

# SAFETY DATA SHEET

M34514 - ANSI - EN



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## HYDROCHLORIC ACID (HCl) (ALL GRADES)

SDS No.: M34514

SDS Revision Date: 21-Jan-2016

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### SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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<b>Company Identification:</b>	Occidental Chemical Corporation 5005 LBJ Freeway P.O. Box 809050 Dallas, TX 75380-9050 1-800-752-5151
<b>24 Hour Emergency Telephone Number:</b>	1-800-733-3665 or 1-972-404-3228 (USA); CANUTEC (Canada): 1-613-996-6666; CHEMTREC (within USA and Canada): 1-800-424-9300; CHEMTREC (outside USA and Canada): +1 703-527-3887; CHEMTREC Contract No: CCN16186
<b>To Request an SDS:</b>	MSDS@oxy.com or 1-972-404-3245
<b>Customer Service:</b>	1-800-752-5151 or 1-972-404-3700
<b>Product Identifier:</b>	<b>HYDROCHLORIC ACID (HCl) (ALL GRADES)</b>
<b>Trade Name:</b>	Hydrochloric Acid (HCl) aqueous all grades
<b>Synonyms:</b>	Muriatic Acid, HCl Solution, Aqueous hydrogen chloride
<b>Product Use:</b>	Process chemical, Metal cleaning, Water purification, Petroleum Industry
<b>Uses Advised Against:</b>	None identified

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### SECTION 2. HAZARDS IDENTIFICATION

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**OSHA REGULATORY STATUS:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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### EMERGENCY OVERVIEW:

**Color:** Colorless  
**Physical State:** Liquid  
**Appearance:** Clear  
**Odor:** Irritating, Pungent, Sharp

**Signal Word:** Danger

**MAJOR HEALTH HAZARDS:** CORROSIVE. CAUSES SEVERE SKIN BURNS AND SERIOUS EYE DAMAGE. HARMFUL IF SWALLOWED. HARMFUL IF INHALED. CAUSES DAMAGE TO TEETH THROUGH PROLONGED OR REPEATED EXPOSURES.

**PHYSICAL HAZARDS:** Contact with metals may evolve flammable hydrogen gas. May spatter or generate heat when mixed with water.

**PRECAUTIONARY STATEMENTS:** Do not get in eyes, on skin, or on clothing. Wear gloves, protective clothing, eye, and face protection. Do not breathe mist, vapors, or spray. Use outdoors or in a well-ventilated area. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Keep separated from incompatible substances.

**ADDITIONAL HAZARD INFORMATION:** This material is corrosive. To treat contacted tissue, flush with water to dilute. There is no specific antidote.

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### GHS CLASSIFICATION:

GHS: CONTACT HAZARD - SKIN:	Category 1B - Causes severe skin burns and eye damage.
GHS: CONTACT HAZARD - EYE:	Category 1 - Causes serious eye damage
GHS: ACUTE TOXICITY - INHALATION:	Category 4 - Harmful if inhaled
GHS: ACUTE TOXICITY - ORAL:	Category 4 - Harmful if swallowed.
GHS: TARGET ORGAN TOXICITY (REPEATED EXPOSURE):	Category 1 - Causes damage to teeth through prolonged or repeated exposure
GHS: TARGET ORGAN TOXICITY (REPEATED EXPOSURE):	Category 1 - Causes damage to teeth through prolonged or repeated exposure
GHS: CARCINOGENICITY:	Not classified as a carcinogen per GHS criteria. This material is not classifiable as to its carcinogenicity to humans (Group 3 - IARC). ACGIH - A4 Carcinogen - Not classifiable as a human carcinogen.

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**UNKNOWN ACUTE TOXICITY:** Not applicable. 100% of this product consists of ingredient(s) of known acute toxicity.

