Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Name: ACS-CLL-112
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: Liquid
Color: Clear, pink liquid.
Odor: Musty

Pictogram(s):

Signal Word: Danger

Hazard Statements:
H302 Harmful if swallowed.
H361 Suspected of damaging fertility or the unborn child [*] [*].
H314 Causes severe skin burns and eye damage

Precautionary Statements:
P202 Do not handle until all safety precautions have been read and understood.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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:
disodium metasilicate
BORIC ACID (HBO2), SODIUM SALT, TETRAHYDRATE SODIUM METABORATE TETRAHYDRATESODIUM
oxido(oxo)borane sodium nitrite potassium hydroxide
sodium 4(or 5)-methyl-1H-benzotriazolide
phenolphthalein

GHS Classification:
Physical and Chemical Hazards: Not classified
Human Health: Acute Tox 4 - H302, Repr. 2 - H361, Skin Corr. 1C - H314
Environment: Not classified

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

Inhalation:
Inhalation of high concentrations of vapors may cause irritation of the respiratory tract with
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. Seek medical attention if symptoms persist. Give artificial respiration if the exposed person is not breathing.
Ingestion  If the product is ingested, seek medical attention immediately. Do NOT give the exposed person anything to drink. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Skin contact  If this product contacts the skin, immediately flush the affected area with plenty of clean running water for at least fifteen (15) minutes. If the product penetrates the clothing, promptly remove the contaminated clothing or shoes, and flush the affected area as described. Seek medical attention if irritation persists.
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. Seek medical attention if irritation persists.

Most important symptoms and effects, both acute and delayed

General Information  The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation  Inhalation of high concentrations of vapors may cause irritation of the respiratory tract with sore throat, coughing, shortness of breath, possible chest pain.
Ingestion  Harmful if swallowed. Suspected of damaging fertility.
Skin contact  Corrosive! Can cause redness, pain, and severe skin burns.
Eye contact  Extreme irritation of eyes and mucous membranes, including burning and tearing. Causes serious eye damage. Causes severe eye burns.

Notes To The Physician  There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

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  Hazardous combustion results in the release of oxides of nitrogen, oxides of carbon and possibly toxic phosphines. May result in a caustic residue.

Unusual Fire & Explosion Hazards  Dried residue can thermally decompose, giving off irritating and possibly toxic fumes.

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 clean spillage 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 eye sand 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). Store away from strong acids, strong reducing agents, ammonia salts, amines, organic matter, phthalic acid and cyanides. 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. Store away from strong acids, strong reducing agents, ammonia salts, amines, organic matter, 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

Ingredient Comments
No information for the control parameters

Process Conditions
Provide eyewash, quick drench.

Engineering Measures
Provide adequate ventilation.

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
When handling this product, it is recommended to wear chemical resistant gloves. The choice of suitable protective gloves depends on work conditions and what chemicals are handled, but we have positive experience with gloves made of Rubber.

Eye Protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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>Value/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Clear, pink liquid.</td>
</tr>
<tr>
<td>Odor</td>
<td>Musty.</td>
</tr>
<tr>
<td>Odor Threshold -Lower</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Odor Threshold -Upper</td>
<td>No Information available.</td>
</tr>
<tr>
<td>pH-Value, Conc. Solution</td>
<td>12.5</td>
</tr>
<tr>
<td>Melting point</td>
<td>32.0 °F</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>212.0 °F</td>
</tr>
<tr>
<td>Flashpoint</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Flammability State</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Flammability Limit -Lower (%)</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Flammability Limit -Upper (%)</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>23.8 mm Hg 0.0</td>
</tr>
<tr>
<td>Vapor Density (air=1)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.17 @ 68.0°F</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Completely soluble in water.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Auto Ignition Temperature (°C)</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No information available.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No Information available.</td>
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<tr>
<td>Molecular Weight</td>
<td>Not known.</td>
</tr>
<tr>
<td>Volatile Organic Compound</td>
<td>No Information available.</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and Reactivity

Reactivity: Reaction with Strong acids, strong reducing agents, ammonia salts, amines, organic matter, 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: Hazardous combustion results in oxides of nitrogen. Decomposition of sodium nitrite may leave a caustic residue.

