Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Name: ACS-CLL-114
Identifier Uses: Closed Loop Treatment.
Supplier: Advanced Chemical Service Inc.
3410 La Sierra Ave.;#F271
Riverside, CA  92503
Tel: 800-319-9227
Contact Person: 800-319-9227 / www.advancedchemicalservice.com
Emergency Telephone: 24-HOUR EMERGENCY TELEPHONE: INFOTRAC: 1-800-535-5053 INTERNATIONAL#: 1-352-323-3500

SECTION 2: HAZARDS IDENTIFICATION

Appearance: Clear, pale yellow liquid.
Color: Clear, pale yellow liquid.
Odor: Slightly sweet.

Pictogram(s):

Signal Word: Danger
Hazard Statements:
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage

Precautionary Statements:
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 Immediately call a POISON CENTER or doctor/ physician

Contains:
sodium nitrite
disodium metasilicate
sodium hydroxide
sodium 4(or 5)-methyl-1H-benzotriazolide

GHS Classification:
Physical and Chemical Hazards: Not classified
Human Health: Acute Tox 4 - H302, Skin Corr. 1A - H314
Environment: Not classified

OSHA Regulatory Status: This product is Hazardous under the OSHA Hazard communication Standard.

Inhalation: No specific symptoms noted, inhalation is not believed to be a likely route of exposure.
Ingestion: May cause chemical burns in mouth and throat. Harmful if swallowed.
Skin Contact: Corrosive! Can cause redness, pain, and severe skin burns.
Eye Contact: Causes severe eye burns.
Routes of Exposure: No Information available.
SECTION 3: Composition/Information on Ingredients

Composition Comments
Confidential business information has been removed without affecting the overall safety information on the safety data sheet.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

**General Information**
General first aid, rest, warmth and fresh air.

**Inhalation**
If this product is inhaled, move the exposed person to fresh air promptly. Get medical attention if any discomfort continues.

**Ingestion**
If the product is ingested, seek medical attention immediately.

**Skin contact**
Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.

**Eye contact**
If the product contacts the eyes, immediately flush eyes with plenty of clean running water for at least fifteen (15) minutes, lifting the upper and lower eyelids occasionally. Remove contact lenses if worn.

Most important symptoms and effects, both acute and delayed

**General Information**
The severity of the symptoms described will vary dependent of the concentration and the length of exposure.

**Inhalation**
No specific symptoms noted, inhalation is not believed to be a likely route of exposure.

**Ingestion**
May cause chemical burns in mouth and throat. Harmful if swallowed.

**Skin contact**
Corrosive! Can cause redness, pain, and severe skin burns.

**Eye contact**
Causes severe eye burns.

**Routes of Exposure**
No Information available.

Most important symptoms and effects, both acute and delayed

**Notes To The Physician**
Treat Symptomatically.

SECTION 5: Firefighting Measures

**Auto Ignition Temperature (°C)**
No Information available.

**Flammability Limit - Lower (%)**
No Information available.

**Flammability Limit - Upper (%)**
No Information available.

**Flashpoint**
No Information available.

**Extinguishing Media**
Use fire-extinguishing media appropriate for surrounding materials. Water, foam, dry chemical or carbon dioxide.

**Hazardous combustion products**
Oxides of nitrogen. May leave a caustic residue.

**Unusual Fire & Explosion Hazards**
Dried residue can stimulate the combustion of organic materials.

**Special Fire Fighting Procedures**
Use water to cool containers exposed to a fire. Avoid breathing fire vapors.

**Protective equipment for firefighters**
Wear full protective clothing and self-contained breathing apparatus, suitable gloves and boots.

SECTION 6: Accidental Release Measures

**Personal Precautions**
For personal protection, see section 8. In case of inadequate ventilation, use respiratory protection. Do not smoke, use open fire or other sources of ignition. In case of spills, beware of slippery floors and surfaces.

**Environmental Precautions**
Keep out of drains, municipal sewers, open bodies of water and water course.
Spill Clean Up Methods
Restrict non-essential personnel from the area. Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to cleanspillage area. Do not contaminate water sources or sewer. Place into chemical waste container for disposal according to local, state or federal regulations. Neutralize residue with lime or soda ash and flush spill area. DO NOT TOUCH SPILLED MATERIAL! Wash thoroughly after dealing with a spillage.

SECTION 7: Handling and Storage

Handling
Use proper personal protection when handling. Provide good ventilation. Avoid contact with skin and eyes and clothing. Do not use contact lenses. Avoid inhalation of vapors and mists. Avoid prolonged or repeated contact. Do NOT ingest. Wash thoroughly after handling. Rinse container before disposal.