**GHS SYMBOL:** Corrosive, Health hazard, Exclamation mark



**GHS SIGNAL WORD:** DANGER

### GHS HAZARD STATEMENTS:

#### GHS - Health Hazard Statement(s)

- Causes severe skin burns and eye damage
- Causes serious eye damage
- Harmful if swallowed
- Harmful if inhaled
- Causes damage to organs through prolonged or repeated exposure (teeth)

#### GHS - Precautionary Statement(s) - Prevention

- Wear protective gloves, protective clothing, eye, and face protection
- Do not breathe mist, vapors, or spray
- Wash thoroughly after handling
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area

#### GHS - Precautionary Statement(s) - Response

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- Immediately call a POISON CENTER or doctor/physician
- Wash contaminated clothing before reuse
- IF INHALED: Remove person to fresh air and keep comfortable for breathing
- Call a POISON CENTER or doctor/physician if you feel unwell
- Specific treatment (see First Aid information on product label and/or Section 4 of the SDS)

#### GHS - Precautionary Statement(s) - Storage

- Store locked up

#### GHS - Precautionary Statement(s) - Disposal

- Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

#### Hazards Not Otherwise Classified (HNOC)

None identified

**See Section 11: TOXICOLOGICAL INFORMATION**

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms:** Muriatic Acid, HCl Solution, Aqueous hydrogen chloride

Contains Hydrochloric Acid [Hydrogen Chloride]

Component	Percent [%]	CAS Number
Water	63 - 91	7732-18-5
Hydrochloric Acid [Hydrogen Chloride]	9-36	7647-01-0

### SECTION 4. FIRST AID MEASURES

**INHALATION:** If inhaled and adverse effects occur, remove victim to fresh air and keep at rest in a position comfortable for breathing. Evaluate ABC's (is Airway constricted, is Breathing occurring, and is blood Circulating) and treat symptomatically. IF exposed or concerned: Get medical advice/attention. If you feel unwell, GET MEDICAL ATTENTION IMMEDIATELY.

**SKIN CONTACT:** If on skin or hair, immediately flush contaminated areas with water. Immediately remove all contaminated clothing, jewelry, and shoes. Rinse skin with large amounts of water. Thoroughly clean and dry contaminated clothing and shoes before reuse. The specific treatment is dilution with water. There is no antidote. If you feel unwell, IMMEDIATELY CONTACT A POISON CENTER, PHYSICIAN/DOCTOR, OR GET MEDICAL ATTENTION.

**EYE CONTACT:** Immediately rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Continued irrigation may be necessary to ensure neutral pH. Water or saline may be used. GET MEDICAL ATTENTION IMMEDIATELY.

**INGESTION:** If swallowed: Rinse mouth. Do NOT induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. Never give anything by mouth to an unconscious or convulsive person. GET MEDICAL ATTENTION IMMEDIATELY.

**Most Important Symptoms/Effects (Acute and Delayed)** Hydrochloric acid may be corrosive to the eyes, skin, and mucus membranes. It may be corrosive to any tissue it comes in contact with. Depending on the concentration, duration, and nature of the exposure, it can cause serious burns and extensive tissue destruction.

**Acute Symptoms/Effects:** Listed below.

**Inhalation (Breathing):** Respiratory System Effects: Inhalation of this material may cause: irritation of the respiratory tract with sore throat, coughing, shortness of breath, hoarseness, laryngeal spasms, upper respiratory tract edema, inflammation and ulceration, hemorrhage, chest pain, and pulmonary edema. Measurements of distress include increased respiration rate and decreased tidal volume, decreased forced expiratory volume, increased airway resistance, and reduced vital capacity. You may observe sudden circulatory collapse, glottis or esophageal edema and death.

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**Skin:** Skin Corrosion: Concentrated hydrochloric acid is corrosive to tissue, possibly causing redness, irritation, burns, ulceration, scarring, and possible necrosis (tissue death). Severe burns have been fatal. Sudden circulatory collapse can occur with shock if large areas of skin have been burned.

**Eye:** Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn.

**Ingestion (Swallowing):** Gastrointestinal System Effects: Acute ingestion of concentrated hydrochloric acid may cause nausea, vomiting, abdominal pain, diarrhea, gastrointestinal bleeding, perforation, necrosis, scarring, acidosis, and sudden circulatory collapse. May be fatal if swallowed.

