Section 1: Identification

Product Identifier
Product Form: Mixture
Product Name: Hydrochloric Acid
Synonyms: Muriatic Acid

Intended Use of the Product
Acidizing of petroleum wells, boiler scale removal, pickling & metal cleaning, chemical intermediate ore reduction, pH control.

Name, Address, and Telephone of the Responsible Party
Manufacturer
CHEMTRADE LOGISTICS INC.
155 Gordon Baker Road
Suite 300
Toronto, Ontario M2H 3N5
For SDS Info: (416) 496-5856
www.chemtradelogistics.com

Emergency Telephone Number
Emergency Telephone Number
Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300
INTERNATIONAL: +1-703-741-5970
Chemtrade Emergency Contact: (866) 416-4404
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

Section 2: Hazards Identification

Classification of the Substance or Mixture
GHS Classification
Met. Corr. 1 H290
Skin Corr. 1A H314
Eye Dam. 1 H318
STOT 3 H335
Aquatic Acute 2 H401
Full text of hazard classes and H-statements: see section 16

Label Elements
GHS Labeling
Hazard Pictograms:

Signal Word: Danger

Hazard Statements:
H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H335 – May cause respiratory tract irritation.
H401 - Toxic to aquatic life.

Precautionary Statements:
P260 - Do not breathe vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas 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, and eye protection.
Hydrochloric Acid
Safety Data Sheet

P301+P330+P331+P310 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or physician
P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or physician
P304+P340+310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician
P321 - Specific treatment (see section 4 on this SDS).
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.
P403 – Store in a well ventilated area.
P405 - Store locked up.
P406+P234 – Store in original container or tore in corrosive resistant container with a resistant inner liner.
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Other Hazards
Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

Unknown acute toxicity
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Mixture</th>
<th>Name</th>
<th>Product Identifier</th>
<th>%*</th>
<th>GHS Ingredient Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Water</td>
<td>(CAS-No.) 7732-18-5</td>
<td>63.1 - 72</td>
<td>Not classified</td>
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<tr>
<td></td>
<td>Hydrochloric acid</td>
<td>(CAS-No.) 7647-01-0</td>
<td>28 - 36.9</td>
<td>Met. Corr. 1, H290</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1A, H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 2, H401</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STOT 3, H335</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16
*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

Description of First-aid Measures
General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Rinse cautiously with water for at least 30 minutes. Get immediate medical advice/attention. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention. Chemical burns must be treated promptly by a physician.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention. Call a poison center or physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Corrosive to eyes, respiratory system and skin.

Inhalation: Corrosive to the respiratory tract. Be aware that symptoms of lung edema (shortness of breath) may develop up to 24 hours after exposure

Skin Contact: Causes severe irritation which will progress to chemical burns.

Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.
Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic Symptoms: Repeated exposure may cause inflammation of the respiratory tract, chronic bronchitis, and etching of dental enamel.

Indication of Any Immediate Medical Attention and Special Treatment Needed
If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media
Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide. Use water with caution. Contact with water will generate considerable heat.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture
Fire Hazard: Not flammable.
Explosion Hazard: Product is not explosive.
Reactivity: May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction. Toxic gases may evolve on burning.

Advice for Firefighters
Precautionary Measures Fire: Exercise caution when fighting any chemical fire.
Firefighting Instructions: Use water spray or fog for cooling exposed containers.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Hazardous Combustion Products: In the event of a fire the following can be released: chlorine, hydrogen, hydrogen chloride gas.
Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections
Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray.
For Non-Emergency Personnel
Protective Equipment: Use appropriate personal protective equipment (PPE).
For Emergency Personnel
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.
Ventilate area.

Environmental Precautions
Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and Materials for Containment and Cleaning Up
For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.
Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb spillage to prevent material damage. Cautiously neutralize spilled liquid. Neutralization may release carbon dioxide. Dilute acid with water and neutralize with sodium carbonate (soda ash) or lime. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections
See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling
Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist, and spray. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

Additional Hazards When Processed: May be corrosive to metals. May release corrosive vapors.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.
Hydrochloric Acid

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Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from extremely high or low temperatures and incompatible materials. Store in original container or corrosive resistant and/or lined container.


