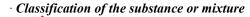
Printing date 08/15/2024

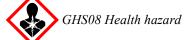
Reviewed on 08/15/2024

1 Identification

- · Product identifier
- Trade name: <u>Hydrochloric Acid, 0.5 Normal</u> NIST Traceable (Phenolphthalein e.p.)
- · Article number: EQS047
- 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 shermann@aquasolutions.org Technical Coordinator Sherman Nelson shermann@aquasolutions.org
- *Emergency telephone number:* Chemtrec: 800-424-9300 Canutec: 613-996-6666

2 Hazard(s) identification





Specific Target Organ Toxicity - Repeated Exposure 2 H373 May cause damage to organs through prolonged or repeated exposure.

GHS05 Corrosion

Skin Corrosion 1A Eye Damage 1 H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.

· Label elements

• *GHS label elements* The product is classified and labeled according to the Globally Harmonized System (GHS). • *Hazard pictograms*



· Signal word Danger

• Hazard-determining components of labeling: Hydrochloric Acid

· Hazard statements

Causes severe skin burns and eye damage.

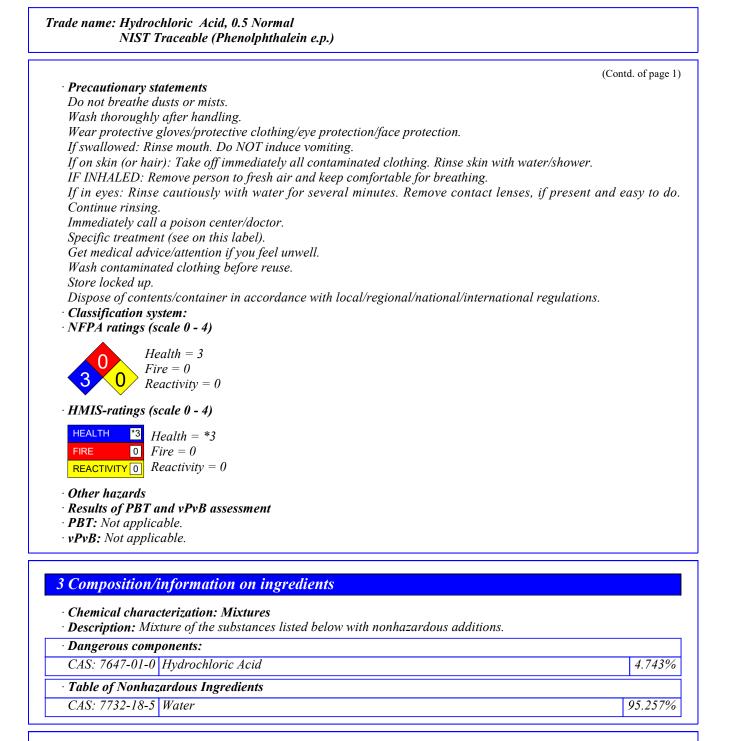
May cause damage to organs through prolonged or repeated exposure.

(Contd. on page 2)

[–] ÚS

Printing date 08/15/2024

Reviewed on 08/15/2024



4 First-aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• 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.

(Contd. on page 3)

US

Printing date 08/15/2024

Reviewed on 08/15/2024

Trade name: Hydrochloric Acid, 0.5 Normal NIST Traceable (Phenolphthalein e.p.)

(Contd. of page 2)

- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- 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: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture
- During heating or in case of fire poisonous gases are produced.
- Advice for firefighters
- Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
• Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/surface or ground 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 section 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.
Protective Action Criteria for Chemicals
· PAC-1:
CAS: 7647-01-0 Hydrochloric Acid 1.8 ppm
· PAC-2:
CAS: 7647-01-0 Hydrochloric Acid 22 ppm
· PAC-3:
CAS: 7647-01-0 Hydrochloric Acid 100 ppm

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: Keep respiratory protective device available.

(Contd. on page 4)

US

Printing date 08/15/2024

Reviewed on 08/15/2024

Trade name: Hydrochloric Acid, 0.5 Normal NIST Traceable (Phenolphthalein e.p.)

(Contd. of page 3)

- · 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 section 7.
- · Control parameters

• Components with limit values that require monitoring at the workplace:		
CAS: 7647-01-0 Hydrochloric Acid		
	Ceiling limit value: 7.0 mg/m3 mg/m ³	
PEL	Ceiling limit value: 7 mg/m³, 5 ppm	
REL	Ceiling limit value: 7 mg/m³, 5 ppm Ceiling limit value: 7 mg/m³, 5 ppm	
TLV	Ceiling limit value: 2 ppm	
	<i>A4</i>	

• 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.

Store protective clothing separately.

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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.

(Contd. on page 5)

US

Printing date 08/15/2024

Reviewed on 08/15/2024

Trade name: Hydrochloric Acid, 0.5 Normal NIST Traceable (Phenolphthalein e.p.)

