

MATERIAL SAFETY DATA SHEET (C1)R
G.J. Chemical Co

Section I Identification

Distribution Source-----> G.J. Chemical Co., Inc.
Street Address-----> 40 Veronica Avenue, Somerset, NJ 08873
Telephone Number-----> 973-589-1450
Emergency Telephone Number> 1-800-424-9300 Chemtrec

Product Name-----> Hydrochloric Acid 36.5-38%(All Grades)
Product Number-----> 176710, 176725, 176740
Chemical Name or Synonyms--> Hydrogen Chloride Aqueous Solution,
Chlorhydric Acid, Muriatic Acid
Molecular Formula/Weight-----> HCL/36.46
RTECS Number-----> MW 4025000

Section II Ingredients

| Ingredient | CAS No. | % by WT. | | Exposure |
|-----------------------|-----------|----------|--------|-----------------|
| | | Range | Limits | |
| Hydrochloric Acid | 7647-01-0 | 36.5-38 | | 2ppm TLV(ACGIH) |
| EC-No.231-595-7 | | | | 5ppm TWA(OSHA) |
| Index-No.017-002-01-X | | | | 5ppm TWA(NIOSH) |
| | | | | 50ppm (IDLH) |
| Water | 7732-18-5 | 63-63.5 | | |
| EC-No.231-791-2 | | | | |

Key: (PEL) = OSHA
(TLV) = Threshold Limit Value OSHA & ACGIH (STEL) = ACGIH
CAS = Chemical Abstracts Registry Number (TWA) = Time Weighted Average
IDLH = Immediate Danger to Life and Health

Section III Health Hazard Data

Appearance: Clear, colorless to pale yellow liquid.

Emergency Overview:

DANGER!

- ~Causes eye and skin burns.
- ~Causes digestive and respiratory tract burns.
- ~May be fatal if inhaled or swallowed.
- ~Repeated or prolonged exposure may cause erosion of exposed teeth.
- ~ Corrosive to metal.
- ~ Target Organs: Respiratory System, Gastrointestinal System, Teeth, Eyes and Skin.

GHS Classification

Skin corrosion (Category 1B)

Serious eye damage (Category 1)

Specific target organ toxicity - single exposure (Category 3)

GHS Label elements, including precautionary statements



Pictogram

Signal word **Danger**

Hazard statement(s)

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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.

Exposure limits: See Section II

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x

Effects of overexposure:

Acute:

Eye> May cause irreversible eye injury, vapor or mist may cause irritation and severe burns, contact with liquid is corrosive to the eyes and causes severe burns. May cause painful sensitization to light.

Skin> May be absorbed through skin in harmful amounts, contact with liquid is corrosive and causes severe burns, may cause photosensitization in certain individuals.

Inhalation> May be fatal if inhaled. Causes severe Irritation of the upper respiratory tract with coughing, burns, difficult breathing, and possibly coma. Causes chemical burns to the respiratory tract. May cause pulmonary edema and severe respiratory disturbances.

Ingestion> May cause circulatory system failure. Causes severe digestive tract burns with abdominal pain, vomiting and possible death. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.

Chronic: Prolonged or repeated skin exposure may cause dermatitis and erosion of teeth. Repeated exposure to low concentrations of HCL vapor or mist may cause bleeding of nose and gums. Chronic bronchitis and gastritis have been reported. Symptoms may be delayed.

Medical Conditions Aggravated by Exposure: Any individuals with chronic respiratory, skin, and digestive diseases. Moisture increases the severity of irritation.

Notes to Physician: Do not use sodium bicarbonate in an attempt to neutralize the acid.

Section IV First Aid Measures

Emergency and First Aid Procedures:

Inhalation> Remove to fresh air immediately. If not breathing give artificial respiration. If breathing is difficult give oxygen. Keep warm and quiet. Immediately get medical aid.

Eyes (Splash)> Immediately flush eyes with water for 15 minutes. Hold eyelids open for complete irrigation. Take to a physician. Do not allow victim to rub or keep eyes closed.

Skin (Splash)> Wash affected area with soap and water and rinse for 15 minutes. Remove contaminated clothing and shoes. Consult a physician.

Ingestion> Do NOT induce vomiting. If the victim is conscious and alert give 2 oz capfuls of milk or water. Immediately consult a physician or poison control center, treat symptomatically.

Section V Fire and Explosion Hazard Data

Flash Point: N.D. °F

LEL %: N.D.