Usage Description
Store in a cool, dry, and well-ventilated place away from incompatible materials. Vent containers frequently, and more often in warm weather to relieve pressure. Keep container tightly closed when not in use. Do not get in eyes, on skin, or on clothing.

Storage Precautions
Store closed containers in a cool, dry, well-ventilated area away from incompatible materials. This product is stable under normal conditions of handling and storage. Avoid cold temperatures. The recommended storage temperature is above 32°F, preferably at room temperature (70°F). The recommended shelf life is two (2) years. It is recommended that products be retested if stored for more than two (2) years. Under ideal storage conditions, the shelf life is almost indefinite. Strong acids, strong reducing agents, ammonia salts, amines, phthalic acid and cyanides.

Specific End Use(s)
The identified uses are in section 1 of this Safety Data Sheet.

SECTION 8: Exposure Controls/Personal Protection

Protective Equipment

<table>
<thead>
<tr>
<th>Component</th>
<th>STD</th>
<th>TWA (8 hrs.)</th>
<th>STEL (15mins)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium hydroxide</td>
<td>OSHA</td>
<td>2mg/m3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ingredient Comments
OSHA

Process Conditions
Provide eyewash, quick drench.

Engineering Measures
General mechanical ventilation is recommended for enclosed areas.

Respiratory Equipment
Use of respirator protection is not generally required. However, if exposure is above the stated limits or ventilation is inadequate, use a NIOSH approved acid gas/organic vapor respirator to reduce potential for inhalation exposure. When using respirator cartridges, they must be changed frequently to assure breakthrough exposure does not occur.

Hand Protection
Use rubber or plastic gloves to minimize skin contact.

Eye Protection
To avoid contact with eyes, use chemical splash goggles. Face shield is recommended. Eye wash station should be available in the work area.

Hygiene Measures
DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

SECTION 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear, pale yellow liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Clear, pale yellow liquid.</td>
</tr>
<tr>
<td>Odor</td>
<td>Slightly sweet.</td>
</tr>
</tbody>
</table>
### Odor Threshold
- **Lower**: No Information available.
- **Upper**: No Information available.

### pH-Value, Conc. Solution
12.5

### Melting point
32.0 °F

### Initial boiling point and boiling range
212.0 °F

### Flashpoint
No Information available.

### Evaporation rate
No Information available.

### Flammability State
No Information available.

### Flammability Limit - Lower (%)
No Information available.

### Flammability Limit - Upper (%)
No Information available.

### Vapor pressure
23.8 mm Hg

### Vapor Density (air=1)
No Information available.

### Relative density
1.27 @ 68.0°F

### Bulk Density
No Information available.

### Solubility
Completely soluble in water.

### Decomposition temperature
No Information available.

### Partition coefficient; n-octanol/water
No Information available.

### Auto Ignition Temperature (°C)
No Information available.

### Viscosity
No Information available.

### Explosive Properties
No information available.

### Oxidizing properties
No Information available.

### Molecular Weight
No Information available.

### Volatile Organic Compound
No Information available.

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**SECTION 10: Stability and Reactivity**

**Reactivity**: Strong acids, strong reducing agents, ammonia salts, amines, phthalic acid and cyanides.

**Stability**: This product is stable at ambient temperatures and atmospheric pressures.

**Hazardous Polymerization**: Hazardous polymerization is not expected to occur under normal temperatures and pressures.

**Hazardous Decomposition Products**: Oxides of nitrogen. May leave a caustic residue.

**Conditions to Avoid**: Avoid extreme temperatures and storing in large quantities for long periods of time.

**Materials to Avoid**: Do not mix with other chemicals unless listed on directions.

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**SECTION 11: Toxicological Information**

**Toxicological Information**

**Acute Toxicity (Oral LD50)**: >1150.00 mg/kg Rat
Acute Toxicity (Dermal LD50) >594.00mg/kg Rabbit
Acute Toxicity (Inhalation LC50) No Information available.

Skin Corrosion/Irritation No Information available.
Respiratory Sensitization No Information available.
Skin Sensitization No Information available.
Reproductive Toxicity: No Information available.
Germ Cell Mutagenicity: Genotoxicity - In Vitro Genotoxicity - In Vivo

Carcinogenicity: No Information available.
NTP - Carcinogenicity phenolphthalein: Reasonably anticipated to be a human carcinogen.
OSHA - Carcinogenicity The product and its components are not listed.
IARC Carcinogenicity phenolphthalein: 2B IARC Group 2B possibly carcinogenic to humans.

Specific Target Organ Toxicity - Single Exposure:
STOT - Single Exposure No Information available.
Specific Target Organ Toxicity - Repeated Exposure:
STOT - Repeated Exposure No Information available.