(Contd. of page 4)

• Eye protection:



Tightly sealed goggles

· Body protection: Protective work clothing

Information on basic physical and c	chemical properties	
General Information		
Appearance: Form:	1:	
Form: Color:	Liquid Colorless	
Odor:	Odorless	
Odor threshold:	Not determined.	
pH-value at 20 °C (68 °F):	<2	
Change in condition		
Melting point/Melting range:	0 °C (32 °F)	
Boiling point/Boiling range:	100 °C (212 °F)	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not applicable.	
Decomposition temperature:	Not determined.	
Ignition temperature:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)	
Density at 20 °C (68 °F):	1.00623 g/cm³ (8.39699 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/wate	er): Not determined.	
Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Solvent content:		
Water:	95.3 %	
VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal	

(Contd. of page 5)

Safety Data Sheet acc. to OSHA HCS

Printing date 08/15/2024

Reviewed on 08/15/2024

Trade name: Hydrochloric Acid, 0.5 Normal
NIST Traceable (Phenolphthalein e.p.)

Solids content:

0.0~%

· 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:
- 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:

The product shows the following dangers according to internally approved calculation methods for preparations: Corrosive

Irritant

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)

None of the ingredients is listed.

·NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is 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.

(Contd. on page 7)

US

Printing date 08/15/2024

Reviewed on 08/15/2024

Trade name: Hydrochloric Acid, 0.5 Normal NIST Traceable (Phenolphthalein e.p.)

(Contd. of page 6)

• Additional ecological information:

· General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. 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.

· UN-Number		
DOT, IMDG, IATA	UN1789	
· UN proper shipping name		
DOT	Hydrochloric acid solution	
· IMDG, IATA	HYDROCHLORIC ACID solution	
· Transport hazard class(es)		
DOT		
CORROSIVE 8		
- Class	8 Corrosive substances	
Label	8	
· IMDG, IATA		
· Class	8 Corrosive substances	
· Label	8	
· Packing group		

Printing date 08/15/2024

Reviewed on 08/15/2024

(Contd. of page 7)

Trade name: Hydrochloric Acid, 0.5 Normal NIST Traceable (Phenolphthalein e.p.)

· Environmental hazards:

• Marine pollutant:

· Special precautions for user

Warning: Corrosive substances

No

• Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· UN "Model Regulation":

UN 1789 HYDROCHLORIC ACID SOLUTION, 8, III

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available. · Sara · Section 355 (extremely hazardous substances): None of the ingredients is listed. · Section 313 (Specific toxic chemical listings): None of the ingredients is listed. • TSCA (Toxic Substances Control Act): Water ACTIVE Hvdrochloric Acid ACTIVE Hazardous Air Pollutants CAS: 7647-01-0 Hydrochloric Acid · Proposition 65 · Chemicals known to cause cancer: None of the ingredients is listed. · Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed. · Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed. · Chemicals known to cause developmental toxicity: None of the ingredients is listed. · Carcinogenic categories · EPA (Environmental Protection Agency) None of the ingredients is listed. · TLV (Threshold Limit Value) None of the ingredients is listed. · NIOSH-Ca (National Institute for Occupational Safety and Health) None of the ingredients is listed.

• GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS). (Contd. on page 9)

Printing date 08/15/2024

Reviewed on 08/15/2024

Trade name: Hydrochloric Acid, 0.5 Normal NIST Traceable (Phenolphthalein e.p.)

	(Contd. of page
Hazard pictograms	
\wedge	
GHS05 GHS08	
Signal word Danger	
Hazard-determining components of labeling:	
Hydrochloric Acid	
Hazard statements	
Causes severe skin burns and eye damage.	
May cause damage to organs through prolonged or repeated exposure.	
Precautionary statements	
Do not breathe dusts or mists.	
Wash thoroughly after handling.	
Wear protective gloves/protective clothing/eye protection/face protection.	
If swallowed: Rinse mouth. Do NOT induce vomiting.	
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/show	ver.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if prese	ent and easy to
Continue rinsing.	
Immediately call a poison center/doctor.	
Specific treatment (see on this label).	
Get medical advice/attention if you feel unwell.	
Wash contaminated clothing before reuse.	
Store locked up.	
Dispose of contents/container in accordance with local/regional/national/international regulated	ions.
<i>Chemical safety assessment:</i> 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:* • Date of preparation / last revision Revision 1.2, 08-15-2024: Reviewed SDS for accuracy. STN/GW Revision 0.0 Creation date for SDS 12-03-2014. STN 08/15/2024 / 1.1 • Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

(Contd. on page 10)

Printing date 08/15/2024

Reviewed on 08/15/2024

Trade name: Hydrochloric Acid, 0.5 Normal NIST Traceable (Phenolphthalein e.p.)

(Contd. of page 9)

OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Skin Corrosion 1A: Skin corrosion/irritation – Category 1A Eye Damage 1: Serious eye damage/eye irritation – Category 1 Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2 • * Data compared to the previous version altered.