SECTION 1: IDENTIFICATION

Product Name  ACS-CLP-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  Solid.
Color  Granular purple and white.
Odor  Odorless.

Pictogram(s)

Signal Word  Danger
Hazard Statements  
H272 May intensify fire; oxidizer.
H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage
H335 May cause respiratory irritation.
H350 May cause cancer [*].
H361 Suspected of damaging fertility or the unborn child[*].
H400 Very toxic to aquatic life.

Precautionary Statements  
P210 Keep away from heat/ sparks/open flames/hot surfaces. — No smoking.
P260 Do not breathe dust/fume/ gas/mist/vapors/spray.
P261 Avoid breathing dust/fume/ gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/eye protection/face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 If exposed or concerned: Get medical advice/attention.
P310 Immediately call a POISON CENTER or doctor/physician.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Contains

BORIC ACID (HBO2), SODIUM SALT, TETRAHYDRATE SODIUM METABORATE TETRAHYDRATESODIUM oxido(oxo)borane disodium metasilicate sodium nitrite phenolphthalein

GHS Classification

Physical and Chemical Hazards Ox Sol 2- H272,

Human Health Acute Tox 3 - H301, Skin Corr. 1B - H314, Carc. 1B - H350, Repr. 2 - H361, STOT SE 3 - H335,

Environment Aquatic Acute 1 - H400

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

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 and symptoms occur, move the exposed person to fresh air promptly. Seek medical attention if symptoms persist.

Ingestion If this product is ingested, drink small amounts of water and monitor superficial effects on mouth and esophagus. If irritation is noted, seek medical attention promptly. 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 soap and 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 this product contacts the eyes, immediately flush eyes with plenty of clean runningwater 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 No information available

Inhalation Inhalation of vapors or fumes may cause slight to moderate irritation to mucous membranes and respiratory tract. Symptoms of exposure may include irritation of nose and throat. Avoid contact.

Ingestion Exposure to product may cause slight moderate irritation to inner linings of mouth, esophagus and gastrointestinal tract. Symptoms of nitrite poisoning may include intense cyanosis, nausea, dizziness, vomiting, collapse, spasms of abdominal pain, rapid heartbeat, irregular breathing, coma, convulsions or death due to circulatory collapse. Product is considered moderately toxic. Do NOT ingest.

Eye contact Symptoms of exposure may include redness, tearing, swelling or pain. Avoid contact.

Routes of Exposure No Information available.

Inhalation

Exposure to vapors or fumes may cause slight to moderate irritation to mucous membranes and respiratory tract. Symptoms of exposure may include irritation of nose and throat. Avoid contact.

Ingestion

Exposure to product may cause slight moderate irritation to inner linings of mouth, esophagus and gastrointestinal tract. Symptoms of nitrite poisoning may include intense cyanosis, nausea, dizziness, vomiting, collapse, spasms of abdominal pain, rapid heartbeat, irregular breathing, coma, convulsions or death due to circulatory collapse. Product is considered moderately toxic. Do NOT ingest.

Skin contact

Exposure to product may cause slight to moderate irritation to skin. Symptoms of exposure may include redness, itching, swelling or pain. Avoid contact.

Eye contact

Exposure to product may cause severe irritation to eyes, and possibly burns or eye damage. Symptoms of exposure may include redness, swelling, tearing or pain. Avoid contact.
cyanosis, nausea, dizziness, vomiting, collapse, spasms of abdominal pain, rapid heartbeat, irregular breathing, coma, convulsions or death due to circulatory collapse. Product is considered moderately toxic. Do NOT ingest.

**Skin contact**
Exposure to product may cause slight to moderate irritation to skin. Symptoms of exposure may include redness, itching, swelling or pain. Avoid contact.

**Eye contact**
Exposure to product may cause severe irritation to eyes, and possibly burns or eye damage. Symptoms of exposure may include redness, swelling, tearing or pain. Avoid contact.

**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 water, foam, dry chemical or carbon dioxide to extinguish fire.

**Hazardous combustion products**
Hazardous combustion results in the release of oxides of nitrogen, oxides of carbon and possibly toxic phosphines.

**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.

**Protective equipment for fire-fighters**
Fire fighters should wear full protective equipment, including a self-contained breathing apparatus.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions**
Use proper personal protection (refer to Section 8). Remove all sources of ignition. Run off from fire control or dilution water may cause pollution. Keep out of drains, municipal sewers, open bodies of water and water course.

**Environmental Precautions**
Safely stop source of spill. Clean up spills immediately. Restrict non-essential personnel from the area. Wear protective clothing, goggles and respirator if ventilation is not adequate. Sweep up spilled material and place into container for reuse or disposal. Dispose of waste in accordance with local, state or federal regulations. Use vacuum or wet mop to clean up dust. Flush spill area with water.

### SECTION 7: HANDLING AND STORAGE

**Handling**
Use proper personal protection when handling (refer to Section 8). Use under well-ventilated conditions. Avoid contact with eyes, skin and clothing. Avoid breathing vapors and mists. Avoid prolonged or repeated contact. Do NOT ingest. Wash thoroughly after handling. Rinse container before disposal.

**Usage Description**
Use only according to directions.

**Storage Precautions**
Keep container tightly closed. Do not store in heat or direct sunlight. Keep in dry, cool, and well ventilated place. The recommended storage temperature is 34°F to 129°F, preferably at room temperature 70°F the recommended storage temperature is above 32°F, preferably at room temperature (70°F).