Specific End Use(s)

Acidizing of petroleum wells, boiler scale removal, pickling & metal cleaning, chemical intermediate ore reduction, pH control.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

<table>
<thead>
<tr>
<th>Hydrochloric acid (7647-01-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico OEL Ceiling (mg/m³)</td>
<td>7 mg/m³</td>
</tr>
<tr>
<td>Mexico OEL Ceiling (ppm)</td>
<td>5 ppm</td>
</tr>
<tr>
<td>USA ACGIH ACGIH Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>USA ACGIH ACGIH chemical category</td>
<td>Not Classifiable as a Human Carcinogen</td>
</tr>
<tr>
<td>USA OSHA OSHA PEL (Ceiling) (mg/m³)</td>
<td>7 mg/m³</td>
</tr>
<tr>
<td>USA OSHA OSHA PEL (Ceiling) (ppm)</td>
<td>5 ppm</td>
</tr>
<tr>
<td>USA NIOSH NIOSH REL (ceiling) (mg/m³)</td>
<td>7 mg/m³</td>
</tr>
<tr>
<td>USA NIOSH NIOSH REL (ceiling) (ppm)</td>
<td>5 ppm</td>
</tr>
<tr>
<td>USA IDLH US IDLH (ppm)</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Alberta OEL Ceiling (mg/m³)</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>Alberta OEL Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>British Columbia OEL Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>Manitoba OEL Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>New Brunswick OEL Ceiling (mg/m³)</td>
<td>7.5 mg/m³</td>
</tr>
<tr>
<td>New Brunswick OEL Ceiling (ppm)</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Newfoundland &amp; Labrador OEL Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>Nova Scotia OEL Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>Nunavut OEL Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>Northwest Territories OEL Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>Ontario OEL Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>Prince Edward Island OEL Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>Québec PLAFOND (mg/m³)</td>
<td>7.5 mg/m³</td>
</tr>
<tr>
<td>Québec PLAFOND (ppm)</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Saskatchewan OEL Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>Yukon OEL Ceiling (mg/m³)</td>
<td>7 mg/m³</td>
</tr>
<tr>
<td>Yukon OEL Ceiling (ppm)</td>
<td>5 ppm</td>
</tr>
</tbody>
</table>

Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Acid-resistant clothing.

Hand Protection: Wear protective gloves.
**Hydrochloric Acid**

**Safety Data Sheet**


**Eye Protection:** Chemical safety goggles and face shield.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Other Information:** 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>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless or slightly yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Pungent</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>≈ 0</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>108.6 °C (227.48 °F)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>13.3 kPa</td>
</tr>
<tr>
<td>Relative Vapor Density at 20°C</td>
<td>1.268 (air = 1)</td>
</tr>
<tr>
<td>Relative Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.14 - 1.187</td>
</tr>
<tr>
<td>Solubility</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
</tbody>
</table>

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** May be corrosive to Aluminum, stainless steel, carbons steel, copper, bronze. Contact with metals may evolve flammable hydrogen gas. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction.

**Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).

**Possibility of Hazardous Reactions:** Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to Avoid:** Extremely high or low temperatures and incompatible materials.

**Incompatible Materials:** Highly reactive or incompatible with the following materials: metals and alkalis. Reactive or incompatible with the following materials: oxidizing materials, hypochlorites, and cyanide salt.

**Hazardous Decomposition Products:** Thermal decomposition generates: Corrosive vapors.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects - Product

**Acute Toxicity (Oral):** Not classified

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Not classified

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Causes severe skin burns and eye damage.

**pH:** = 0

**Eye Damage/Irritation:** Causes serious eye damage.
Hydrochloric Acid
Safety Data Sheet

pH: ≈ 0

Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): 3
Aspiration Hazard: Not classified

Symptoms/Effects After Inhalation: May cause respiratory tract irritation.
Symptoms/Effects After Skin Contact: Causes severe irritation which will progress to chemical burns.
Symptoms/Effects After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.
Symptoms/Effects After Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Chronic Symptoms: Repeated exposure may cause inflammation of the respiratory tract, chronic bronchitis, and etching of dental enamel.

