1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Muriatic Acid

Other means of identification

UN-No. UN1789
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Stains
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Sunnyside Corporation
Supplier Address 225 Carpenter Avenue
Wheeling IL 60090 US
Supplier Phone Number Phone:8003238611
Fax:8475419043
Supplier Email sscontact@sunnysidecorp.com
Emergency telephone number Chem Trec 8004249300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
</tbody>
</table>
GHS Label elements, including precautionary statements

**Emergency Overview**

**Signal word** Danger

**Hazard Statements**
Harmful if swallowed
Toxic if inhaled
Causes severe skin burns and eye damage

![Danger Symbol]

**Appearance** Clear to light yellow  **Physical State** Liquid  **Odor** Pungent

**Precautionary Statements - Prevention**
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**
Immediately call a POISON CENTER or doctor/physician

**Eyes**
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 doctor/physician

**Skin**
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

**Inhalation**
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician

**Ingestion**
Rinse mouth
Do NOT induce vomiting
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

**Precautionary Statements - Storage**
Store in a well-ventilated place. Keep container tightly closed
Store locked up

**Precautionary Statements - Disposal**
Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**
Not applicable
Unknown Toxicity
0% of the mixture consists of ingredient(s) of unknown toxicity

Other information
No information available

Interactions with Other Chemicals
No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride</td>
<td>7647-01-0</td>
<td>15 - 40</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret

### 4. FIRST AID MEASURES

**First aid measures**

**General Advice**
Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Eye Contact**
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 doctor.

**Skin Contact**
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

**Inhalation**
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician or poison control center immediately.

**Ingestion**
Do NOT induce vomiting. Rinse mouth. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Self-protection of the first aider**
Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Most important symptoms and effects, both acute and delayed**

**Most Important Symptoms and Effects**
Burning sensation. Coughing and/or wheezing. Difficulty in breathing.

**Indication of any immediate medical attention and special treatment needed**
Notes to Physician
Treat symptomatically. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
Note: Most foams will react with the material and release corrosive/toxic gases.

Specific Hazards Arising from the Chemical
The product causes burns of eyes, skin and mucous membranes.

Uniform Fire Code
Corrosive: Acid-Liquid
Toxic: Liquid

Hazardous Combustion Products
Hydrogen chloride.

Explosion Data
Sensitivity to Mechanical Impact
No.

Sensitivity to Static Discharge
No.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Corrosive hazard. Wear protective gloves/clothing and eye/face protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Wear protective gloves/protective clothing and eye/face protection. Do not touch damaged packages or spilled material. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Environmental Precautions

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for Containment
Dike far ahead of spill to collect runoff water.

Methods for cleaning up
Dam up. Soak up with inert absorbent material. Use personal protective equipment as required. Sweep up and shovel into suitable containers for disposal.
7. HANDLING AND STORAGE

Precautions for safe handling

Handling
Use personal protection equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible Products

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride</td>
<td>Ceiling: 2 ppm</td>
<td>Ceiling: 5 ppm</td>
<td>IDLH: 50 ppm</td>
</tr>
<tr>
<td>7647-01-0</td>
<td>Ceiling: 7 mg/m³</td>
<td>Ceiling: 5 ppm</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value
OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits
NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures
Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Tight sealing safety goggles. Face protection shield.

Skin and Body Protection
Wear protective gloves and protective clothing.

Respiratory Protection
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures
Take off contaminated clothing and wash before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State
Liquid
**Appearance**
- Clear to light yellow

**Color**
- No information available

**Odor**
- Pungent

**Odor Threshold**
- No information available

---

**Property**
- **Values**
- **Remarks/ Method**

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/ Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>2</td>
<td>None known</td>
</tr>
<tr>
<td>Melting / freezing point</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flash Point</td>
<td>5001 °C / 9034 °F</td>
<td>None known</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Miscible in water</td>
<td>None known</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No data available</td>
<td>None known</td>
</tr>
</tbody>
</table>

**Other Information**
- Softening Point: No data available
- VOC Content (%): No data available
- Particle Size: No data available
- Particle Size Distribution: No data available

---

10. **STABILITY AND REACTIVITY**

**Reactivity**
- No data available.

**Chemical stability**
- Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**
- None under normal processing.

**Hazardous Polymerization**
- Hazardous polymerization does not occur.

**Conditions to avoid**
- Exposure to air or moisture over prolonged periods. Excessive heat.

**Incompatible materials**

**Hazardous Decomposition Products**
- Hydrogen chloride.

---

11. **TOXICOLOGICAL INFORMATION**
Information on likely routes of exposure

Product Information
Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation
Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate.

Eye Contact
Specific test data for the substance or mixture is not available. (based on components). Causes serious eye damage.

Skin Contact
Specific test data for the substance or mixture is not available. Causes severe burns.

