

### SECTION-1: Identification of the substance / mixture and the company / undertaking

<b>Catalogue Number</b>	CS-O-46099
<b>Product Name</b>	HCL 2.0M in Diethyl Ether
<b>CAS No.</b>	7647-01-0
<b>Category</b>	Fine Chemicals
<b>Synonyms</b>	Not available
<b>Brand</b>	Clearsynth Labs Ltd.
<b>Identified uses</b>	Laboratory Chemicals
<b>Uses advised against</b>	Not available
<b>Company</b>	Clearsynth Labs Ltd. Mumbai, India
<b>Emergency Phone #</b>	+91-22-245045900
<b>REACH No.</b>	Not available

### SECTION 2: Hazards identification

**Disclaimer:** This is sample MSDS. Please email [sales@clearsynth.com](mailto:sales@clearsynth.com) for more details.

#### 2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Not available

#### 2.2 Label Elements

**Signal Word:** Warning



#### Hazard Statement(s)

Code	Statement
H314	Not available
H331	Not available
H280	Not available
H290	Not available

H318	Causes serious eye damage.
H335	Not available
H400	Not available
H301	Not available
H330	Not available
H334	Not available
H370	Not available
H372	Not available

### Precautionary Statement(s)

Code	Statement
P260	Not available
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	Not available
P302+P361+P354	Not available
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P354+P338	Not available
P316	Not available
P321	Specific treatment (see ... on this label).
P363	Not available
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation
P234	Not available
P264+P265	Not available
P317	Not available
P319	Get medical help if you feel unwell.

P390	Not available
P406	Not available
P410+P403	Not available
P273	Not available
P391	Not available
P233	Not available
P270	Not available
P284	Not available
P301+P316	Not available
P308+P316	Not available
P320	Not available
P330	Not available
P342+P316	Not available
P403	Not available

### SECTION 3: Composition / information on ingredients

#### 3.1 Substance

Component : HCL 2.0M in Diethyl Ether

CAS Number : 7647-01-0

Molecular Formula : HCl

Molecular Weight : 36.5

Parent Chemical : -

Synonyms : Not available

Concentration : Not available

### SECTION 4: First aid measures

#### SECTION 4: First-aid measures

##### 4.1 Description of first aid measures

General advice: Remove contaminated clothing and shoes. Seek medical attention if symptoms persist or are severe.

Inhalation: Move person to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, seek medical attention.

Skin contact: Wash immediately with plenty of water. Seek medical attention if irritation, burns, or pain occur.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

Continue rinsing. Get medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed  
Not available.

4.3 Indication of any immediate medical attention and special treatment needed  
Treat symptomatically. Not available.

### SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media: Use extinguishing measures appropriate to surrounding fire (e.g., dry chemical, carbon dioxide, alcohol-resistant foam).

Unsuitable extinguishing media: Not available.

#### 5.2 Special hazards arising from the substance or mixture

Flammable solvent vapors may form explosive mixtures with air. Container may rupture when heated. Hydrogen chloride may be released.

Hazardous combustion products: Not available.

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective gear. Cool containers with water spray from a safe distance. Prevent fire-fighting water from entering drains or waterways.

### SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Evacuate unnecessary personnel. Eliminate all ignition sources. Provide adequate ventilation. Avoid breathing vapors/mist and avoid contact with skin and eyes. Wear appropriate PPE.

#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent entry into drains, sewers, or waterways.

#### 6.3 Methods and material for containment and cleaning up

Contain spill with inert absorbent material. Collect into suitable, closed containers for disposal. Use non-sparking tools. Ventilate area and wash spill site after material pickup.

#### 6.4 Reference to other sections

See Section 8 for personal protective equipment and Section 13 for disposal considerations.

