GPS Safety Summary
Hydro Chloric Acid Liquid

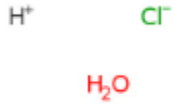
Reference number: AIL-GPS-076 Issue date: 14/04/2025 Version: 1.0 **CL-4: PUBLIC**

1. General Statement

Hydro Chloric Acid is a colourless to yellowish,pungent odour Liquid.Mixable with water.
Characteristics of a 36% hydrochloric acid solution:Strongly caustic. Reacts with air under formation of caustic acid fumes which are heavier than air.Strong acid which reacts vigorously with bases.Non-noble metals are dissolved under hydrogen formation. Oxides are also dissolved. Carbonates are converted under formation of carbon dioxide. With oxidizing agents chlorine is formed.Acute or chronic health hazards result from the substance.

2. Chemical identification.

Name :Hydro Chloric Acid Liquid
CAS number(s) :7647-01-0
EC number :231-595-7
Molecular formula :H2O.Hcl
Structure :



3. Uses and Benefits

It is Used to produce pharmaceutical hydrochlorides; vinyl chloride from acetylene; alkyl chlorides from olefins and arsenious chloride from arsenious oxide; electronic grade for etching semiconductor crystals. Used in the chlorination of rubber; in organic reactions involving isomerization, polymerization and alkylation; as a catalyst and condensing agent; for making chlorine where economical; in the separation of cotton from wool and cotton de-linting; as flux in the babbitt type of metal alloy; etching semi-conductor crystals.
The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.

4. Physical / chemical properties

Property	Value
Physical state :	Liquid
Colour :	Colourless to yellowish
pungent odou	Pungent odour
pH :	< 1
Melting point :	-30 C°solution 37 %
Boiling point :	90 °C

Flash point :	Not applicable
Density :	1140 kg/m3
Solubility in Water:	Soluble in water.

5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal)	NA
Irritation / corrosion **Skin / eye/ respiratory tract**	Causes severe skin burns and eye damage.May cause respiratory irritation
Respiratory or skin sensitisation	NA
Toxicity after repeated exposure **Oral / inhalation / dermal**	NA
Genotoxicity / Mutagenicity	NA
Carcinogenicity	NA
Toxicity for reproduction	NA

6. Environmental Effects

Effect Assessment	Result
Aquatic toxicity	No
Fate and behavior	**Result**
Persistence and degradability	Not rapidly degradable
Bioaccumulative potential	Does not contain bioaccumulative component(s).

7. Exposure

Human health

This substance causes severe skin burns and eye damage, causes serious eye irritation, may cause respiratory irritation and causes skin irritation.The exposure must be kept as minimum as possible by the use of appropriate risk management measures suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers.Careless handling or accidental spillage of the chemical could result in exposure to potentially hazardous levels of chemicals.Industrial workers should ensure that they follow the advice found in the extended safety data sheet (SDS).

Environment

Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. Spillage shall be quickly collected in the event of an accidental release. More information about release measures and accidental release measures are available in the extended safety data sheet.

8. Risk Management Recommendations

Human health measures

Organizational	A basic standard of occupational hygiene is recommended. Ensure operatives are well informed of the hazards and trained to minimise exposures. Ensure regular inspection and maintenance of equipment and machines. Handle and store according to the indications of the Safety Data Sheet.	
Protection	Eye protection:	Safety glasses
	Skin and body protection:	Wear suitable protective clothing
	Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment.
Engineering controls	Ensure good ventilation of the work station.	
Environment protective measures		
Avoid release to the environment		

9. First-aid measures

First-aid measures after inhalation: Remove the person to fresh air and keep them comfortable for breathing. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a physician immediately.

10. Fire-fighting measures

Extinguishing media
Suitable extinguishing media: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire: On burning: release of toxic and corrosive gases/vapours (hydrogen chloride).

Advice for firefighters
Precautionary measures fire : Cool surrounding containers with water spray.If possible, take the container out of the dangerous zone.Rise in pressure and risk of bursting when heating.
Contain vapours with water spray.

Firefighting instructions: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

11. Accidental release measures

Protective equipment : Gloves (EN 374). Face shield (EN 166). Corrosion-proof suit (EN 14605). Large spills/in enclosed spaces: self-contained breathing apparatus (EN 136 + EN 137). Large spills/in enclosed spaces: gas-tight suit (EN 943). Reactivity hazard: self-contained breathing apparatus (EN 136 + EN 137). Reactivity hazard: gas-tight suit (EN 943).

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.

12. Disposal consideration

Regional legislation (waste) : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

13. Handling and storage

Precautions for safe handling: Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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14. Classification and Labeling

Hazard pictograms (GHS US)	:	
Signal word (GHS US)	:	Danger
Hazard statements (GHS US)	:	H290 - May be corrosive to metals H314 - Causes severe skin burns and eye damage H335 - May cause respiratory irritation
Precautionary statements (GHS US)	:	P234 - Keep only in original packaging. P260 - Do not breathe dusts or mists. P264 - Wash hands, forearms and face thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection. 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 - If inhaled: Remove person to fresh air and keep comfortable for breathing. 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. P312 - Call a poison center or doctor if you feel unwell. P321 - Specific treatment (see supplemental first aid instruction on this label). P363 - Take off immediately all contaminated clothing and wash it before reuse. P390 - Absorb spillage to prevent material-damage. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

15. Conclusion

Hydro Chloric Acid is a colourless to yellowish,pungent odour Liquid.Mixable with water.Characteristics of a 36% hydrochloric acid solution:Strongly caustic. Reacts with air under formation of caustic acid fumes which are heavier than air.Strong acid which reacts vigorously with bases.Non-noble metals are dissolved under hydrogen formation. Oxides are also dissolved. Carbonates are converted under formation of carbon dioxide. With oxidizing agents chlorine is formed.Acute or chronic health hazards result from the substance.Risk of explosion in contact with:potassium,sodium,potassium permanganate (seldom) conc. sulfuric acid.The substance can react dangerously with:aluminium,amines fluorine,concentrated lye,oxidizing agents,caesium carbides; calcium carbide; calcium hydride; formaldehyde; copper sulfide; lithium silicide; metals; sodium hydride;sodium hypochlorite and its solutions; natron bleaching solution; rubidium carbide; silanes; silicon dioxide; vinyl methyl ether; zinc.The exposure must be kept as minimum as possible by the use of appropriate risk management measures as suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers.

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16. Contact Information within company

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This GPS safety summary is intended to give general information about the health, safety and environment and not intended to provide in-depth details. To obtain the most accurate and current information, consult the appropriate Safety Data Sheet (SDS) prior to use of the material named herein.