SAFETY DATA SHEET

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) (OSHA HCS)

SECTION 1. IDENTIFICATION

Product name	:	Hydrochloric Acid (1mol/L)
Product code	:	H1202

Manufacturer or supplier's details

Company name of supplier	:	TCI America
Address	:	9211 N. Harborgate Street Portland, OR 97203 U.S.A.
Telephone	:	+1-800-4238616/+1-503-2831681
Telefax	:	+1-888-5201075/+1-503-2831987
E-mail address	:	sales-US@TCIchemicals.com

Chemical Emergencies: TCI America (8:00am - 5:00pm) PST +1-503-2867624
Transportation Emergencies: Chemtrec 24-Hour +1-800-4249300 (U.S.A.)/+1-703-5273887 (International)

Recommended use of the chemical and restrictions on use

Recommended use	:	Use as laboratory reagent

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to Metals	:	Category 1
Skin corrosion	:	Category 1C
Serious eye damage	:	Category 1
Respiratory sensitization	:	Category 1
Specific target organ toxicity - single exposure	:	Category 1 (Respiratory system)
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)
Specific target organ toxicity - repeated exposure	:	Category 1 (Respiratory system, Teeth)

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements :
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H370 Causes damage to organs (Respiratory system).
H372 Causes damage to organs (Respiratory system, Teeth) through prolonged or repeated exposure.

Precautionary Statements :

Prevention:

P234 Keep only in original container.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P285 In case of inadequate ventilation wear respiratory protection.

Response:

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all

contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
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/ doctor.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.

Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P406 Store in corrosive resistant container with a resistant inner liner.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS RN	Concentration (% w/w)
Hydrogen Chloride	7647-01-0	>= 1 - < 5

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

If inhaled : Remove person to fresh air and keep comfortable for breathing.Immediately call a POISON CENTER or doctor/ physician.

In case of skin contact : Take off all contaminated clothing immediately.If on skin, rinse well with water.Call a POISON CENTER or doctor/ physician.

In case of eye contact : Rinse with plenty of water.If easy to do, remove contact lens, if worn.Immediately call a POISON CENTER or doctor/ physician.

If swallowed : Immediately call a POISON CENTER or doctor/ physician.Rinse mouth.Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Dry powder, Foam, Water spray, Carbon dioxide (CO2)

Specific hazards during fire fighting : No information available.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Remove undamaged containers from fire area if it is safe to do so.

Special protective equipment for fire-fighters : Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency proce- : Wear suitable protective equipment.Keep people away from and upwind of spill/leak.Ensure adequate ventilation.Entry to non-involved

dures		personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions	:	Prevent product from entering drains.
Methods and materials for containment and cleaning up	:	Collect as much of the spill as possible with a suitable absorbent material.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	Prevent generation of vapor or mist.
Local/Total ventilation	:	Ensure adequate ventilation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Use a local exhaust ventilation.
Advice on safe handling	:	Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Wash hands and face thoroughly after handling. Keep only in original packaging.
Conditions for safe storage	:	Keep container tightly closed. Store in a cool and shaded area. Keep in a well-ventilated place. Store locked up.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS RN	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrogen Chloride	7647-01-0	C	2 ppm	ACGIH
		C	5 ppm 7 mg/m3	NIOSH REL
		C	5 ppm 7 mg/m3	OSHA Z-1
		C	5 ppm 7 mg/m3	OSHA P0

Engineering measures : Install a closed system or local exhaust.Also install safety shower and eye bath.

Personal protective equipment

Respiratory protection	:	Gas mask, Self-contained breathing apparatus
Hand protection	:	Impervious gloves
Eye protection	:	Safety glasses, Safety goggles, Face-shield
Skin and body protection	:	Impervious protective clothing

*Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	colorless
Odor	:	No data available
Odor Threshold	:	0.77 ppm
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	1.02
Solubility(ies)	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		

Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Molecular weight	:	36.46 g/mol
Metal corrosion rate	:	Corrosive to metals

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No data available
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	None under normal processing.
Incompatible materials	:	Bases, Amines, Metals
Hazardous decomposition products	:	Hydrogen chloride gas

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Product**:**

Acute oral toxicity	:	Acute toxicity estimate: 2,778 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 83.33 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method

Skin corrosion/irritation
Product**:**

Result	:	Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days.

Components:
Hydrogen Chloride:

Result	:	Causes severe burns.

Serious eye damage/eye irritation
Product**:**

Result	:	Irreversible effects on the eye

Components**:**
Hydrogen Chloride:

Result	:	Irreversible effects on the eye

Respiratory or skin sensitization
Components**:**
Hydrogen Chloride:

Assessment	:	May cause sensitization by inhalation.

Germ cell mutagenicity : No information available.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Components:
Hydrogen Chloride:

Reproductive toxicity - Assessment	:	No toxicity to reproduction

STOT-single exposure
Product**:**

Assessment	:	May cause respiratory irritation.

Components:
Hydrogen Chloride:

Target Organs	:	Respiratory system
Assessment	:	Causes damage to organs.

STOT-repeated exposure
Components:
Hydrogen Chloride:

Target Organs	:	Respiratory system, Teeth
Assessment	:	Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity	:	No information available.
Aspiration toxicity	:	No information available.
RTECS No.	:	MW4025000 (Hydrogen Chloride)

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

Components:

Hydrogen Chloride:

Partition coefficient: n-octanol/water	:	0.25

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Disposal in accordance with local and national regulations.Entrust disposal to a licensed waste disposal company.
Contaminated packaging	:	Disposal in accordance with local and national regulations.Before disposal of used container, remove contents completely.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 1789
Proper shipping name	:	Hydrochloric acid
Class	:	8
Packing group	:	III

IMDG-Code

UN number	:	UN 1789
Proper shipping name	:	HYDROCHLORIC ACID
Class	:	8
Packing group	:	III
EmS Code	:	F-A, S-B

Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number : UN 1789
Proper shipping name : Hydrochloric acid
Class : 8
Packing group : III
ERG Code : 157
Marine pollutant : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS RN	Component RQ (lbs)	Calculated product RQ (lbs)
Hydrogen Chloride	7647-01-0	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS RN	Component RQ (lbs)	Calculated product RQ (lbs)
Hydrogen Chloride	7647-01-0	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Components	CAS RN	Component TPQ (lbs)
Hydrogen Chloride	7647-01-0	500

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:
Hydrogen Chloride 7647-01-0 >= 1 - < 5 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):
Hydrogen Chloride 7647-01-0 >= 1 - < 5 %
The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):
Hydrogen Chloride 7647-01-0 >= 1 - < 5 %
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:
Hydrogen Chloride 7647-01-0 >= 1 - < 5 %
The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:
Hydrogen Chloride 7647-01-0 >= 1 - < 5 %
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Hydrogen Chloride 7647-01-0

Pennsylvania Right To Know

Water 7732-18-5
Hydrogen Chloride 7647-01-0

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

California List of Hazardous Substances

Hydrogen Chloride	7647-01-0

California Permissible Exposure Limits for Chemical Contaminants

Hydrogen Chloride	7647-01-0

California List of Acutely Hazardous Chemicals, Toxics and Reactives

Hydrogen Chloride	7647-01-0

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Revision Date : 11/14/2024

This SDS was prepared sincerely based on the information obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling operations, sufficient care should be taken, in addition to the safety measures suitable for the given situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.