Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Name: ACS-CLN-120
Identifier: Inhibited Hydrochloric Acid.
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, reddish-brown liquid.
Color: Clear, reddish-brown liquid.
Odor: Pungent.

Pictogram(s)

Signal Word: Danger
Hazard Statements: H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage

Precautionary Statements: P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P338 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.
P271 Use only outdoors or in a well-ventilated area.

Contains: 2-butoxyethanol
prop-2-yn-1-ol
hydrogen chloride

GHS Classification:
Physical and Chemical Hazards: Not classified
Human Health: Acute Tox 4 - H332, Skin Corr. 1A - H314
Environment: Not classified

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

Inhalation: Inhalation of product mists, vapors, fog and other airborne forms of any particle size may cause irritation to mucous membranes and respiratory tract. Symptoms of exposure may include nasal discomfort and coughing. High or prolonged inhalation exposure may lead to corrosion of mucous membranes with temporary lung irritation and cough, difficulty breathing, shortness of breath and/or pulmonary edema. Gross exposure may cause death. Avoid contact.

Ingestion: Exposure to liquid product may cause severe irritation and possible burns to inner linings of mouth, esophagus and gastrointestinal tract. Gross ingestion may cause death. Do NOT
Skin contact
Exposure to liquid product may cause severe irritation to skin, and possible burns. Symptoms of exposure may include redness, swelling or pain. Depending on the length of exposure and amount of acid, effects could include dermatitis, permanent scarring or death. Avoid contact.

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

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. Seek medical attention if symptoms persist. Check for breathing and pulse. If breathing is difficult, give oxygen (six liters per minute). If breathing has stopped, give artificial respiration. Keep the exposed person warm and at rest.

Ingestion
Do NOT induce vomiting unless directed to do so by medical personnel. If this product is ingested, give the exposed person plenty of water and seek medical attention promptly. Have the exposed person lie down and keep warm. Give the exposed person large amounts of water. Give the exposed person at least one ounce of milk of magnesia or aluminum hydroxide gel in an equal amount of water. If unavailable, give the white of two (2) or three (3) eggs. 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. Keep affected area cool.

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. Do NOT try to neutralize the acid. Seek medical attention if irritation persists. Apply cool packs on eyes while transporting victim to medical facility.

Most important symptoms and effects, both acute and delayed

General Information
Inhalation of product mists, vapors, fog and other airborne forms of any particle size may cause irritation to mucous membranes and respiratory tract. Symptoms of exposure may include nasal discomfort and coughing. High or prolonged inhalation exposure may lead to corrosion of mucous membranes with temporary lung irritation and cough, difficulty breathing, shortness of breath and/or pulmonary edema. Gross exposure may cause death. Avoid contact.

Ingestion
Exposure to liquid product may cause severe irritation and possible burns to inner linings of mouth, esophagus and gastrointestinal tract. Gross ingestion may cause death. Do NOT ingest.

Skin contact
Exposure to liquid product may cause severe irritation to skin, and possible burns. Symptoms of exposure may include redness, swelling or pain. Depending on the length of exposure and amount of acid, effects could include dermatitis, permanent scarring or death. Avoid contact.

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

Routes of Exposure
No Information available.
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 dry chemical, foam or carbon dioxide to extinguish fire. Water is NOT recommended as adding water to acid can generate large amounts of heat.

Hazardous combustion products Combustion may lead to the release of oxides of hydrogen and hydrogen chloride.
Unusual Fire & Explosion Hazards May generate flammable, potentially explosive hydrogen gas on contact with most metals. Explosive concentrations of hydrogen may accumulate inside metal equipment. Hydrochloric acid fumes may be released from heating under fire conditions.

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 NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

SECTION 6: Accidental Release Measures

Personal Precautions For personal protection, see section 8.
Environmental Precautions Keep out of drains, municipal sewers, open bodies of water and water course.
Spill Clean Up Methods 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. Do NOT flush into sewer or storm drain. Dike spill area and neutralize with alkaline material (lime, sodium bicarbonate, soda ash); then soak up with an inert material (sand, vermiculite, earth). Place into a non-metal chemical waste container for disposal according to local, state or federal regulations at an approved chemical waste reprocessing facility. Neutralize residue with lime or soda ash and flush spill area.