**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 occupational exposure limits noted for the ingredients(s).
Process Conditions
Keep container tightly sealed when not in use. Provide eyewash, quick drench.

Engineering Measures
General mechanical ventilation is recommended for enclosed areas.

Respiratory Equipment
Use a dust mask to reduce exposure to particulate matter. 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 safety glasses or 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>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>Granular purple and white.</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold -Lower</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Odor Threshold - Upper</td>
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<tr>
<td>pH-Value, Conc. Solution</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Melting point</td>
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<tr>
<td>Initial boiling point and boiling range</td>
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<tr>
<td>Flashpoint</td>
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<tr>
<td>Evaporation rate</td>
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<tr>
<td>Flammability State</td>
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</tr>
<tr>
<td>Flammability Limit -Lower (%)</td>
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</tr>
<tr>
<td>Flammability Limit - Upper (%)</td>
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<tr>
<td>Vapor pressure</td>
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<tr>
<td>Vapor Density (air=1)</td>
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<tr>
<td>Relative density</td>
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<tr>
<td>Bulk Density</td>
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<tr>
<td>Solubility</td>
<td>Completely soluble in water.</td>
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<td>Decomposition temperature</td>
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<td>Partition coefficient; n-octanol/water</td>
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<td>Auto Ignition Temperature (°C)</td>
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<td>Viscosity</td>
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<td>Explosive Properties</td>
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<td>Oxidizing Properties</td>
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<td>Molecular Weight</td>
<td>No Information available.</td>
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</table>
Volatile Organic Compound

No Information available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity
Reactions may occur with 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 contact with strong acids, strong reducing agents, ammonia salts, amines, phthalic acid and cyanides.

Materials to Avoid
Keep away from strong acids, strong reducing agents, ammonia salts, amines, phthalic acid and cyanides.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological Information
No Information available.

Acute Toxicity (Oral LD50)
>2394.00mg/kg Rat

Acute Toxicity (Dermal LD50)
>389.00mg/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:

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>
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</thead>
<tbody>
<tr>
<td>BORIC ACID (HBO2), SODIUM SALT, TETRAHYDRATE</td>
<td>2330mg/kg Rat</td>
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<tr>
<td>SODIUM METABORATE TETRAHYDRATE sodium</td>
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<td></td>
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</tr>
<tr>
<td>oxido(oxo)borane</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>disodium metasilicate</td>
<td>770mg/kg Mouse</td>
<td></td>
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<tr>
<td>sodium nitrite</td>
<td>157.9mg/kg Rat</td>
<td>175mg/kg Mouse</td>
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<tr>
<td></td>
<td>186mg/kg Rabbit</td>
<td>85mg/kg Rat</td>
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<tr>
<td>sodium carbonate</td>
<td>4090mg/kg Rat</td>
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<td>5.5mg/l (vapors)</td>
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<td>Rat 4 Hours</td>
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<td></td>
<td></td>
<td></td>
<td>2.3mg/l (vapors)</td>
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SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity
No Information available.

Acute Toxicity - Fish
LC50 96 Hours >125.00ppm Onchorhynchus mykiss (Rainbow Trout)
Acute Toxicity - Aquatic Invertebrates  
LC50 48 Hours >1575.00ppm Daphnia magna

Acute Toxicity - Aquatic Plants  
EC50 72 Hours >35.00ppm

Degradability  
No information available.

Bioaccumulative Potential  
No data available on bioaccumulation.

Mobility  
No information available.

Results of PBT and vPvB Assessment  
No information available.

Other Adverse Effects  
No information available.

<table>
<thead>
<tr>
<th>Name</th>
<th>Acute Toxicity (Fish)</th>
<th>Acute Toxicity (Aquatic Invertebrates)</th>
<th>Acute Toxicity (Aquatic Plants)</th>
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</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>
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<tr>
<td>sodium carbonate</td>
<td>LC50 96 Hours &lt;320.00mg/l Lepomis macrochirus (Bluegill)</td>
<td>LC50 96 Hours &lt;565.00mg/l Daphnia magna</td>
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</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  
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. Dispose in accordance with all applicable federal, state and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

UN No. (DOT/TDG)  
1500 - SODIUM NITRITE

UN No. (IMDG)  
1500 - SODIUM NITRITE

UN No. (ICAO)  
1500 - Sodium nitrite

DOT Proper Shipping Name  
1500 - SODIUM NITRITE

TDG Proper Shipping Name  
1500 - SODIUM NITRITE

DOT Hazard Class  
5.1

DOT Hazard Label  
Class 5 - Oxidizing Substance (Division 5.1)

TDG Class  
5.1

TDG Label(s)  
5.1 +6.1

IMDG Class  
5.1

ICAO Class  
5.1

Transport Labels

DOT Pack Group  
III

IMDG Pack Group  
III
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/Superfund, Hazardous Substances/Reportable Quantities (EPA)
The Following ingredients are listed None Listed.

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 None Listed.

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

Rhode Island "Right To Know" List
The Following ingredients are listed None Listed.

Minnesota "Right To Know" List
The Following ingredients are listed None Listed.

New Jersey "Right To Know" List
The Following ingredients are listed sodium nitrite phenolphthalein

Pennsylvania "Right To Know" List
The Following ingredients are listed sodium nitrite
SECTION 16: OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

<table>
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</tr>
<tr>
<td>Personal Protection</td>
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Revision Comments
Revision Date 07/22/2015
Revision 1

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