<table>
<thead>
<tr>
<th>Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium nitrite</td>
<td>157.9mg/kg Rat 175mg/kg Mouse 186mg/kg Rabbit 85mg/kg Rat</td>
<td></td>
<td>5.5mg/l (vapors) Rat 4 Hours</td>
</tr>
<tr>
<td>disodium metasilicate</td>
<td>770mg/kg Mouse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sodium hydroxide</td>
<td></td>
<td>1350mg/kg Rabbit</td>
<td></td>
</tr>
<tr>
<td>sodium chloride</td>
<td>3g/kg Rat</td>
<td></td>
<td>10g/kg Rabbit 42g/m3 Rat 1 Hours</td>
</tr>
<tr>
<td>sodium 4(or 5)-methyl-1H-benzotriazolide</td>
<td>920mg/kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 12: Ecological Information

Ecotoxicity
Acute Toxicity - Fish LC50 96 Hours >170.00ppm Onchorhynchus mykiss (Rainbow Trout)
Acute Toxicity - Aquatic Invertebrates LC50 48 Hours >790.00ppm Daphnia magna
Acute Toxicity - Aquatic Plants EC50 72 Hours >45.00ppm

Degradability No information available.

Bioaccumulative Potential

Mobility Completely soluble in water.

Results of PBT and vPvB Assessment The product does not contain any PBT or vPvB Substances.

Other Adverse Effects None known.

<table>
<thead>
<tr>
<th>Name</th>
<th>Acute Toxicity (Fish)</th>
<th>Acute Toxicity (Aquatic Invertebrates)</th>
<th>Acute Toxicity (Aquatic Plants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium nitrite</td>
<td>LC50 96 Hours 0.13mg/l Onchorhynchus mykiss (Rainbow Trout)</td>
<td>EC50 48 Hours 100.00mg/l Daphnia magna</td>
<td></td>
</tr>
<tr>
<td>sodium hydroxide</td>
<td></td>
<td></td>
<td>EC50 100.00ppm Daphnia magna</td>
</tr>
<tr>
<td>sodium 4(or 5)-methyl-1H-benzotriazolide</td>
<td>LC50 96 Hours 191.20mg/l Lepomis macrochirus (Bluegill)</td>
<td>LC50 48 Hours 245.70mg/l Daphnia magna</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 13: Disposal Considerations
Waste Management  
When handling waste, consideration should be made to the safety precautions applying to handling of the product.

Disposal Methods  
Dispose of waste and residues in accordance with local authority requirements. Do NOT dump into any sewers, on the ground or into any body of water. Rinse containers before disposal. Since emptied containers contain product residue, follow label warnings even after container is emptied.

SECTION 14: Transport Information

UN No. (DOT/TDG) 3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Nitrite Solution)
UN No. (IMDG) 3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Nitrite Solution)
UN No. (ICAO) 3266 - Corrosive liquid, basic, inorganic (Sodium Nitrite Solution)
DOT Proper Shipping Name 3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Nitrite Solution)
TDG Proper Shipping Name 3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Nitrite Solution)
DOT Hazard Class 8
DOT Hazard Label Class 8 - Corrosive
TDG Class 8
TDG Label(s) 8
IMDG Class 8
ICAO Class 8
Transport Labels

DOT Pack Group II
IMDG Pack Group II
Air Pack Group II
EMS F-A, S-B
Environmentally Hazardous Substance/Marine Pollutant No

SECTION 15: Regulatory Information

US Federal Regulations
SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
The Following ingredients are listed None Listed.

CERCLA/Supercfund, Hazardous Substances/Reportable Quantities (EPA)
The Following ingredients are listed sodium hydroxide

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
The Following ingredients are listed None Listed.

SARA 313 Emission Reporting
The Following ingredients are listed None Listed.

CAA Accidental Release Prevention
The Following ingredients are listed sodium nitrite
OSHA Highly Hazardous Chemicals
The Following ingredients are listed None Listed.

US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins
The Following ingredients are listed phenolphthalein

California Air Toxics “Hot Spots” (A-I)
The Following ingredients are listed sodium hydroxide

California Air Toxics “Hot Spots” (A-II)
The Following ingredients are listed None Listed.

Massachusetts “Right To Know” List
The Following ingredients are listed sodium nitrite sodium hydroxide

Rhode Island “Right To Know” List
The Following ingredients are listed sodium hydroxide

Minnesota “Right To Know” List
The Following ingredients are listed sodium hydroxide

New Jersey “Right To Know” List
The Following ingredients are listed sodium nitrite sodium hydroxide phenolphthalein

Pennsylvania “Right To Know” List
The Following ingredients are listed sodium nitrite sodium hydroxide
SECTION 16: Other Information

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>3</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>D</td>
</tr>
</tbody>
</table>

Revision Comments
Revision Date: 5/22/2015
Revision: 1

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