### SECTION-7: Handling and storage

SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Handle in a fume hood or well-ventilated area. Keep away from heat, sparks, open flames, and hot surfaces. Use non-sparking equipment and ground/bond containers during transfer. Avoid breathing vapors/mist. Avoid contact

with skin and eyes. Do not eat, drink, or smoke when using this product.

### 7.2 Conditions for safe storage, including any incompatibilities

Store tightly closed in a cool, dry, well-ventilated place. Keep away from ignition sources. Protect from moisture.

Store away from incompatible materials.

Incompatible materials: Not available.

### 7.3 Specific end use(s)

Not available.

## SECTION 8: Exposure controls / personal protection

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Occupational exposure limits: Not available.

#### 8.2 Exposure controls

Engineering controls: Use local exhaust ventilation or fume hood. Provide explosion-proof ventilation where applicable.

Personal protective equipment (PPE):

- Eye/face protection: Safety goggles or face shield.
- Skin protection: Chemical-resistant gloves; protective clothing.
- Respiratory protection: Use appropriate respirator if ventilation is inadequate. Not available.
- Hygiene measures: Wash hands thoroughly after handling. Remove contaminated clothing and wash before reuse.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available

Property	Value
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

## SECTION 10: Stability and reactivity

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Not available.

#### 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

Not available.

#### 10.4 Conditions to avoid

Heat, sparks, open flames, and other ignition sources. Moisture. Static discharge.

#### 10.5 Incompatible materials

Not available.

#### 10.6 Hazardous decomposition products

Not available.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

- Acute toxicity: Hydrogen chloride will rapidly dissociate and its effects are thought to be a result of pH change (local deposition of H<sup>+</sup>) rather than effects of hydrogen chloride/hydrochloric acid. The irritation of hydrogen chloride to

mucous is so severe that workers evacuate from the work place shortly after detecting its odor. In one of eight asthmatic volunteers exposed to an aerosol of unbuffered hydrochloric acid at pH 2 for 3 min during tidal breathing, airway resistance was increased by 50%. Short term exposures have been reported to induce transitory obstruction in the respiratory tract, which diminishes with repeated exposure, suggesting adaption. Exposure to hydrochloric acid can produce burns on the skin and mucous membranes, the severity of which is related to the concentration of the solution. Subsequently, ulceration may occur, followed by keloid and retractile scarring. Contact with the eyes may produce reduced vision or blindness. Frequent contact with aqueous solutions of hydrochloric acid may lead to dermatitis. Dental decay, with changes in tooth structure, yellowing, softening and breaking of teeth, and related digestive diseases are frequent after exposures to hydrochloric acid. For repeated dose toxicity, local irritation effects were observed in the groups of 10 ppm and above in a 90-day inhalation study. LC50 (rat) = 3,124 ppm/1 hr.

- Skin corrosion/irritation: Hydrogen chloride is corrosive to the skin. Both hydrogen chloride gas and hydrochloric acid are highly corrosive. Many strong acids cause tissue burns through the denaturation of proteins and partial hydrolysis of proteins. Most proteins denature at pH values of less than 3-4. The large-scale denaturation of proteins, de-esterification of lipids and subsequent desiccation of tissues leads to chemical burns. Symptoms include itching, bleaching or darkening of skin or tissues, blistering and burning sensations.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No skin sensitization has been reported.
- Germ cell mutagenicity: A negative result has been shown in the Ames test. A positive result, which is considered to be an artifact due to the low pH, has been obtained in a chromosome aberration test using Hamster ovary cells.
- Carcinogenicity: In humans, no association between hydrogen chloride exposure and tumor incidence was observed. No pre-neoplastic or neoplastic nasal lesions were observed in a 128-week inhalation study with male rats at 10 ppm hydrogen chloride gas. No evidence of treatment related carcinogenicity was observed either in other animal studies performed by inhalation, oral or dermal administration. There is inadequate evidence for the carcinogenicity in humans of hydrochloric acid. There is inadequate evidence for the carcinogenicity in experimental animals of hydrochloric acid. Overall evaluation: Hydrochloric acid is not classifiable as to its carcinogenicity to humans (Group 3).
- Reproductive toxicity: Hydrogen chloride is not expected to have developmental toxicity. In addition, no effects on the gonads were observed in a good 90-day inhalation study up to 50 ppm.
- STOT-single exposure: No data available.
- STOT-repeated exposure: For repeated dose toxicity, local irritation effects were observed in the groups of 10 ppm and above in a 90-day inhalation study. Chronic exposure to hydrogen chloride can lead to liver damage, bleeding of nose and gums, nasal and oral mucosal ulceration, conjunctivitis, yellowing of teeth and erosion of tooth enamel as well as dermatitis.
- Aspiration hazard: Anaesthetized mice underwent orotracheal instillation of hydrochloric acid and exhibited significant weight loss, decreased oxygenation, increased respiratory elastance and pulmonary inflammation; injury parameters peaked between days 1 and 3, followed by almost complete recovery over days 5-10; histology showed evidence of fibrosis on day 10. Acid aspiration is a major cause of acute lung injury; in an isolated blood-perfused rat lung model, lung water increased both in regions that received acid and in adjacent regions that did not.

