

MATERIAL SAFETY DATA SHEET

Product Name: Hydrochloric acid

CAS No.: 7647-01-0

Version: 0

1. Identification

Product Code : 90422, 90169, 90421
Company Name : Advent Chembio Private Limited
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2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
HYDROCHLORIC ACID	7647-01-0	20-40 %

3. Hazards Identification**Hazard classification****Physical hazards**

Corrosive to metals : Category 1

Health hazards

Acute Toxicity(Oral) : Category 4

Skin corrosion/irritation Category 1

Serious eye damage/eye irritation Category 1

Specific target organ toxicity – Category 4

single exposure (Inhalation - vapor)

Labels elements

Hazard symbol



Signal word : Danger

Hazard statement : May be corrosive to metals.
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause respiratory irritation.

Precautionary statement

Prevention : Keep only in original container. Wash thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product.

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- Response** : Absorb spillage to prevent material damage. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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 .
- Storage** : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in corrosive resistant container with a resistant inner liner.
- Disposal** : Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal .
- Other hazards which do not result in GHS classification** : None.

4. First Aid Measures

- General information** : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.
- Ingestion** : Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs .
- Inhalation** : Move to fresh air. Call a physician or poison control center immediately. Apply artificial respiration if victim is not breathing. If breathing is difficult, give oxygen .
- Skin contact** : Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes .
- Eye contact** : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention immediately.
- Most important symptoms/effects, acute and delayed** : Causes severe skin and eye burns. Harmful if swallowed .
- Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed .

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5. Fire Fighting Measures

General fire hazards : No data available.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials .

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Fire or excessive heat may produce hazardous decomposition products .

Special protective equipment and precautions for firefighters

Special fire fighting procedures : Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures : Ventilate closed spaces before entering them. Keep unauthorized personnel away. Evacuate area. Keep upwind. See Section 8 of the MSDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing .

Methods and material for containment and cleaning up : Neutralize with lime or soda ash. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Dike far ahead of larger spill for later recovery and disposal .

Notification Procedures : Inform authorities if large amounts are involved.

Environmental precautions : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and Storage

Precautions for safe handling : Do not eat, drink or smoke when using the product. Do not get in eyes, on skin, on clothing. Wash hands thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Use caution when adding this material to water .

Conditions for safe storage, including any incompatibilities : Keep container tightly closed. Store in a well-ventilated place. Unsuitable containers: metals.

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8. Exposure Controls Personal Protection

Control parameters

Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
HYDROCHLORIC ACID	Ceiling	2 ppm	US. ACGIH Threshold Limit Values (2011)
	Ceil_Time	5 ppm 7 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	Ceiling	5 ppm 7 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	Ceiling	5 ppm 7 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

Appropriate engineering controls : No data available.

Individual protection measures, such as personal protective equipment

General information : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Eye/face protection : Wear safety glasses with side shields (or goggles). Wear face shield if there is risk of splashes.

Hand protection : Chemical resistant gloves.

Other : Wear suitable protective clothing and gloves.

Respiratory protection : If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Hygiene measures : Provide eyewash station and safety shower. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not get in eyes. Wash contaminated clothing before reuse. Do not get this material in contact with skin.

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Appearance	:	Liquid ,Colorless
Odor	:	Pungent
Solubility in water	:	Soluble
Relative density	:	1.18 (20 °C)
pH	:	0.1 (1 N aqueous solution)
Initial boiling point and boiling range	:	48 °C
Melting point/freezing point:	:	-35 °C
Vapor pressure	:	14.1 kPa
Vapor density:	:	No data available
Formula	:	HCl
Molecular Weight	:	36.46 g/mol

10. Stability and Reactivity

Reactivity	:	Reacts violently with strong alkaline substances .
Chemical stability	:	Material is stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerization does not occur.
Conditions to avoid	:	Avoid contact with strong reducing agents. Strong oxidizing agents. Contact with alkalis .
Incompatible materials	:	Acids. Amines. Alkalies. Metals. Reducing agents. Oxidizing agents.
Hazardous decomposition products	:	Chlorine. hydrogen chloride By heating and fire, corrosive vapors/gases may be formed .

11. Toxicological Information**Information on likely routes of exposure**

Ingestion	:	Harmful if swallowed ..
Inhalation	:	Causes severe burns.
Skin contact	:	Causes severe skin burns .
Eye contact	:	Causes serious eye damage.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

Oral Product	:	ATEmix (Rat): 581 mg/kg
Dermal Product	:	No data available.
Inhalation Product	:	No data available.
Specified substance(s): HYDROCHLORIC ACID	:	LC 50 (Mouse, 1 h): 1,108 mg/l
Repeated dose toxicity Product	:	No data available.

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Skin corrosion/irritation Product	:	Causes severe skin burns.
Serious eye damage/eye irritation Product	:	Causes serious eye damage.
Respiratory or skin sensitization Product	:	Not a skin nor a respiratory sensitizer.
Carcinogenicity Product	:	This substance has no evidence of carcinogenic properties.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans	:	No carcinogenic components identified.
US. National Toxicology Program (NTP) Report on Carcinogens	:	No carcinogenic components identified.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	:	No carcinogenic components identified.
Germ cell mutagenicity In vitro Product	:	No mutagenic components identified.
In vivo Product	:	No mutagenic components identified.
Reproductive toxicity Product	:	No components toxic to reproduction.
Specific target organ toxicity - single exposure Product	:	Respiratory tract irritation.
Specific target organ toxicity - repeated exposure Product	:	None known.
Aspiration hazard Product	:	Not classified.
Other effects	:	None known.

12. Ecological Information**Ecotoxicity****Acute hazards to the aquatic environment :**

Fish Product	:	No data available .
Specified substance(s): HYDROCHLORIC ACID	:	LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 282 mg/l Mortality
Aquatic invertebrates Product	:	No data available

Chronic hazards to the aquatic environment :

Fish Product	:	No data available.
Aquatic invertebrates Product	:	No data available.
Toxicity to Aquatic Plants Product:	:	No data available.
Persistence and degradability	:	
Biodegradation Product	:	Expected to be readily biodegradable .
BOD/COD ratio Product	:	No data available.
Bioaccumulative potential	:	
Bioconcentration factor (BCF) Product	:	No data available on bioaccumulation.
Partition coefficient n-octanol / water (log Kow) Product	:	No data available.
Mobility in soil	:	The product is water soluble and may spread in water systems.

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Other adverse effects : Large amounts of the product may affect the acidity (pH-factor) in water with possible risk of harmful effects to aquatic organisms .

13. Disposal consideration

Disposal instructions : Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated packaging : Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN 1789	Hydrochloric acid	8	II	No
IMDG	UN 1789	Hydrochloric acid	8	II	No
IATA	UN 1789	Hydrochloric acid	8	II	No

15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

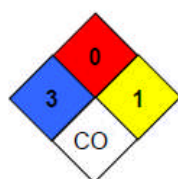
Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

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16. Other Information**NFPA Hazard ID**

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe
COR: Corrosive

Issue Date :01/08/2014

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