Product	ACS-CLL-112X
Revision Date	02/13/2019
Revision	1

Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Name	**ACS-CLL-112X**
Identifier Uses	Closed Loop Treatment
Supplier	Advanced Chemical Service Inc. 3410 La Sierra Ave.#F271 Riverside, CA 92503 Tel: 800-319-9227
Website	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 Pink Liquid
Color	Clear Pink Liquid
Odor	Odorless

Pictogram(s)

Signal Word	Danger
Hazard Statements	H272 May intensify fire; oxidizer H361 Suspected of damaging fertility or the unborn child. H332 Harmful if inhaled. H314 Causes severe skin burns and eye damage
Precautionary Statements	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 P202 Do not handle until all safety precautions have been read and understood. 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
Contains	Sodium Nitrite
GHS Classification	
Physical and Chemical Hazards	Ox Liq 3 - H272,
Human Health	Eye Irrit.2A - H315, Repr. 2 - H361, Acute Tox 4 - H332, Skin Corr. 1C - H314
Environment	Not classified
OSHA Regulatory Status	This product is Hazardous under the OSHA Hazard communication Standard.
Inhalation	Harmful if inhaled.
Ingestion	Harmful if swallowed. Suspected of damaging fertility.
Skin contact	Corrosive! Can cause redness, pain, and severe skin burns.
Eye contact	Causes severe eye burns.
Routes of Exposure	Unknown

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. Rinse nose and mouth with water.
Ingestion	If the product is ingested, seek medical attention immediately. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Skin contact	If the product penetrates the clothing, promptly remove the contaminated clothing or shoes, and flush the affected area as described. If this product contacts the skin, immediately flush the affected area with plenty of clean running water for at least fifteen (15) minutes.
Eye contact	Do not rub eye. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention immediately. Continue to rinse. Continue to rinse for at least 15 minutes.

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	Harmful if inhaled.
Ingestion	Harmful if swallowed. Suspected of damaging fertility.
Skin contact	Corrosive! Can cause redness, pain, and severe skin burns.
Eye contact	Causes severe eye burns.
Routes of Exposure	Unknown

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.
Flash point	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.
Unusual Fire & Explosion Hazards	Dried residue can stimulate the combustion of organic materials. Nitrite is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Nitrite increases the flammability of any combustible material.
Special Fire Fighting Procedures	Use water to cool containers exposed to a fire. Avoid breathing fire vapors.
Protective equipment for fire-fighters	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. 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).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.

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

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective Equipment

Component	STD	TWA (8 Hrs.)		STEL (15mins)		Notes
potassium hydroxide	OSHA		2mg/m3			

Ingredient Comments OSHA

Process Conditions Provide eyewash, quick drench.

Engineering Measures Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

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

Appearance Liquid.

Color Pink Liquid

Odor odorless

Odor Threshold -Lower No Information available.

Odor Threshold - Upper No Information available.

pH-Value, Conc. Solution 12.5

Melting point	32.0 °F
Initial boiling point and boiling range	212.0 °F
Flash point	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 0.0
Vapor Density (air=1)	Not determined.
Relative density	10.30 @ 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.

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. Keep away from reactive or combustible materials.
Materials to Avoid	Keep away from Strong acids, strong reducing agents, ammonia salts, amines, organic matter, phthalic acid and cyanides.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological Information	No Information available.
Acute Toxicity (Oral LD50)	>931.00mg/kg Rat
Acute Toxicity (Dermal LD50)	>600.00mg/kg Rabbit
Acute Toxicity (Inhalation LC50)	Not determined.

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 The product and its components are not listed.
OSHA - Carcinogenicity The product and its components are not listed.
IARC Carcinogenicity The product and its components are not listed.

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

Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
sodium nitrite	157.9mg/kg Rat 175mg/kg Mouse 186mg/kg Rabbit 85mg/kg Rat		5.5mg/l (vapors) Rat 4 Hours
potassium hydroxide		1350mg/kg Rabbit	
sodium 4(or 5)-methyl-1H-benzotriazolide	920mg/kg		

SECTION 12: ECOLOGICAL INFORMATION

Eco toxicity No Information available.

Acute Toxicity - Fish LC50 96 Hours >175.00ppm 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.

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 None known.

Name	Acute Toxicity (Fish)	Acute Toxicity (Aquatic Invertebrates)	Acute Toxicity (Aquatic
sodium nitrite	LC50 96 Hours 0.13mg/l Onchorhynchus mykiss (Rainbow Trout)	EC50 48 Hours 100.00mg/l Daphnia magna	
potassium hydroxide		EC50 100.00ppm Daphnia magna	
sodium 4(or 5)-methyl--H-benzotriazolide	LC50 96 Hours 191.20mg/l Lepomis macrochirus (Bluegill) LC50 96 Hours 23.70 Onchorhynchus mykiss (Rainbow Trout)	LC50 48 Hours 245.70mg/l Daphnia magna	

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)	3093 - CORROSIVE LIQUID, OXIDIZING, (Sodium Nitrite Solution)
UN No. (IMDG)	3093 - CORROSIVE LIQUID, OXIDIZING, (Sodium Nitrite Solution)
UN No. (ICAO)	3093 - Corrosive liquid, oxidizing (Sodium Nitrite Solution)
DOT Proper Shipping Name	3093 - CORROSIVE LIQUID, OXIDIZING, (Sodium Nitrite Solution)
TDG Proper Shipping Name	3093 - CORROSIVE LIQUID, OXIDIZING, (Sodium Nitrite Solution)
DOT Hazard Class	8, 5.1
DOT Hazard Label	Class 8 - Corrosive
TDG Class	8
TDG Label(s)	8 +5.1
IMDG Class	8
ICAO Class	8
Transport Labels	
DOT PackGroup	II
IMDG Pack Group	II
Air Pack Group	II
EMS	F-A, S-Q
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

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

California Air Toxics "Hot Spots" (A-I)
The Following ingredients are listed potassium hydroxide

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

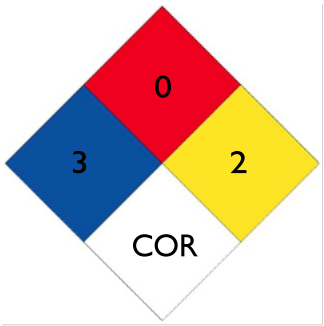
Minnesota "Right To Know" List
The Following ingredients are listed potassium hydroxide

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

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)

Health	3
Flammability	0
Physical Hazard	2
Personal Protection	D

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.