**Delayed Symptoms/Effects:**

- Respiratory System Effects: Chronic occupational exposure to hydrochloric acid has been reported to cause chronic bronchitis
- Skin: Repeated and prolonged skin contact may cause a chronic dermatitis
- Eye: Blindness, resulting from corneal burns, damage/loss of internal contents of eye, and perforation of globe
- Gastrointestinal Effects: Chronic occupational exposure has been reported to cause gastritis
- Teeth: Prolonged exposure to low concentrations may also cause dental discoloration and erosion

**Interaction with Other Chemicals Which Enhance Toxicity:** None known.

**Medical Conditions Aggravated by Exposure:** May aggravate preexisting conditions such as: eye disorders that decrease tear production or have reduced integrity of the eye; skin disorders that compromise the integrity of the skin; and respiratory conditions including asthma and other breathing disorders.

**Protection of First-Aiders:** Protect yourself by avoiding contact with this material. Avoid contact with skin and eyes. Do not breathe dust, fume, gas, mist, vapors, or spray. Do not ingest. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations.

**Notes to Physician:** Treat as a corrosive substance. Do not attempt to neutralize pH with sodium bicarbonate. Treat via dilution. Water or milk may be used. There is no antidote. Severe burns have been fatal. Treatment is supportive care. Follow normal parameters for airway, breathing, and circulation.

## SECTION 5. FIRE-FIGHTING MEASURES

**Fire Hazard:** Not combustible, but if involved in a fire decomposes to produce irritants and toxic gases.

**Extinguishing Media:** Use media appropriate for surrounding fire.

**Fire Fighting:** Keep unnecessary people away, isolate hazard area and deny entry. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Move container from fire area if it can be done without risk. Cool non-leaking containers with water. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Component	Immediately Dangerous to Life/ Health (IDLH)
Hydrochloric Acid [Hydrogen Chloride] 7647-01-0	50 ppm IDLH

**Hazardous Combustion Products:** Hydrogen chloride, Chlorine, Hydrogen gas

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<b>Sensitivity to Mechanical Impact:</b>	Not sensitive.
<b>Sensitivity to Static Discharge:</b>	Not sensitive.
<b>Lower Flammability Level (air):</b>	Not flammable
<b>Upper Flammability Level (air):</b>	Not flammable
<b>Flash point:</b>	Not flammable
<b>Auto-ignition Temperature:</b>	Not determined

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

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### Personal Precautions:

Remove all ignition sources. Keep unnecessary and unprotected persons away. Isolate hazard area and deny entry. Stop spill/leak if no risk involved. Consider evacuation of personnel located downwind if material is leaking. Do not get in eyes, on skin or on clothing. Do not breathe dust, fume, gas, mist, vapors, or spray. Do not ingest. Wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS.

### Methods and Materials for Containment and Cleaning Up:

Completely contain spilled materials with dikes, sandbags, etc. Shut off ventilation system if needed. Reuse or reprocess where possible. Neutralize with soda ash or dilute caustic soda. Collect with appropriate, noncombustible absorbent and place into suitable container. Liquid material may be removed with a properly rated vacuum truck.

### Environmental Precautions:

Keep out of water supplies and sewers. This material is acidic and may lower the pH of the surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies.

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## SECTION 7. HANDLING AND STORAGE

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### Precautions for Safe Handling:

Avoid breathing vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the MSDS. Use only equipment and hoses approved for this material. NEVER add water to this product. Always add product to large quantities of water. When mixing, slowly add to water to minimize heat generation and spattering. Water or caustic solutions should never be added directly to this product because of violent reaction and spattering.

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**Safe Storage Conditions:**

Store and handle in accordance with all current regulations and standards. Store in rubber-lined steel, acid-resistant plastic or glass containers. Keep container tightly closed. Store in a cool, dry area. Store in a well-ventilated area. Keep away from heat, sparks and open flames. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet). Do not store in aluminum container or use aluminum fittings or transfer lines. Protect from physical damage. Dike and vent storage tanks.

**Incompatibilities/ Materials to Avoid:**

Alkalis, metals, oxidizing agents, Mercuric sulfate, Perchloric acid, Carbides of calcium, cesium, rubidium, Acetylides of cesium and rubidium, Phosphides of calcium and uranium, Lithium silicide

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Regulatory Exposure Limit(s):** Listed below for the product components that have non-regulatory occupational exposure limits (OEL's).

