

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the product

Product code: H8040

Product name: Hydrochloric Acid 37%

CAS No.: 7647-01-0

1.2 Recommended use and restriction on use

General use : for experimental, research and industrial use

Restriction on use : Never drink, Not used except for experimental, research and industrial applications.

1.3 Manufacturer / Supplier / Distributor information

Importer/distributors identification

Company : ASIA CHEMIE (THAILAND) CO., LTD.

Address : 44/27 Moo.4 T.Huaykapi A.Muangchonburi, Chonburi, Thailand. 20130

Telephone number : +66 3838 7988

Fax number : +66 3838 7989

E-mail : asiachemie@gmail.com, natchakot@asiachemie.com, natchakot@gmail.com

2. Hazards identification

2.1 GHS Classification

Corrosive to metals: Category 1

Skin corrosion/irritation: Category 1B

Specific target organ toxicity (Single exposure): Category 3 (Respiratory tract irritation)

2.2 GHS label elements

Hazard symbols



Signal words : Danger

Hazard statements

H290 May be corrosive to metals

H314 Causes severe skin burns and eye damage

H335 May cause respiratory irritation.

Precautionary Statements

P234 Keep only in original container.

P260 Do not breathe gas/mist/vapours/spray.

P261 Avoid breathing 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 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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/physician.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P321 Specific treatment

P363 Wash contaminated clothing 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.

P406 Store in corrosive resistant container with a resistant inner liner.

P501 Dispose of contents/container in accordance with local/regional/national/international regulation

2.3 Other hazards which do not result in classification : (NFPA Classification)

Not available

3. Composition/information on ingredients

Chemical Name	Synonyms	CAS No.	Concentration (%)
Water	-	7732-18-5	65
Hydrogen chloride	-	7647-01-0	35

4. First aid measures**4.1 Eye contact**

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.

4.2 Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Get medical attention immediately.
- Wash thoroughly after handling.

4.3 Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.
- Take the doctor's examination.

4.4 Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Get medical attention immediately.

4.5 Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

4.6 Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

5. Fire-fighting measures**5.1 Suitable (Unsuitable) extinguishing media**

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray.
- Avoid use of water jet for extinguishing.

5.2 Specific hazards arising from the chemical

- Not available

5.3 Special protective actions for firefighters

- In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.
- Do not access if the tank on fire.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.
- Vapor or gas is burned at distant ignition sources can be spread quickly.

6. Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- Ventilate closed spaces before entering.
- Must work against the wind, let the upwind people to evacuate.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Remove all sources of ignition.
- Do not direct water at spill or source of leak.
- Avoid skin contact and inhalation.

6.2 Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

6.3 Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount

- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.

7. Handling and storage

7.1 Precautions for safe handling

- Avoid contact with incompatible materials.
- Comply with all applicable laws and regulations for handling
- Refer to Engineering controls and personal protective equipment.
- Operators should wear antistatic footwear and clothing.
- Do not inhale the steam prolonged or repeated.
- Avoid contact with strong oxidizing agent.

7.2 Conditions for safe storage, including any incompatibilities

- Do not apply direct heat.
- Avoid direct sunlight.
- Keep in the original container.
- Please pay attention to incompatibilities materials and conditions to avoid.
- No open fire.
- Collected them in sealed containers.
- Do not eat, drink or smoke when using this product.
- Do not store in metal containers.

8. Exposure controls/personal protection

8.1 Exposure limits

ACGIH TLV

- [Hydrogen chloride] : Ceiling, 2 ppm

OSHA PEL

- [Hydrogen chloride]:(C) 5 (C) 7

8.2 Engineering controls

Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
- Any air-purifying respirator with a full facepiece and an organic vapor canister.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

Hand protection

- Wear appropriate chemical resistant glove.

Skin protection

- Wear appropriate chemical resistant protective clothing.

Others

- Not available

9. Physical and chemical properties

A. Appearance	
- Appearance	Liquid
- Color	colorless
B. Odor	characteristic odor

C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	-25 °C
F. Initial Boiling Point/Boiling Ranges	Not available
G. Flash point	Not available
H. Evaporation rate	20 hPa (20°C)
I. Flammability (solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not available
L. Solubility	67 g/100 ml (30°C)
M. Vapour density	Not available
N. Specific gravity (Relative density)	1.19
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	36.46
T. Molecular formula	HCl

10. Stability and reactivity

10.1 Chemical Stability

- Stable under normal conditions of use and storage.