Information on Toxicological Effects - Ingredient(s)
LD50 and LC50 Data:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>LD50 Dermal Rabbit</th>
<th>LC50 Fish 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (7647-01-0)</td>
<td>&gt; 5010 mg/kg</td>
<td>7.45 mg/l</td>
</tr>
<tr>
<td>IARC Group</td>
<td>3</td>
<td></td>
</tr>
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</table>

SECTION 12: ECOLOGICAL INFORMATION

Toxicity
Ecology - General: Toxic to aquatic life.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>LC50 Fish 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (7647-01-0)</td>
<td>7.45 mg/l</td>
</tr>
<tr>
<td>(Species: Oncorhynchus mykiss - Exposure time: 96h)</td>
<td></td>
</tr>
</tbody>
</table>

Persistence and Degradability
Hydrochloric Acid
Persistence and Degradability: Not established.

Bioaccumulative Potential
Hydrochloric Acid
Bioaccumulative Potential: Not established.

Mobility in Soil: Not available

Other Adverse Effects
Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.
Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

<table>
<thead>
<tr>
<th>TRANSPORTATION CLASSIFICATION</th>
<th>DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification Number</td>
<td>UN1789</td>
<td>UN1789</td>
<td>UN1789</td>
<td>UN1789</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>HYDROCHLORIC ACID</td>
<td>HYDROCHLORIC ACID</td>
<td>HYDROCHLORIC ACID</td>
<td>HYDROCHLORIC ACID</td>
</tr>
<tr>
<td>Transport Hazard Class(es)</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
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</table>

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**Hydrochloric Acid**

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### Packing Group

<table>
<thead>
<tr>
<th>II</th>
<th>II</th>
<th>II</th>
<th>II</th>
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</thead>
</table>

### Environmental Hazards

<table>
<thead>
<tr>
<th>Marine Pollutant</th>
<th>Marine Pollutant</th>
<th>Marine Pollutant</th>
<th>Marine Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td>N/A</td>
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</table>

### Emergency Response

<table>
<thead>
<tr>
<th>ERG Number</th>
<th>ERAP Index</th>
<th>EMS</th>
<th>ERG code (IATA)</th>
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</thead>
<tbody>
<tr>
<td>157</td>
<td>3 000</td>
<td>F-A, S-B</td>
<td>8L</td>
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</tbody>
</table>

### Additional Information

Not applicable

---

### SECTION 15: REGULATORY INFORMATION

#### US Federal Regulations

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>CERCLA RQ</th>
<th>EPCRA 304 RQ</th>
<th>SARA 302 TPQ</th>
<th>SARA 313</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (7647-01-0)</td>
<td>5000 lb</td>
<td>5000 lb (anhydrous and gas only)</td>
<td>500 lb (anhydrous and gas only)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

#### SARA 311/312

- **Hydrochloric Acid**
  - Immediate (acute) health hazard, Sudden release of pressure

#### US TSCA Flags

- Not present

#### US State Regulations

**California Proposition 65**

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Carcinogenicity</th>
<th>Developmental Toxicity</th>
<th>Female Reproductive Toxicity</th>
<th>Male Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (7647-01-0)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**State Right-To-Know Lists**

- **Hydrochloric acid (7647-01-0)**
  - U.S. - Massachusetts - Right To Know List - Yes
  - U.S. - New Jersey - Right to Know Hazardous Substance List - Yes
  - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List - Yes
  - U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances - No
  - U.S. - Pennsylvania - RTK (Right to Know) List - Yes

#### Canadian Regulations

- Listed on the Canadian DSL (Domestic Substances List)
- Not listed on the Canadian NDSL (Non-Domestic Substances List)

#### International Inventories/Lists

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Australia AICS</th>
<th>Turkey CICR</th>
<th>Korea ECL</th>
<th>EU EINECS</th>
<th>EU ELINCS</th>
<th>EU SVHC</th>
<th>EU NLP</th>
<th>Mexico INSQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (7647-01-0)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>China IECSC</th>
<th>Japan ENCS</th>
<th>Japan ISHL</th>
<th>Japan PDSCL</th>
<th>Japan PRTR</th>
<th>Philippines PICCS</th>
<th>New Zealand NZIOC</th>
<th>US TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (7647-01-0)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Preparation or Latest Revision** : 11/10/2017

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada’s Hazardous Products Regulations (HPR).