Likely routes of exposure

- No data available.

Symptoms related to the physical, chemical and toxicological characteristics

- The irritation of hydrogen chloride to mucous is so severe that workers evacuate from the work place shortly after detecting its odor. Inhalation of the fumes can cause coughing, choking, inflammation of the nose, throat, and upper respiratory tract, and in severe cases, pulmonary edema, circulatory system failure, and death. Skin contact can cause redness, pain, and severe skin burns. Contact with the eyes may produce reduced vision or blindness; both

hydrogen chloride gas and hydrochloric acid may cause severe burns to the eye and permanent eye damage. Severe and rapid corrosive burns of the mouth, gullet and gastrointestinal tract will result if hydrochloric acid is swallowed; symptoms include burning, choking, nausea, vomiting and severe pain. Frequent contact with aqueous solutions of hydrochloric acid may lead to dermatitis. Dental decay, with changes in tooth structure, yellowing, softening and breaking of teeth, and related digestive diseases are frequent after exposures to hydrochloric acid.

### SECTION 12: Ecological information

#### SECTION 12: Ecological information

##### 12.1 Toxicity

Not available.

##### 12.2 Persistence and degradability

Not available.

##### 12.3 Bioaccumulative potential

Not available.

##### 12.4 Mobility in soil

Not available.

##### 12.5 Results of PBT and vPvB assessment

Not available.

##### 12.6 Endocrine disrupting properties

Not available.

##### 12.7 Other adverse effects

Not available.

### SECTION 13: Disposal considerations

#### SECTION 13: Disposal considerations

##### 13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations. Do not discharge to drains. Collect as hazardous waste. Contaminated packaging should be handled as product residue.

Waste codes: Not available.

### SECTION 14: Transport information

#### SECTION 14: Transport information

##### 14.1 UN number

Not available.

##### 14.2 UN proper shipping name

Not available.

##### 14.3 Transport hazard class(es)

Not available.

#### 14.4 Packing group

Not available.

#### 14.5 Environmental hazards

Not available.

#### 14.6 Special precautions for user

Not available.

#### 14.7 Maritime transport in bulk according to IMO instruments

Not available.

### SECTION 15: Regulatory information

#### SECTION 15: Regulatory information

##### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Not available.

##### 15.2 Chemical safety assessment

Not available.

### SECTION 16: Other information

#### SECTION 16: Other information

Product name: HCL 2.0M in Diethyl Ether

Catalog no.: CS-O-46099

CAS no.: 7647-01-0

Supplier: Clearsynth Labs Ltd., Mumbai, India

Emergency phone: +91-22-245045900

Abbreviations and acronyms: Not available.

Revision date: Not available.

Disclaimer: The information provided is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Not available.

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