

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/04/2017

Reviewed on 01/04/2017

1 Identification

- **Product identifier**
- **Trade name:** Hydrochloric Acid 37% Reagent ACS Grade
- **Article number:** H2505
- **CAS Number:**
7647-01-0
- **EC number:**
231-595-7
- **Index number:**
017-002-01-X
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586
- **Information department:**
Technical Coordinator
Sherman Nelson sherman@aquasolutions.org
- **Emergency telephone number:**
Chemtrec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Met. Corr.1 H290 May be corrosive to metals.

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05 GHS07

- **Signal word** Danger

- **Hazard statements**

May be corrosive to metals.

Causes severe skin burns and eye damage.

May cause respiratory irritation.

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- **Precautionary statements**

Do not breathe dusts or mists.

Wear eye protection / face protection.

Keep only in original container.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

If on skin (or hair): 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.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Absorb spillage to prevent material damage.

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description**

7647-01-0 Hydrochloric Acid

- **Identification number(s)**

· **EC number:** 231-595-7

· **Index number:** 017-002-01-X

4 First-aid measures

- **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

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- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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- Control parameters

- Components with limit values that require monitoring at the workplace:

CAS: 7647-01-0 Hydrochloric Acid

NIOSH RECOMENDED EXP LIM

Ceiling limit value: 7.0 mg/m³ mg/m³

TLV

Ceiling limit value: 2.0 ppm mg/m³

- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls

- Personal protective equipment:

- General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:

Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

- Information on basic physical and chemical properties

- General Information

- Appearance:

Form:

Liquid

Color:

Colorless

- Odor:

Pungent

- Odor threshold:

Not determined.

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· pH-value (10 g/l) at 20 °C (68 °F):	<1
· Change in condition	
Melting point/Melting range:	-30 °C (-22 °F)
Boiling point/Boiling range:	>100 °C (>212 °F)
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 21 °C (70 °F):	226.636 hPa (170 mm Hg)
· Density at 20 °C (68 °F):	1.18 g/cm ³ (9.847 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:

Irritation of skin	Skin Corrosion/Irritation	causes burns (rabbit)
Irritation of eyes	Eye damage/eye irritation	corrosiv to eye (rabbit)

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	Germ cell mutagenicity	No Data Availab (Human)
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- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|---------------|
| <ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA | UN1789 |
|--|---------------|

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· **UN proper shipping name**· **DOT**

Hydrochloric acid

· **IMDG, IATA**

HYDROCHLORIC ACID

· **Transport hazard class(es)**· **DOT**· **Class**

8 Corrosive substances

· **Label**

8

· **IMDG, IATA**· **Class**

8 Corrosive substances

· **Label**

8

· **Packing group**· **DOT, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Corrosive substances

· **Danger code (Kemler):**

80

· **EMS Number:**

F-A,S-B

· **Segregation groups**

Acids

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **UN "Model Regulation":**

UN 1789 HYDROCHLORIC ACID, 8, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **Sara**· **Section 355 (extremely hazardous substances):** Substance is not listed.· **Section 313 (Specific toxic chemical listings):** Substance is not listed.· **TSCA (Toxic Substances Control Act):** Substance is not listed.· **Proposition 65**· **Chemicals known to cause cancer:** Substance is not listed.· **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.· **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.· **Chemicals known to cause developmental toxicity:** Substance is not listed.· **Carcinogenic categories**· **EPA (Environmental Protection Agency)** Substance is not listed.· **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.· **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.· **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**

GHS05 GHS07

· **Signal word** *Danger*· **Hazard statements***May be corrosive to metals.**Causes severe skin burns and eye damage.**May cause respiratory irritation.*· **Precautionary statements***Do not breathe dusts or mists.**Wear eye protection / face protection.**Keep only in original container.**Wash thoroughly after handling.**Use only outdoors or in a well-ventilated area.**If on skin (or hair): 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.**Immediately call a POISON CENTER/doctor.**Specific treatment (see on this label).**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**If swallowed: Rinse mouth. Do NOT induce vomiting.**Absorb spillage to prevent material damage.**Store locked up.**Store in corrosive resistant container with a resistant inner liner.**Store in a well-ventilated place. Keep container tightly closed.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environment protection department.· **Contact:**· **Date of preparation / last revision***Revision 0.1, 1-04-17: added item back to chemges after it was deleted. STN**01/04/2017 / -*· **Abbreviations and acronyms:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**ACGIH: American Conference of Governmental Industrial Hygienists**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic*

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vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Met. Corr. 1: Corrosive to metals – Category 1
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

US