Component	OSHA Final PEL TWA	OSHA Final PEL STEL	OSHA Final PEL Ceiling
Hydrochloric Acid [Hydrogen Chloride] 7647-01-0	-----	-----	5 ppm 7 mg/m <sup>3</sup>

*OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration; PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit*

**NON-REGULATORY EXPOSURE LIMIT(S):** Listed below for the product components that have non-regulatory occupational exposure limits (OEL's).

Component	ACGIH TWA	ACGIH STEL	ACGIH Ceiling	OSHA TWA (Vacated)	OSHA STEL (Vacated)	OSHA Ceiling (Vacated)
Hydrochloric Acid [Hydrogen Chloride]	-----	-----	2 ppm	-----	-----	5 ppm 7 mg/m <sup>3</sup>

- *The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown, are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).*

- *The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.*

Component	OXY REL 8 hr TWA	OXY REL STEL	OXY REL Ceiling
Hydrochloric Acid [Hydrogen Chloride] 7647-01-0 ( 9-36 )			2 ppm

**ENGINEERING CONTROLS:** Use closed systems when possible. Provide local exhaust ventilation where vapor or mist may be generated. Ensure compliance with applicable exposure limits.

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**PERSONAL PROTECTIVE EQUIPMENT:**

**Eye Protection:** Wear chemical safety goggles with a face-shield to protect against eye and skin contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Skin and Body Protection:** Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Always place pants legs over boots.

**Hand Protection:** Wear appropriate chemical resistant gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove.

**Protective Material Types:**

- Nitrile
- Neoprene
- Butyl rubber
- Polyvinyl chloride (PVC)
- Responder®
- Trelchem® HPS
- Tychem®

**Respiratory Protection:** Where vapor or mist concentration exceeds or is likely to exceed applicable exposure limits, a NIOSH approved respirator with acid gas cartridges (appropriate for hydrogen chloride) is required. When an air-purifying respirator is not adequate, for exposures above the IDLH or for spills and/or emergencies of unknown concentrations, a NIOSH approved self-contained breathing apparatus or airline respirator with a full-face piece and with an auxiliary self contained escape pack is required. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

Component	Immediately Dangerous to Life/ Health (IDLH)
Hydrochloric Acid [Hydrogen Chloride] 7647-01-0	50 ppm IDLH

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Liquid
<b>Appearance:</b>	Clear
<b>Color:</b>	Colorless
<b>Odor:</b>	Irritating, Pungent, Sharp
<b>Odor Threshold [ppm]:</b>	0.3 ppm (causes olfactory fatigue).
<b>Molecular Weight:</b>	36.46
<b>Molecular Formula:</b>	HCl
<b>Boiling Point/Range:</b>	140 - 221°F (60 - 105 °C)
<b>Freezing Point/Range:</b>	-29 to 5 °F (-34 to -15 °C).
<b>Melting Point/Range:</b>	Not applicable to liquids
<b>Vapor Pressure:</b>	14.6 - 80 mmHg @ 20 °C
<b>Vapor Density (air=1):</b>	1.3 @ 20 °C
<b>Relative Density/Specific Gravity (water=1):</b>	1.05 - 1.18
<b>Density:</b>	8.75 - 9.83 lbs/gal

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<b>Water Solubility:</b>	100%
<b>pH:</b>	0.03647 wt% HCl solution (364 ppm) has a pH of 2
<b>Volatility:</b>	9 - 36% by volume
<b>Evaporation Rate (ether=1):</b>	< 1.00 (butyl acetate = 1)
<b>Partition Coefficient (n-octanol/water):</b>	No data available
<b>Flash point:</b>	Not flammable
<b>Flammability (solid, gas):</b>	Not flammable
<b>Lower Flammability Level (air):</b>	Not flammable
<b>Upper Flammability Level (air):</b>	Not flammable
<b>Auto-ignition Temperature:</b>	Not determined
<b>Viscosity:</b>	No data available

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**SECTION 10. STABILITY AND REACTIVITY**

**Reactivity:** Hydrochloric acid reacts vigorously with alkalis and with many organic materials. Reacts with strong oxidizing materials causing the release of chlorine.