---

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Hydrochloric Acid
Safety Data Sheet

Revision Summary

<table>
<thead>
<tr>
<th>Section</th>
<th>Change</th>
<th>Date Changed</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>New Product</td>
<td></td>
</tr>
</tbody>
</table>

GHS Full Text Phrases:

<table>
<thead>
<tr>
<th>Aquatic Acute 2</th>
<th>Hazardous to the aquatic environment - Acute Hazard Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation Category 1</td>
</tr>
<tr>
<td>Met. Corr. 1</td>
<td>Many be corrosive to metals Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation Category 1A</td>
</tr>
<tr>
<td>H290</td>
<td>May be corrosive to metals</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H401</td>
<td>Toxic to aquatic life</td>
</tr>
</tbody>
</table>

NFPA 704

NFPA Health Hazard: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA Fire Hazard: 0 - Materials that will not burn under typical fire conditions including intrinsically noncombustible materials such as concrete, stone and sand.

NFPA Reactivity Hazard: 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.

HMIS Rating

Health: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability: 0 Minimal hazard – Material that will not burn.

Physical: 1 Slight Hazard

PPE: See Section 8

NSF® - 60

This product has been certified to NSF/ANSI 60 for a Maximum Use Level (MUL) of 40 mg/L.

Abbreviations and Acronyms

AICS – Australian Inventory of Chemical Substances
AGCH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
ATE - Acute Toxicity Estimate
BCF - Bioconcentration factor
BEI - Biological Exposure Indices (BEI)
CAS No. - Chemical Abstracts Service number
CERCLA RQ - Comprehensive Environmental Response, Compensation, and Liability Act - Reportable Quantity
CICR - Turkish Inventory and Control of Chemicals
EC50 - Median effective concentration
ECL - Korea Existing Chemicals List
EINECS - European Inventory of Existing Commercial Chemical Substances
ELINCS - European List of Notified Chemical Substances
EmS - IMDG Emergency Schedule Fire & Spillage
ENCs - Japanese Existing and New Chemicals Inventory
EPA – Environmental Protection Agency
EPCRA 304 RQ – EPCRA 304 Extremely Hazardous Substance Emergency Planning and Community Right-to-Know-Act – Reportable Quantity
EC30 - Median effective concentration

LC50 - Median Lethal Concentration
LC50 - Median Lethal Dose
LOAE - Lowest Observed Adverse Effect Level
LOEC - Lowest-observed-effect Concentration
Log Pow - Octanol/water Partition Coefficient
NIOSH - National Institute for Occupational Safety and Health
NLP - Europe No Longer Polymers List
NOAEL - No-Observed Adverse Effect Level
NOEC - No-Observed Effect Concentration
NZIOC - New Zealand Inventory of Chemicals
OEL - Occupational Exposure Limits
OSHA – Occupational Safety and Health Administration
PEL - Permissible Exposure Limits
PICCS - Philippine Inventory of Chemicals and Chemical Substances
PDSCL - Japan Poisonous and Deleterious Substances Control Law
PPE – Personal Protective Equipment
PRTR – Japan Pollutant Release and Transfer Register
REL - Recommended Exposure Limit
SADT - Self Accelerating Decomposition Temperature

11/10/2017 EN (English US) SDS#: CHE-4001S 8/9
Hydrochloric Acid
Safety Data Sheet

Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA’S “Right to Know” (29 CFR 1910.1200) and Canada’s WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.