Ingestion
Specific test data for the substance or mixture is not available. Toxic if swallowed. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride</td>
<td>= 700 mg/kg (Rat)</td>
<td>&gt;5010 mg/kg (Rabbit)</td>
<td>= 3124 ppm (Rat) 1 h</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
Erythema (skin redness). Burning. May cause blindness. Coughing and/or wheezing. Difficulty in breathing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization
No information available.

Mutagenic Effects
No information available.

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride</td>
<td>Group 3</td>
<td>IARC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*IARC (International Agency for Research on Cancer)*
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive Toxicity
No information available.

STOT - single exposure
No information available.

STOT - repeated exposure
No information available.

Chronic Toxicity
Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen.

Target Organ Effects

Aspiration Hazard
No information available.
Numerical measures of toxicity  Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)
1,842.00 mg/kg
ATEmix (inhalation-dust/mist)
1.32 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride</td>
<td></td>
<td>96h LC50: 282 mg/L (Gambusia affinis)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7647-01-0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and Degradability
No information available.

Bioaccumulation
No information available

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods
This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging
Dispose of contents/containers in accordance with local regulations.

US EPA Waste Number
D002

California Hazardous Waste Codes
791

14. TRANSPORT INFORMATION

DOT
UN-No. UN1789
Proper Shipping Name HYDROCHLORIC ACID SOLUTION
Hazard Class 8
Packing Group II
Description UN1789, HYDROCHLORIC ACID SOLUTION, 8, II
Emergency Response Guide Number 157

TDG
UN-No. UN1789
Proper Shipping Name: HYDROCHLORIC ACID SOLUTION
Hazard Class: 8
Packing Group: II
Description: UN1789, HYDROCHLORIC ACID SOLUTION, 8, II

MEX
UN-No.: UN1789
Proper Shipping Name: HYDROCHLORIC ACID SOLUTION
Hazard Class: 8
Packing Group: II
Description: UN1789, HYDROCHLORIC ACID SOLUTION, 8, II

ICAO
UN-No.: UN1789
Proper Shipping Name: HYDROCHLORIC ACID SOLUTION
Hazard Class: 8
Packing Group: II
Description: UN1789, HYDROCHLORIC ACID SOLUTION, 8, II

IATA
UN-No.: UN1789
Proper Shipping Name: HYDROCHLORIC ACID SOLUTION
Hazard Class: 8
Packing Group: II
Description: UN1789, HYDROCHLORIC ACID SOLUTION, 8, II

IMDG/IMO
UN-No.: UN1789
Proper Shipping Name: HYDROCHLORIC ACID SOLUTION
Hazard Class: 8
Packing Group: II
EmS No.: F-A, S-B
Description: UN1789, HYDROCHLORIC ACID SOLUTION, 8, II

RID
UN-No.: UN1789
Proper Shipping Name: HYDROCHLORIC ACID SOLUTION
Hazard Class: 8
Packing Group: II
Classification code: C1
Description: UN1789, HYDROCHLORIC ACID SOLUTION, 8, II

ADR
UN-No.: UN1789
Proper Shipping Name: HYDROCHLORIC ACID SOLUTION
Hazard Class: 8
Packing Group: II
Classification code: C1
Description: UN1789, HYDROCHLORIC ACID SOLUTION, 8, II

ADN
UN-No.: UN1789
Proper Shipping Name: HYDROCHLORIC ACID SOLUTION
Hazard Class: 8
Packing Group: II
Classification code: C1
Special Provisions: 520
Description: UN1789, HYDROCHLORIC ACID SOLUTION, 8, II
Hazard Labels: 8
Limited Quantity: 1 L
15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride - 7647-01-0</td>
<td>7647-01-0</td>
<td>15 - 40</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

- Acute Health Hazard: Yes
- Chronic Health Hazard: No
- Fire Hazard: No
- Sudden release of pressure hazard: No
- Reactive Hazard: No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride 7647-01-0</td>
<td>5000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride 7647-01-0</td>
<td>5000 lb</td>
<td>5000 lb</td>
<td>RQ 5000 lb final RQ RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Rhode Island</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride 7647-01-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

International Regulations

Mexico
National occupational exposure limits
<table>
<thead>
<tr>
<th>Component</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride</td>
<td></td>
<td>Mexico: Ceiling 5 ppm</td>
</tr>
<tr>
<td>7647-01-0 ( 15 - 40 )</td>
<td></td>
<td>Mexico: Ceiling 7 mg/m³</td>
</tr>
</tbody>
</table>

Mexico - Occupational Exposure Limits - Carcinogens

Canada
WHMIS Hazard Class
E - Corrosive material
D1A - Very toxic materials

16. OTHER INFORMATION

NFPA
Health Hazards 3
Flammability 0
Instability 1
Physical and Chemical Hazards -
Physical Hazard 1

HMIS
Health Hazards 3
Flammability 0
Physical Hazard 1

Prepared By
Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Revision Date
08-Nov-2013

Revision Note
No information available

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of Safety Data Sheet