**Chemical Stability:** Stable at normal temperatures and pressures.

**Possibility of Hazardous Reactions:**

Avoid heat, flames, sparks and other sources of ignition. Mixing with water may cause splattering and release of large amounts of heat. Will react with some metals forming flammable hydrogen gas. Hydrogen chloride may react with cyanide, forming lethal concentrations of hydrocyanic acid. Avoid contact with incompatible materials.

**Conditions to Avoid:** (e.g., static discharge, shock, or vibration) -. None known.

**Incompatibilities/ Materials to Avoid:** Alkalis. metals. oxidizing agents. Mercuric sulfate. Perchloric acid. Carbides of calcium, cesium, rubidium. Acetylides of cesium and rubidium. Phosphides of calcium and uranium. Lithium silicide.

**Hazardous Decomposition Products:** chlorine, hydrogen chloride, hydrogen gas

**Hazardous Polymerization:** Will not occur.

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**SECTION 11. TOXICOLOGICAL INFORMATION****TOXICITY DATA:****PRODUCT TOXICITY DATA:** Hydrochloric Acid (HCl) (All Grades)

<b>LD50 Oral:</b> 700 mg/kg (Rat)	<b>LD50 Dermal:</b> >5010 mg/kg (Rabbit)	<b>LC50 Inhalation:</b> 3124 ppm (1 hr - Rat), converted to 1562 ppm (4 hr - Rat)
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**COMPONENT TOXICITY DATA:**

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**Note:** The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

Component	LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
Water 7732-18-5	90 mL/kg (Rat)	-----	-----
Hydrochloric Acid [Hydrogen Chloride] 7647-01-0	238 - 277 mg/kg (Rat)	5010 mg/kg (Rabbit)	1.68 mg/L (1 hr-Rat)

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**POTENTIAL HEALTH EFFECTS:**

- Eye contact:** Causes serious eye damage. Eye exposure may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn.
- Skin contact:** Can cause severe skin burns. Concentrated hydrochloric acid is corrosive to tissue, causing redness, irritation (possibly severe), burns, ulceration, scarring, and possible necrosis (tissue death).
- Inhalation:** Inhalation of this material may cause: irritation of the respiratory tract with sore throat, coughing, shortness of breath, hoarseness, laryngeal spasms, upper respiratory tract edema, inflammation and ulceration, hemorrhage, chest pain, and pulmonary edema.
- Ingestion:** Ingestion of concentrated hydrochloric acid can cause nausea, vomiting, abdominal pain, diarrhea, gastrointestinal bleeding, perforation, necrosis and scarring, acidosis, and sudden circulatory collapse. May be fatal if swallowed.
- Chronic Effects:** Repeated or prolonged skin exposure to dilute solutions may result in dermatitis. Photosensitization has been reported in chronic occupational skin exposures. Discoloration and erosion of the teeth may occur as a result of long term exposure. Chronic occupational inhalation exposure to hydrochloric acid has been reported to cause chronic bronchitis.

**SIGNS AND SYMPTOMS OF EXPOSURE:**

Listed below.

- Inhalation (Breathing):** Respiratory System Effects: Inhalation of this material may cause: irritation of the respiratory tract with sore throat, coughing, shortness of breath, hoarseness, laryngeal spasms, upper respiratory tract edema, inflammation and ulceration, hemorrhage, chest pain, and pulmonary edema. Measurements of distress include increased respiration rate and decreased tidal volume, decreased forced expiratory volume, increased airway resistance, and reduced vital capacity. You may observe sudden circulatory collapse, glottis or esophageal edema and death.
- Skin:** Skin Corrosion: Concentrated hydrochloric acid is corrosive to tissue, possibly causing redness, irritation, burns, ulceration, scarring, and possible necrosis (tissue death). Severe burns have been fatal. Sudden circulatory collapse can occur with shock if large areas of skin have been burned.
- Eye:** Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn.