UEL %: N.D.

Auto-ignition Temperature: N.D.

**Extinguishing Media - Foam--> x CO2--> x Dry Chemical--> x
Water-fog--> x Other-->**

Special Fire Fighting Procedures: Wear self contained breathing apparatus in pressure demand or other positive pressure mode and full protective gear for confined spaces. Water run off can cause environmental damage. Dike and collect water used to fight fire.

Unusual Fire and Explosion Hazards: Not flammable, but reacts with most metals to form flammable hydrogen gas. Use water spray to keep fire exposed containers cool. Vapors may be heavier than air, they can spread along the ground and collect in low or confined areas.

Section VI Accidental Release Measures

Steps to be taken in case material is released or spilled> Use of personal protective equipment as indicated in Section VIII. Approach spill from upwind. Large spills may be neutralized with dilute alkaline solutions of soda ash, or lime. A vapor suppressing foam may be used to reduce vapors. Absorb spill using a non-combustible absorbent such as, earth, sand or vermiculite. Keep all non-essential people away from exposure.

Waste disposal method: Dispose of contained hazardous waste at a licensed RCRA facility. EPA hazardous waste code D002.

Section VII Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Contents may develop pressure upon prolonged storage. Do not get in eyes, on skin, or on clothing. Discard contaminated shoes. Keep away from strong bases and metals. Use caution when opening. Do not use with metal spatula or other metal items. Do not breathe vapor or mist. Use only with adequate ventilation or respiratory protection. When diluting, the acid should always be added slowly to water and in small amounts.

Do not store above 120°F. Store large quantities only in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Do not store with incompatible materials, separate from oxidizing materials. Keep containers closed when not in use.

Do not take internally. Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner.

Avoid breathing vapors in top of shipping container. Use with adequate ventilation.

Section VIII Exposure Controls and Personal Protection

Respiratory Protection> For vapor concentrations 1 to 10 times ACGIH TLV an air supplied NIOSH/MSHA Approved respirator with full face-piece and organic vapor cartridges. For concentrations over 10 times ACGIH TLV, in confined areas, and/or where vapor concentrations are unknown use a NIOSH approved positive pressure full face-piece supplied air respirator.

Ventilation> Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910.

Protective Gloves> Rubber or neoprene chemical resistant gloves.

Eye Protection> Use safety eyewear with splash guards or face shield.

Other Protective Clothing or Equipment> Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse.

Shower and eyewash should be easily accessible to the work area.

Section IX Physical and Chemical Properties

Appearance -----> Clear, colorless to pale yellow liquid

Odor-----> Strong, pungent.

Boiling Range (°F)-----> 230 (110°C)

Solubility in water-----> Soluble

Vapor Density (air=1)-----> 1.25

Evaporation Rate (Butyl Acetate=1) ->1

Vapor Pressure-----> 160mmHg@20°C

Specific Gravity-----> 1.18@25°C

Melting Point-----> -30°C (-22°F)

Section X Stability and Reactivity Data

Stability: Unstable () Stable (X)

Conditions to avoid--> Heat, and Open Flame.

Incompatibility (Materials to Avoid)--> Metals, strong oxidizing agents, strong reducing agents, bases, acetic anhydride, alcohols, amines, sulfuric acid, vinyl acetate, epoxides (butyl glycidyl ether), chlorosulfonic acid, carbides, beta-propiolactone, ethyleneamine, propyleneoxide, lithium silicides, 2-aminoethanol, 1,1-difluoroethylene, magnesium boride, mercuric sulfate, aldehydes, cyanides, sulfides and phosphides.

Hazardous decomposition products--> Hydrogen Chloride, chlorine, and hydrogen gas.

Hazardous Polymerization--> May occur () Will not occur (X)

Section XI Toxicity Data

The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:

| Ingredient | Oral LD50(Rat) | Skin LD50(Rabbit) | Inhalation LC50 |
|-------------------|-------------------------|----------------------------|--------------------------|
| Hydrochloric Acid | | | 3124ppm/1hr |

Carcinogenicity: IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrochloric acid)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, OSHA or ACGIH.

Specific target organ toxicity - single exposure (Globally Harmonized System)

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. (Hydrochloric acid)

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available**

Teratogenicity: Female rats were exposed to 450mg/m³ of HCL for 1 hour prior to mating or on day 9 of pregnancy. Developmental effects were observed in the offspring. However, this exposure caused toxic effects, including mortality, in the mothers.

