Oryzias latipes) LC50 | | |
| | | 96 h: = 1.3 mg/L semi-static | | |
| | | (Poecilia reticulata) | | |

Persistence and Degradability No information available.

Bioaccumulation

No information available.

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

| Waste Disposal Methods | Dispose of in accordance with federal, state, and local regulations |
|------------------------|---|
| Contaminated Packaging | Do not re-use empty containers. |

14. TRANSPORT INFORMATION

| DOT UN-Number Proper shipping name Hazard Class Packing Group Description Emergency Response Guide Number | UN1760 Corrosive liquids, n.o.s. 8 III UN1760, Corrosive liquids, n.o.s. (Quarternary Ammonium Chloride), 8, III 154 |
|--|---|
| <u>TDG</u> UN-Number Proper Shipping Name | UN1760 Corrosive liquid, n.o.s. |
| Hazard Class | 8 |
| Packing Group | |
| Description | UN1760, Corrosive liquid, n.o.s. (Quarternary Ammonium Chloride), 8, III |
| UN-Number Proper Shipping Name | UN1760 Corrosive liquid, n.o.s. |

| Hazard Class Packing Group Description | 8 III UN1760, Corrosive liquid, n.o.s. (Quarternary Ammonium Chloride), 8, III |
|---|---|
| ICAO UN-Number Proper shipping name Hazard Class Packing Group Description | UN1760 Corrosive liquid, n.o.s. 8 III UN1760, Corrosive liquid, n.o.s., 8, III |
| IATA | |
| UN-Number Proper Shipping Name Hazard Class Packing Group ERG Code Description | UN1760 Corrosive liquid, n.o.s. 8 III 8L UN1760, Corrosive liquid, n.o.s. (Quarternary Ammonium Chloride), 8, III |
| | |
| IMDG/IMO UN-Number Proper Shipping Name Hazard Class Packing Group EmS No. Description | UN1760 Corrosive liquid, n.o.s. 8 III F-A, S-B UN1760, Corrosive liquid, n.o.s. (Quarternary Ammonium Chloride), 8, III |
| <u>RID</u> | |
| UN-Number Proper Shipping Name Hazard Class Packing Group Classification Code Description | UN1760 Corrosive liquid, n.o.s. 8 III C9 UN1760, Corrosive liquid, n.o.s. (Quarternary Ammonium Chloride), 8, III |
| ADR | |
| UN-Number Proper Shipping Name Hazard Class Packing Group Classification Code Tunnel Restriction Code Description ADR/RID-Labels | UN1760 Corrosive liquid, n.o.s. 8 III C9 (E) UN1760, Corrosive liquid, n.o.s. (Quarternary Ammonium Chloride), 8, III, (E) 8 |
| ADN | |
| ADN Proper Shipping Name Hazard Class Packing Group Classification Code Special Provisions Description Limited Quantity | Corrosive liquid, n.o.s. 8 III C9 274 UN1760, Corrosive liquid, n.o.s. (Quarternary Ammonium Chloride), 8, III 5 L |
| | 15. REGULATORY INFORMATION |
| International Inventories TSCA NDSL EINECS | Complies Complies Complies |

Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances IECSC - China Inventory of Existing Chemical Substances

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

| Acute Health Hazard | Yes |
|-----------------------------------|-----|
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

| 16. OTHER INFORMATION | | | | | | | |
|--|--|----------------|-------------------|------------------------------------|--|--|--|
| NFPA | Health Hazard 3 | Flammability 0 | Instability 1 | Physical and Chemical Hazards - | | | |
| <u>HMIS</u> | Health Hazard 3 | Flammability 0 | Physical Hazard 1 | Personal Protection X | | | |
| Prepared By | Product 23 British Latham, 1-800-57 | | | | | | |
| Issuing Date Revision Date Revision Note | 18-Apr-2 18-Apr-2 Initial Re | 2013 2013 | | | | | |

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet