



Safety Data Sheet (SDS) – Hydrochloric Acid

403-AD-RE-101-V01

Amir Hossein Haratian

Research & Development Department

2024-8-15

Report Document

Report Topic					
Safety Data Sheet (SDS) – Hydrochloric Acid					
Purpose of Report					
Awareness and clarifying safety issues related to the Hydrochloric Acid product					
Target Audience					
Organization stakeholders (including colleagues, customers, consumers, etc.)					
Other required details					
Revision number	Writing start date	Date of completion of writing	Prepared by	Approved by	Description
00	2024-8-15	2024-8-15	Amir Hossein Haratian	Amir Rafie	Initial Writing
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					

All material and intellectual property rights of this .

403-HE-RE-101-V01:Certificate number

Table of contents

Section 1: Substance and Company Identification	4
Section 2: Hazard Identification	4
Section 3: Composition/Information on Ingredients	5
Section 4: First-Aid Measures	5
Section 5: Fire-Fighting Measures	5
Section 6: Accidental Release Measures	6
Section 7: Handling and Storage	6
Section 8: Exposure Controls/Personal Protection	6
Section 9: Physical and Chemical Properties	7
Section 10: Stability and Reactivity	7
Section 11: Toxicological Information	7
Section 12: Ecological Information	8
Section 13: Disposal Considerations	8
Section 14: Transport Information	8
Section 15: Regulatory Information	8
Section 16: Other Information	8

Section 1: Substance and Company Identification

- **Product Name:** Hydrochloric Acid
- **Trade Names:** Hydrochloric Acid – Hydrogen Chloride – Chlorohydric Acid
- **CAS Number:** 7647-01-0
- **Appearance:** Colorless or yellow liquid, transparent, free of sediment and suspended particles
- **Uses:** Chemical and petrochemical processes, water purification, metal cleaning, etc.

Supplier Information

- **Company:** Asia Potash Industry
- **Phone:** +98 21-88661968 / +98 21-88886036
- **Fax:** +98 21-88660379
- **Address:** Unit 1, No 8, 17th Alley, South Gandhi St, Tehran, Iran.
- **Email:** info@apic.ir

Emergency Contact:

Section 2: Hazard Identification

Classification (EC No. 1272/2008)

- **Corrosive:** Causes severe skin burns and eye damage. (*Skin Corr. 1B H314*)



- **Respiratory Irritant:** May cause respiratory irritation. (*STOT SE 3 H335*)



- **Specific Environmental and Human Hazards:** Not applicable
- **Unclassified Hazards:** No known additional hazards

Labeling Elements (CLP Regulation)

- **Hazard Statements:**
 - *H314:* Causes severe skin burns and eye damage.
 - *H335:* May cause respiratory irritation.

- **Precautionary Statements:**

- *P260*: Do not breathe dust, fumes, gas, mist, vapors, or spray.
- *P303+P361+P353*: If on skin (or hair): Immediately remove contaminated clothing. Rinse skin with water/shower.
- *P305+P351+P338*: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- *P301+P330+P331*: If swallowed: Rinse mouth. Do NOT induce vomiting.
- *P405*: Store locked up.
- *P501*: Dispose of contents/container in accordance with national, international, or regional regulations.

Section 3: Composition/Information on Ingredients

- **Substance Name:** Hydrochloric Acid
- **Concentration:** 30-33%
- **Chemical Formula:** HCl
- **Molecular Weight:** 36.5 g/mol
- **CAS Number:** 7647-01-0

Section 4: First-Aid Measures

- **Inhalation:** Provide fresh air. If needed, administer artificial respiration. Keep the victim warm and seek immediate medical attention.
- **Ingestion:** Seek medical advice.
- **Skin Contact:** Immediately wash with soap and water, rinse thoroughly, and seek medical attention.
- **Eye Contact:** Rinse open eyes under running water for several minutes. Consult a physician.

Most Important Acute and Delayed Symptoms: No additional information available.

Immediate Medical Attention and Special Treatment: No additional information available.

Section 5: Fire-Fighting Measures

- **Fire Hazard:** Non-flammable. Use appropriate extinguishing methods to contain fires in surrounding areas.
- **Unsuitable Extinguishing Media:** Water may not be suitable for safety reasons.
- **Specific Hazards:** Releases **hydrogen chloride (HCl) gas** when heated.
- **Firefighter Precautions:** Use protective clothing and breathing apparatus.