Mutagenicity: See entry in RTECS for complete information.

Neurotoxicity: No information available.

Section XII Ecological Information

Ecotoxicity: Fish: Bluegill/Sunfish: 3.6mg/L; 48hr; Lethal

Fish: LC50Bluegill/Sunfish: 96hr; pH3.0-3.5 no data available.

**Fish: LC50 - Gambusia affinis (Mosquito fish) - 282 mg/l - 96 h
(Hydrochloric acid)**

Environmental: Will exhibit extensive evaporation from soil surfaces. Upon transport through the soil, hydrochloric acid will dissolve some of the soil materials (especially those with carbonate bases) and the acid will neutralize to some degree.

Section XIII Disposal Considerations

Waste Disposal Method> Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly it is the responsibility of the user to determine the proper storage, transportation, treatment and or disposal methodologies for spent materials and residues at time of disposition. Dispose in accordance with all applicable disposal regulations. Waste disposal method: Dispose of contained hazardous waste at a licensed RCRA facility. EPA hazardous waste code D002.

Section XIV Transport Information

DOT Shipping Name-----> Hydrochloric Acid
DOT Hazard Classification----> 8 (Corrosive Liquid)
DOT Label Codes-----> 8
DOT ID Number-----> UN1789
DOT Package Code-----> II
Emergency Response Guide-> 157
Marine Pollutant-----> No

Section XV Regulatory Information

(RQ) Reportable Quantity-> 13514lbs. CERCLA

Sara 302 - Yes; CAS 7647-01-0 EHSTPQ:500lbs. gas only
Sara 313 - Yes; CAS 7647-01-0 (Acid aerosols, vapors, mists and fog)

Sara Section 311 List Hazards:

- (a) Immediate Acute Health>>>>>>> Yes
- (b) Delayed Chronic Health>>>>>>> Yes
- (c) Fire>>>>> No (d) Reactive>>>>> Yes
- (e) Sudden Release of Pressure>>>> No

Massachusetts Right To Know Components

Hydrochloric acid CAS-No.7647-01-0

Pennsylvania Right To Know Components

Water CAS-No.7732-18-5

Hydrochloric acid CAS-No.7647-01-0

New Jersey Right To Know Components

Water CAS-No.7732-18-5

Hydrochloric acid CAS-No. 7647-01-0

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section XVI Other Information

HMIS (Hazardous Materials Identification System)

Hazard Rating:

4-Extreme

3-High

2-Moderate

1-Slight

0-Insignificant

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/ | \
Fire- / | \-Reactivity
/ 0 | 2\
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3 | K/
Toxicity- \ | /-Personal
\
/ | / **Protection**
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Prepared by-----> T.G. Fenstermaker, Jr.

Acronyms:

| | | |
|--------|---|---|
| ACGIH | - | American Conference of Governmental Industrial Hygienists |
| AIHA | - | American Industrial Hygiene Association |
| ANSI | - | American Nation Standards Institute |
| API | - | American Petroleum Institute |
| CERCLA | - | Comprehensive Emergency Response, Compensation, and Liability Act |
| DOT | - | U.S. Department of Transportation |
| EPA | - | U.S. Environmental Protection Agency |
| HMIS | - | Hazardous Materials Information System |
| IARC | - | International Agency For Research On Cancer |
| MSHA | - | Mine Safety and Health Administration |
| NFPA | - | National Fire Protection Association |
| NIOSH | - | National Institute of Occupational Safety and Health |
| NOIC | - | Notice of Intended Change (Proposed change to ACGIH TLV) |
| NTP | - | National Toxicology Program |
| OPA | - | Oil Pollution Act of 1990 |
| OSHA | - | U.S. Occupational Safety & Health Administration |
| PEL | - | Permissible Exposure Limit (OSHA) |
| RCRA | - | Resource Conservation and Recovery Act |
| REL | - | Recommended Exposure Limit (NIOSH) |
| SARA | - | Superfund Amendments and Reauthorization Act of 1986 Title III |
| SCBA | - | Self-Contained Breathing Apparatus |
| STEL | - | Short-Term Exposure Limit (generally 15 minutes) |
| TLV | - | Threshold Limit Value |
| TSCA | - | Toxic Substances Control Act |
| TWA | - | Time Weighted Average (8hr.) |
| WHMIS | - | Canadian Workplace Hazardous Materials Information System |

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