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

Materials to Avoid: Do not mix with other chemicals unless listed on directions. Keep away from Strong acids.
strong reducing agents, ammonia salts, amines, organic matter, phthalic acid and cyanides.

SECTION 11: Toxicological Information

<table>
<thead>
<tr>
<th>Toxicological Information</th>
<th>No Information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity (Oral LD50)</td>
<td>&gt;1659.00mg/kg Rat</td>
</tr>
<tr>
<td>Acute Toxicity (Dermal LD50)</td>
<td>&gt;771.00mg/kg Rabbit</td>
</tr>
<tr>
<td>Acute Toxicity (Inhalation LC50)</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Respiratory Sensitization</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Skin Sensitization</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Reproductive Toxicity:</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity:</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Genotoxicity - In Vitro</td>
<td></td>
</tr>
<tr>
<td>Genotoxicity - In Vivo</td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity:</td>
<td>No Information available.</td>
</tr>
<tr>
<td>NTP - Carcinogenicity</td>
<td>phenolphthalein: Reasonably anticipated to be a human carcinogen.</td>
</tr>
<tr>
<td>OSHA - Carcinogenicity</td>
<td>The product and its components are not listed.</td>
</tr>
<tr>
<td>IARC Carcinogenicity</td>
<td>The product and its components are not listed.</td>
</tr>
</tbody>
</table>

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</td>
<td>175mg/kg Mouse</td>
<td>186mg/kg Rabbit</td>
</tr>
<tr>
<td>potassium hydroxide</td>
<td>85mg/kg Rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sodium 4(or 5)-methyl-1H-benzotriazolide</td>
<td>284mg/kg Rat</td>
<td>920mg/kg</td>
<td>5.5mg/l (vapors) Rat 4 Hours</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological Information

<table>
<thead>
<tr>
<th>Eco toxicity</th>
<th>No Information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity - Fish</td>
<td>LC50 96 Hours &gt;5565.00ppm Onchorhynchus mykiss (Rainbow Trout)</td>
</tr>
<tr>
<td>Acute Toxicity - Aquatic Invertebrates</td>
<td>LC50 48 Hours &gt;7475.00ppm Daphnia magna</td>
</tr>
<tr>
<td>Acute Toxicity - Aquatic Plants</td>
<td>EC50 72 Hours &gt;45.00ppm</td>
</tr>
</tbody>
</table>

Degradeability        | No information available. |
Bio accumulative Potential | No Information available. |
Mobility               | Completely soluble in water. |

Results of PBT and vPvB Assessment

The product does not contain any PBT or vPvB Substances.

Other Adverse Effects

<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 4(or 5)-methyl-1H-benzotriazolide</td>
<td>LC50 96 Hours 191.20mg/l Lepomis macrochirus (Bluegill)</td>
<td>LC50 96 Hours 223.70 Onchorhynchus mykiss (Rainbow Trout)</td>
<td>LC50 48 Hours 245.70mg/l Daphnia magna</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 Metaborate Octahydrate)
UN No. (IMDG) 3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Metaborate Octahydrate)
UN No. (ICAO) 3266 - Corrosive liquid, basic, inorganic (Sodium Metaborate Octahydrate)
DOT Proper Shipping Name 3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Metaborate Octahydrate)
TDG Proper Shipping Name 3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Metaborate Octahydrate)
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 III
IMDG Pack Group III
Air Pack Group III
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

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

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
The Following ingredients are listed

SARA 313 Emission Reporting
The Following ingredients are listed
CAA Accidental Release Prevention
The Following ingredients are listed sodium nitrite

OSHA Highly Hazardous Chemicals
The Following ingredients are 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

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

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

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

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

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

Pennsylvania “Right To Know” List
The Following ingredients are listed sodium nitrite potassium 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 5/15/2015
Revision 1

Disclaimer
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