Section 6: Accidental Release Measures

- **Personal Precautions:**
 - Keep unprotected individuals away.
 - Ensure adequate ventilation.
- **Environmental Precautions:**
 - Do not discharge into the environment without legal authorization.
 - Prevent the substance from entering sewage systems or water sources.
 - Avoid soil contamination.
- **Cleanup Methods:**
 - Use a neutralizing agent.
 - Absorb with sand, diatomaceous earth, acid binders, or sawdust.
 - Dispose of contaminated material as per **Section 13**.

Section 7: Handling and Storage

- **Handling:**
 - Use personal protective equipment as per **Section 8**.
 - Work in well-ventilated areas.
 - Avoid contact with skin, eyes, and clothing.
 - Do not inhale vapors or mist.
 - Do not eat, drink, or smoke while handling.
 - Do not add water to acid; always add acid to water while stirring.
- **Storage:**
 - Store in a **cool, dry, well-ventilated** area.
 - Keep away from incompatible substances.
 - Keep out of reach of children.

Section 8: Exposure Controls/Personal Protection

- **Occupational Exposure Limit (Iran): 2 ppm**
- **Ventilation Requirements: Local exhaust ventilation with a minimum hood face velocity of 10 ft/min**

Personal Protective Equipment (PPE)

- **Hand Protection:** Use impermeable gloves. Check glove quality before use.
- **Eye Protection:** Safety goggles or face shield.
- **Respiratory Protection:** Use appropriate respiratory protection in high concentrations.

Section 9: Physical and Chemical Properties

Property	Value	Property	Value
Appearance	Liquid	Decomposition Temperature	Not specified
Color	White or yellow	Autoignition Temperature	Non-combustible
Odor	Pungent	Explosion Hazard	Not specified
Odor Threshold	0.25 - 10 ppm	Explosive Limits	Not specified
pH	Acidic	Vapor Pressure	16 kPa at 20°C
Melting Point	-46.2°C (1 atm, 31% wt. solution)	Density	1150 kg/m ³
Boiling Point	83°C (1 atm, 31% wt. solution)	Relative Density	1.15 (31% wt. solution)
Sublimation Temperature	Not specified	Evaporation Rate	Not specified
Flash Point	Not specified	Water Solubility	Completely soluble
Flammability	Not specified	Partition Coefficient	Not specified
Ignition Temperature	Not specified	Viscosity	Not applicable

Section 10: Stability and Reactivity

- **Reactivity:** Reacts with water, releasing heat.
- **Stability:** Stable under recommended storage conditions.
- **Incompatible Materials:** Metals, bases, oxidizing agents, aldehydes, epoxides, phosphides, cyanides, sulfides.
- **Hazardous Decomposition:** May release chlorine gas when reacting with oxidizers.

Section 11: Toxicological Information

- **Oral Toxicity (LD50, rat):** 900 mg/kg
- **Skin Corrosion/Irritation:** Causes severe burns.
- **Eye Damage:** Causes serious eye damage.
- **Mutagenicity & Reproductive Effects:** RTECS contains information on these effects.
- **Carcinogenicity:** Not classified as a human carcinogen.

Section 12: Ecological Information

- **Environmental Impact:** Can alter soil acidity and harm aquatic life.
- **Biodegradability:** Expected to be biodegradable.

Section 13: Disposal Considerations

- **Waste Disposal:** Follow national regulations for hazardous waste disposal.
- **Contaminated Packaging:** Dispose of according to legal requirements.

Section 14: Transport Information

- **DOT Classification:** Class 8 (Corrosive)
- **UN Number:** 1789
- **Packaging Group:** II

Section 15: Regulatory Information

Listed in the following regulations:

Region/Country	Regulatory System
Australia	Australian Inventory of Chemical Substances (AICS)
Canada	Domestic Substances List (DSL)
China	Inventory of Existing Chemical Substances in China (IECSC)
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)
Japan	Inventory of Existing and New Chemical Substances (ENCS)
Korea	Existing Chemicals List (ECL)
New Zealand	New Zealand Inventory
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)

Section 16: Other Information

- **Preparation Date:** 2024-8-15
- **Prepared By:** Amir Hossein Heratian
- **Approved By:** Amir Rafie