SECTION 7: Handling and Storage

Handling Use proper personal protection when handling (refer to Section 8).
Usage Description Store closed containers in a cool, dry, well-ventilated area with acid-resistant floors. Keep out of direct sunlight and away from water, heat and incompatible materials. When diluting, always add product to water; do NOT add water to the product. This product is stable under normal conditions of handling and storage.
Storage Precautions 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

<table>
<thead>
<tr>
<th>Component</th>
<th>STD</th>
<th>TWA (8 hrs.)</th>
<th>STEL (15mins)</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>2-butoxyethanol</td>
<td>OSHA</td>
<td>50ppm</td>
<td>240mg/m3</td>
<td></td>
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<tr>
<td>Hydrogen chloride</td>
<td>OSHA</td>
<td></td>
<td>5ppm</td>
<td>7mg/m3</td>
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</tbody>
</table>

Ingredient Comments OSHA

Process Conditions Provide eyewash, quick drench.
**Engineering Measures**
General mechanical ventilation is recommended for enclosed areas.

**Respiratory Equipment**
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 neoprene, polyvinyl chloride (PVC) or rubber 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.

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**SECTION 9: Physical and Chemical Properties**

**Information on Basic Physical and Chemical Properties**

- **Appearance**
  - Clear, reddish-brown liquid.

- **Color**
  - Clear, reddish-brown liquid.

- **Odor**
  - Pungent.

- **Odor Threshold - Lower**
  - No Information available.

- **Odor Threshold - Upper**
  - No Information available.

- **pH-Value, Conc. Solution**
  - 1.0

- **Melting point**
  - No Information available.

- **Initial boiling point and boiling range**
  - 178.0 °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**
  - No Information available.

- **Vapor Density (air=1)**
  - No Information available.

- **Relative density**
  - 1.16 @ 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
Most metals, hydroxides, amines, alkalis/caustics, cyanides, sulfides, strong oxidizers, carbonates, hypochlorites and formaldehyde. May react violently with incompatible substance, releasing toxic and/or flammable gases.

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
Heat can cause evolution of gaseous hydrogen chloride.

Conditions to Avoid
Avoid exposing to contact with Most metals, hydroxides, amines, alkalis/caustics, cyanides, sulfides, strong oxidizers, carbonates, hypochlorites and formaldehyde. May react violently with incompatible substance, releasing toxic and/or flammable gases.

Materials to Avoid
Avoid exposing to contact with Most metals, hydroxides, amines, alkalis/caustics, cyanides, sulfides, strong oxidizers, carbonates, hypochlorites and formaldehyde. May react violently with incompatible substance, releasing toxic and/or flammable gases.

SECTION 11: Toxicological Information

Toxicological Information
No toxicological information for the overall finished product.

Acute Toxicity (Oral LD50)
>180.00mg/kg Rat

Acute Toxicity (Dermal LD50)
No Information available.

Acute Toxicity (Inhalation LC50)
>635.00mg/l (vapors) Rabbit

Skin Corrosion/Irritation
No Information available.

Respiratory Sensitization
No Information available.

Skin Sensitization
No Information available.

Reproductive Toxicity:
No Information available.

Germ Cell Mutagenicity:
No Information available.

Genotoxicity - In Vitro
No Information available.

Genotoxicity - In Vivo
No Information available.

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
2-butoxyethanol: 3 IARC Group 3 Not classifiable as to its carcinogenicity to humans.
hydrogen chloride: 3 IARC Group 3 Not classifiable as to its carcinogenicity to humans.

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

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

STOT - Single Exposure
No Information available.

STOT - Repeated Exposure
No Information available.

SECTION 12: Ecological Information

Ecotoxicity
No Information available.

Acute Toxicity - Fish
No Information available.

Acute Toxicity - Aquatic Invertebrates
No Information available.

Acute Toxicity - Aquatic Plants
No Information available.

Degradability
No information available.

Bioaccumulative Potential
No Information available.

Mobility
No information available.

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

Other Adverse Effects
None known.
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. Do NOT reuse empty containers. Dispose in accordance with all applicable federal, state and local laws and regulations.

SECTION 14: Transport Information

UN No. (DOT/TDG) 1789 - HYDROCHLORIC ACID
UN No. (IMDG) 1789 - HYDROCHLORIC ACID
UN No. (ICAO) 1789 - Hydrochloric acid
DOT Proper Shipping Name 1789 - HYDROCHLORIC ACID
TDG Proper Shipping Name 1789 - HYDROCHLORIC ACID
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 prop-2-yn-1-ol

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
The Following ingredients are listed prop-2-yn-1-ol

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
The Following ingredients are listed prop-2-yn-1-ol

SARA 313 Emission Reporting
The Following ingredients are listed prop-2-yn-1-ol
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<td>CAA Accidental Release Prevention</td>
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<td>OSHA Highly Hazardous Chemicals</td>
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<td>Massachusetts “Right To Know” List</td>
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</table>
SECTION 16: Other Information

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

Health 3
Flammability 0
Physical Hazard 1
Personal Protection H

Revision Comments
Revision Date 5/22/2015
Revision 1

Disclaimer
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