Safety Data Sheet
acc. to OSHA HCS

Printing date 07/21/2022 Reviewed on 07/21/2022

1 Identification

· **Product identifier**

· **Trade name: Gold 50 µg/mL in 2% HCl**

· **Article number:** 50 21-2

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
High-Purity Standards
7221 Investment Drive, North Charleston, SC 29418 United States
Telephone: +1-843-767-7900
Fax: +1-843-767-7906
highpuritystandards.com
Email: info@highpuritystandards.com

· **Information department:** Product safety department
· **Emergency telephone number:**
INFOTRAC
Emergency telephone numbers1-800-535-5053
Other emergency telephone numbers 1-352-323-3500

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.

GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

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

GHS05

· **Signal word** Danger

· **Hazard-determining components of labeling:**
hydrochloric acid

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· **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H319 Causes serious eye irritation.
· **Precautionary statements**
Keep only in original container.
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/shower.
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 present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.
Store locked up.
Store in corrosive resistant container with a resistant inner liner.
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: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
7647-01-0	hydrochloric acid	2.0%

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· **Chemical identification of the substance/preparation**		
7732-18-5	water, distilled, conductivity or of similar purity	97.995%
7440-57-5	Gold	0.005%

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. If symptoms persist, 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:** No special measures required.
· **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.

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· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
7647-01-0	hydrochloric acid	1.8 ppm
7440-57-5	Gold	0.46 mg/m³

· **PAC-2:**		
7647-01-0	hydrochloric acid	22 ppm
7440-57-5	Gold	5.1 mg/m³

· **PAC-3:**		
7647-01-0	hydrochloric acid	100 ppm
7440-57-5	Gold	30 mg/m³

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.

· **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.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
7647-01-0 hydrochloric acid	
PEL	Ceiling limit value: 7 mg/m³, 5 ppm
REL	Ceiling limit value: 7 mg/m³, 5 ppm
TLV	Ceiling limit value: 2 ppm A4

· **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.

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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. 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.

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	*Liquid*
Color:	*According to product specification*
· **Odor:**	*Characteristic*
· **Odor threshold:**	*Not determined.*
· **pH-value:**	*Not determined.*
· **Change in condition**	
Melting point/Melting range:	*Undetermined.*
Boiling point/Boiling range:	*100 °C (212 °F)*

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· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	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:**	Not determined.
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Water:	98.0 %
VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
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.

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11 Toxicological information

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

· LD/LC50 values that are relevant for classification:		
7647-01-0 hydrochloric acid		
Oral	LD50	900 mg/kg (rabbit)

· **Primary irritant effect:**
· **on the skin:** Strong caustic effect on skin and mucous membranes.
· **on the eye:**
Strong caustic effect.
Irritating effect.
· **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)		
7647-01-0	hydrochloric acid	3

· 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.
· **Additional ecological information:**
· **General notes:**
Not hazardous for water.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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· **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.

14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN1789
· **UN proper shipping name**	
· **DOT**	Hydrochloric acid solution
· **ADR**	1789 HYDROCHLORIC ACID solution
· **IMDG, IATA**	HYDROCHLORIC ACID solution
· **Transport hazard class(es)**	
· **DOT**	

· **Class**	8 Corrosive substances
· **Label**	8
· **ADR**	

· **Class**	8 (C1) Corrosive substances
· **Label**	8
· **IMDG, IATA**	

· **Class**	8 Corrosive substances

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· **Label**	8
· **Packing group** · **DOT, ADR, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable.
· **Special precautions for user** · **Hazard identification number (Kemler code):** · **EMS Number:** · **Segregation groups** · **Stowage Category**	Warning: Corrosive substances 80 F-A,S-B Acids E
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **DOT** · **Quantity limitations**	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· **ADR** · **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **IMDG** · **Limited quantities (LQ)** · **Excepted quantities (EQ)**	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **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):**	
7647-01-0	hydrochloric acid

· **Section 313 (Specific toxic chemical listings):**	
7647-01-0	hydrochloric acid

· **TSCA (Toxic Substances Control Act):**
All components have the value ACTIVE.

· **Hazardous Air Pollutants**	
7647-01-0	hydrochloric acid

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· **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)**

7647-01-0	hydrochloric acid	A4

· **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).
· **Hazard pictograms**

GHS05

· **Signal word** Danger

· **Hazard-determining components of labeling:**
hydrochloric acid
· **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H319 Causes serious eye irritation.
· **Precautionary statements**
Keep only in original container.
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/shower.
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 present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.

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Specific treatment (see on this label).
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.
Store locked up.
Store in corrosive resistant container with a resistant inner liner.
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:**
High-Purity Standards
Tel: 843-767-7900
Fax: 843-767-7906
· **Date of preparation / last revision** *07/21/2022 / -*
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international 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
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
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 Irrit. 2A: Serious eye damage/eye irritation – Category 2A