

## Safety Data Sheet

acc. to OSHA HCS

Printing date 06/17/2022

Reviewed on 06/17/2022

### 1 Identification

- **Product identifier**
- **Trade name:** Lead (1000µg/mL in 2% HCl)
- **Article number:** 100028-2
- **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 numbers 1-800-535-5053  
Other emergency telephone numbers 1-352-323-3500

### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 2      H351 Suspected of causing cancer.  
Repr. 1A     H360 May damage fertility or the unborn child.



GHS05 Corrosion

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

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



GHS05    GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
hydrochloric acid  
lead

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**Hazard statements**

H314 Causes severe skin burns and eye damage.

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

**Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

Store locked up.

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%
7439-92-1	lead	0.1%

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**· Chemical identification of the substance/preparation**

7732-18-5 | water, distilled, conductivity or of similar purity

97.9%

**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.
- **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.
- **Protective Action Criteria for Chemicals**

**· PAC-1:**

7647-01-0 | hydrochloric acid

1.8 ppm

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7439-92-1	lead	0.15 mg/m <sup>3</sup>
<b>· PAC-2:</b>		
7647-01-0	hydrochloric acid	22 ppm
7439-92-1	lead	120 mg/m <sup>3</sup>
<b>· PAC-3:</b>		
7647-01-0	hydrochloric acid	100 ppm
7439-92-1	lead	700 mg/m <sup>3</sup>

**7 Handling and storage**

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
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:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

**7647-01-0 hydrochloric acid**

PEL	Ceiling limit value: 7 mg/m <sup>3</sup> , 5 ppm
REL	Ceiling limit value: 7 mg/m <sup>3</sup> , 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.  
Store protective clothing separately.  
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:**

<b>Form:</b>	Liquid
<b>Color:</b>	According to product specification
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)

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· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Vapor pressure at 20 °C (68 °F):</b>	23 hPa (17.3 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	1.01335 g/cm <sup>3</sup> (8.45641 lbs/gal)
· <b>Bulk density:</b>	1,007 kg/m <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
Dynamic:	Not determined.
Kinematic:	Not determined.
· <b>Solvent content:</b>	
Water:	97.9 %
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
Solids content:	0.1 %
· <b>Other information</b>	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.

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· **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:**

**7647-01-0 hydrochloric acid**

Oral	LD50	900 mg/kg (rabbit)
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· **Primary irritant effect:**

· **on the skin:** Strong caustic effect on skin and mucous membranes.

· **on the eye:** Strong caustic effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

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

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
7439-92-1	lead	2B

· **NTP (National Toxicology Program)**

7439-92-1	lead	R
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· **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** UN3264
- **ADR, IMDG, IATA** UNI789
- **UN proper shipping name**
- **DOT** Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid)
- **ADR** 1789 HYDROCHLORIC ACID mixture
- **IMDG, IATA** HYDROCHLORIC ACID mixture
- **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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· <b>Label</b>	8
· <b>Packing group</b> · <b>DOT, ADR, IMDG, IATA</b>	II
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b> · <b>Hazard identification number (Kemler code):</b> · <b>EMS Number:</b> · <b>Segregation groups</b> · <b>Stowage Category</b>	Warning: Corrosive substances 80 F-A,S-B Strong acids C
· <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b> · <b>DOT</b> · <b>Quantity limitations</b>	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· <b>ADR</b> · <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1789 HYDROCHLORIC ACID MIXTURE, 8, II

**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

7439-92-1 lead

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

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<b>· Hazardous Air Pollutants</b>	
7647-01-0	hydrochloric acid
7439-92-1	lead

<b>· Proposition 65</b>	
<b>· Chemicals known to cause cancer:</b>	
7439-92-1	lead

<b>· Chemicals known to cause reproductive toxicity for females:</b>	
7439-92-1	lead

<b>· Chemicals known to cause reproductive toxicity for males:</b>	
7439-92-1	lead

<b>· Chemicals known to cause developmental toxicity:</b>	
7439-92-1	lead

<b>· Carcinogenic categories</b>		
<b>· EPA (Environmental Protection Agency)</b>		
7439-92-1	lead	B2

<b>· TLV (Threshold Limit Value)</b>		
7647-01-0	hydrochloric acid	A4
7439-92-1	lead	A3

<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>	
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 GHS08

**· Signal word** Danger

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

hydrochloric acid

lead

**· Hazard statements**

H314 Causes severe skin burns and eye damage.

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

**· Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dusts or mists.

Wash thoroughly after handling.

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*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.*  
*IF exposed or concerned: Get medical advice/attention.*  
*Specific treatment (see on this label).*  
*Wash contaminated clothing before reuse.*  
*Store locked up.*  
*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** 06/17/2022 / -

· **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*

*Skin Corr. 1A: Skin corrosion/irritation – Category 1A*

*Carc. 2: Carcinogenicity – Category 2*

*Repr. 1A: Reproductive toxicity – Category 1A*