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**Ingestion (Swallowing):** Gastrointestinal System Effects: Acute ingestion of concentrated hydrochloric acid may cause nausea, vomiting, abdominal pain, diarrhea, gastrointestinal bleeding, perforation, necrosis, scarring, acidosis, and sudden circulatory collapse. May be fatal if swallowed.

**TOXICITY:**

Hydrochloric acid is corrosive to skin, eyes, and mucus membranes and causes immediate, severe irritation and corrosion of exposed tissue. Prolonged exposures may cause discoloration and erosion of teeth, gastritis, photosensitization, and bronchitis. Ingestion may be fatal.

**Interaction with Other Chemicals Which Enhance Toxicity:** None known.

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**GHS HEALTH HAZARDS:**

**GHS: ACUTE TOXICITY - ORAL:** Category 4 - Harmful if swallowed.

**GHS: ACUTE TOXICITY - INHALATION:** Category 4 - Harmful if inhaled.

**GHS: CONTACT HAZARD - EYE:** Category 1 - Causes serious eye damage

**GHS: CONTACT HAZARD - SKIN:** Category 1B - Causes severe skin burns and eye damage

**Skin Absorbent / Dermal Route?** No.

**GHS: CARCINOGENICITY:**

Not classified as a carcinogen per GHS criteria. This material is not classifiable as to its carcinogenicity to humans (Group 3 - IARC). ACGIH - A4 Carcinogen - Not classifiable as a human carcinogen.

Component	NTP:	IARC (GROUP 1):	IARC (GROUP 2):	OSHA:
Hydrochloric Acid [Hydrogen Chloride]	Not listed	Not listed	Not listed	Listed

**SPECIFIC TARGET ORGAN TOXICITY (Repeated or Prolonged Exposure):**

Category 1 - Teeth

**SECTION 12. ECOLOGICAL INFORMATION****ECOTOXICITY DATA:****FATE AND TRANSPORT:**

**BIODEGRADATION:** This material is inorganic and not subject to biodegradation

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**PERSISTENCE:** This material is believed not to persist in the environment  
This material is believed to exist in the disassociated state in the environment  
If released to soil, hydrogen chloride will sink into the soil. The acid will dissolve some soil material (in particular, anything with a carbonate base) and will be somewhat neutralized. The remaining portion is thought to transport downward to the water table. If released to water, it dissociates almost completely and will be neutralized by natural alkalinity and carbon dioxide

**BIOCENTRATION:** This material is not expected to bioconcentrate in organisms.

**ADDITIONAL ECOLOGICAL INFORMATION:** This material has exhibited toxicity to terrestrial organisms. May decrease pH of waterways and adversely affect aquatic life. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your local or regional regulatory water boards and/or other appropriate regulatory offices.

### SECTION 13. DISPOSAL CONSIDERATIONS

**Waste from material:**

Reuse or reprocess, if possible. May be subject to disposal regulations. Dispose in accordance with all applicable regulations.

**Container Management:**

Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.

### SECTION 14. TRANSPORT INFORMATION

**IMPORTANT:** The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport

#### LAND TRANSPORT

**U.S. DOT 49 CFR 172.101:**

**UN NUMBER:** UN1789  
**PROPER SHIPPING NAME:** Hydrochloric acid solution  
**HAZARD CLASS/ DIVISION:** 8  
**PACKING GROUP:** II  
**LABELING REQUIREMENTS:** 8  
**RQ (lbs):** RQ 5,000 Lbs. (Hydrochloric acid)

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**CANADIAN TRANSPORTATION OF DANGEROUS GOODS:**

**UN NUMBER:** UN1789  
**SHIPPING NAME:** Hydrochloric acid solution  
**CLASS OR DIVISION:** 8  
**PACKING/RISK GROUP:** II  
**LABELING REQUIREMENTS:** 8

**MARITIME TRANSPORT (IMO / IMDG) :**

**UN NUMBER:** UN1789  
**PROPER SHIPPING NAME:** Hydrochloric acid solution  
**HAZARD CLASS / DIVISION:** 8  
**Packing Group:** II  
**LABELING REQUIREMENTS:** 8

**SECTION 15. REGULATORY INFORMATION****U.S. REGULATIONS****OSHA REGULATORY STATUS:**

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

**CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):**

If a release is reportable under CERCLA section 103, notify the state emergency response commission and local emergency planning committee. In addition, notify the National Response Center at (800) 424-8802 or (202) 426-2675.