10.2 Possibility of hazardous reactions

- May be corrosive to metals.

10.3 Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with metals.

10.4 Incompatible materials

- Avoid contact with strong oxidizing agent and strong reducing agent.

10.5 Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. Toxicological information

11.1 Information on the likely routes of exposure

Respiratory tracts

- May cause respiratory irritation.

Oral

- Not available.

Eye • Skin

- Causes severe skin burns and eye damage

11.2 Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

* Oral

- Product (ATEmix) : 300mg/kg < ATEmix <= 2000mg/kg
- [Water] : LD50 > 90000 mg/kg Rat (KOSHA)
- [Hydrogen chloride] : LD50 238 mg/kg Rat (SIDS)

* Dermal

- Product (ATEmix) : >5000mg/kg
- [Hydrogen chloride] : LD50 > 5010 mg/kg Rabbit (SIDS)

* Inhalation

- Product (ATEmix) : Not available
- [Hydrogen chloride] : Gas LC50 1411 ppm 4 hr Rat (NITE)

Skin corrosion/irritation

- Causes severe skin burns and eye damage

Serious eye damage/irritation

- Not available

Respiratory sensitization

- Not available

Skin sensitization

- Not available

Carcinogenicity*** IARC**

- [Hydrogen chloride] : Group 3

*** OSHA**

- Not available

*** ACGIH**

- [Hydrogen chloride] : A4

*** NTP**

- Not available

*** EU CLP**

- Not available

Germ cell mutagenicity

- Not available

Reproductive toxicity

- Not available

STOT-single exposure

- May cause respiratory irritation.

STOT-repeated exposure

- Not available

Aspiration hazard

- Not available

12. Ecological information**12.1 Ecotoxicity****Fish**

- [Hydrogen chloride] : LC50 3.25 mg/l ~ 3.5 mg/l 96 hr *Lepomis macrochirus*.

Crustaceans

- [Hydrogen chloride] : EC50 4.92 mg/l 48 hr *Daphnia magna*.

Algae

- [Hydrogen chloride] : EC50 0.492 mg/l 72 hr *Selenastrum capricornutum*

12.2 Persistence and degradability**Persistence**

- [Water] : log Kow = -1.38
- [Hydrogen chloride] : log Kow 0.25 (ICSC)

Degradability

- Not available

12.3 Bioaccumulative potential**Bioaccumulative potential**

- [Hydrogen chloride] : BCF 3.162 (Low concentration potential)

Biodegradation

- Not available

12.4 Mobility in soil

Not available

12.5 Other adverse effects

Not available

13. Disposal considerations**13.1 Disposal methods**

- Since more than two kinds of designated waste is mixed, it is difficult to treat separately, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.
- Do disposal as neutralization, hydrolysis and oxidation-reduction.
- High temperature incinerating, high-temperature melt processing will be landfilled

- Solidification processing.

13.2 Special precautions for disposal

- The user of this product must dispose by oneself or entrust it to a waste disposer, a person who recycles other's waste or establishes and operates waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

14. Transport information**14.1 UN No. (IMDG CODE/IATA DGR)**

- 1789

14.2 Proper shipping name

- HYDROCHLORIC ACID

14.3 Hazard Class

- 8

14.4 IMDG CODE/IATA DGR Packing group

- II

14.5 Marine pollutant

- Not applicable

14.6 Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE: F-A (General fire schedule)
- EmS SPILLAGE SCHEDULE: S-B (Corrosive substances)

15. Regulatory information**15.1 National and/or international regulatory information****POPs Management Law**

- Not applicable

Information of EU Classification*** Classification**

- [Hydrogen chloride] : H290, H314, H315, H318, H319, H335

U.S. Federal regulations*** OSHA PROCESS SAFETY (29CFR1910.119)**

- [Hydrogen chloride] : 2267.995 kg 5000 lb

*** CERCLA Section 103 (40CFR302.4)**

- [Hydrogen chloride] : 2267.995 kg 5000 lb

*** EPCRA Section 302 (40CFR355.30)**

- Not applicable

*** EPCRA Section 304 (40CFR355.40)**

- Not applicable

*** EPCRA Section 313 (40CFR372.65)**

- Not applicable

Rotterdam Convention listed ingredients

- Not applicable

Stockholm Convention listed ingredients

- Not applicable

Montreal Protocol listed ingredients

- Not applicable

16. Other information

Reason for the revision: General update.

Date: 10/4/2014

Revision 5

Date: 13/01/2024

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