Component	CERCLA Reportable Quantities:
Hydrochloric Acid [Hydrogen Chloride]	5000 lb (final RQ)

**SARA EHS Chemical (40 CFR 355.30)**

If a release is reportable under EPCRA, notify the state emergency response commission and local emergency planning committee. If the TPQ is met, facilities are subject to reporting requirements under EPCRA Sections 311 and 312.

Component	EPCRA RQs	Section 302 Threshold Planning Quantity (TPQs)
Hydrochloric Acid [Hydrogen Chloride]	5000 lb (EPCRA RQ)	500 lb TPQ

**EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):**

Acute Health Hazard, Reactive Hazard, Chronic Health Hazard, Extremely Hazardous

**EPCRA SECTION 313 (40 CFR 372.65):**

The following chemicals are listed in 40 CFR 372.65 and may be subject to Community Right-to Know Reporting requirements

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Component	Status:
Hydrochloric Acid [Hydrogen Chloride]	1.0 %

**DEPARTMENT OF HOMELAND SECURITY (DHS)- Chemical Facility Anti-Terrorism Standards (6 CFR 27):**

This product is regulated under DHS as follows:

**OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):**

Not regulated

**NATIONAL INVENTORY STATUS**

Component	U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):
Water 7732-18-5 ( 63 - 91 )	Listed
Hydrochloric Acid [Hydrogen Chloride] 7647-01-0 ( 9-36 )	Listed

**TSCA 12(b):** This product is not subject to export notification.**Canadian Chemical Inventory:** All components of this product are listed on either the DSL or the NDSL.**STATE REGULATIONS**

Component	California Proposition 65 Cancer WARNING:	California Proposition 65 CRT List - Male reproductive toxin:	California Proposition 65 CRT List - Female reproductive toxin:	Massachusetts Right to Know Hazardous Substance List	New Jersey Right to Know Hazardous Substance List	New Jersey Special Health Hazards Substance List
Hydrochloric Acid [Hydrogen Chloride] 7647-01-0	Not Listed	Not Listed	Not Listed	Listed	1012	corrosive

Component	New Jersey - Environmental Hazardous Substance List	Pennsylvania Right to Know Hazardous Substance List	Pennsylvania Right to Know Special Hazardous Substances	Pennsylvania Right to Know Environmental Hazard List	Rhode Island Right to Know Hazardous Substance List
Water 7732-18-5	Not Listed	Listed	Not Listed	Not Listed	Not Listed
Hydrochloric Acid [Hydrogen Chloride] 7647-01-0	Listed	Listed	Not Listed	Present	Listed

**CANADIAN REGULATIONS**

• This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations

Component	Water
<b>WHMIS - Classifications of Substances:</b>	
Uncontrolled product according to WHMIS classification criteria	
Component	Hydrochloric Acid [Hydrogen Chloride]

## HYDROCHLORIC ACID (HCl) (ALL GRADES)

SDS No.: M34514

SDS Revision Date: 21-Jan-2016

**WHMIS - Classifications of Substances:**

A,D1A,E  
D1A,E  
E  
D1B,E

## SECTION 16. OTHER INFORMATION

**Prepared by:** OxyChem Corporate HESS - Product Stewardship

**Rev. Date:** 21-Jan-2016

**Disclaimer:**

This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

**HMIS: (SCALE 0-4)** (Rated using National Paint & Coatings Association HMIS: Rating Instructions, 2nd Edition)

**Health Rating:** 3\*

**Flammability Rating:** 0

**Reactivity Rating:** 0

**Health Rating:** 3

**Flammability:** 0

**Reactivity Rating:** 1

**Reason for Revision:**

- Emergency Overview was revised: SEE SECTION 2
- Changed the GHS classification: SEE SECTION 2
- Toxicological Information has been revised: SEE SECTION 11
- Regulatory Information Changes: SEE SECTION 15

**IMPORTANT:**

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OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees

**End of Safety Data Sheet**