

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/20/2024

Reviewed on 05/20/2024

## 1 Identification

- **Product identifier**
- **Trade name:** Hydrogen Cyanide Standard  
4.0 ppm as HCN, NIST Traceable
- **Article number:** M-204
- **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](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtrec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
*The product is not classified, according to the Globally Harmonized System (GHS).*
- **Label elements**
- **GHS label elements** Not Applicable
- **Hazard pictograms** Not Applicable
- **Signal word** Not Applicable
- **Hazard statements** Not Applicable
- **Precautionary statements**  
*If swallowed: Call a poison center/doctor if you feel unwell.*  
*If on skin: Wash with plenty of water.*  
*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**

	Health = 1
	Fire = 0
	Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**

<table border="1" style="display: inline-table;"><tr><td>HEALTH</td><td style="text-align: center;">1</td></tr></table>	HEALTH	1	Health = 1
HEALTH	1		
<table border="1" style="display: inline-table;"><tr><td>FIRE</td><td style="text-align: center;">0</td></tr></table>	FIRE	0	Fire = 0
FIRE	0		
<table border="1" style="display: inline-table;"><tr><td>REACTIVITY</td><td style="text-align: center;">0</td></tr></table>	REACTIVITY	0	Reactivity = 0
REACTIVITY	0		
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:** Not Applicable

· **Table of Nonhazardous Ingredients**

CAS: 7732-18-5	Water	99.998%
CAS: 151-50-8	Potassium Cyanide	0.001%
CAS: 1310-58-3	Potassium Hydroxide	0.001%

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult 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** 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** Not required.
- **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).  
Dispose contaminated material as waste according to section 13.
- **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: 151-50-8	Potassium Cyanide	5.3 mg/m <sup>3</sup>
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CAS: 1310-58-3	Potassium Hydroxide	0.18 mg/m <sup>3</sup>
<b>· PAC-2:</b>		
CAS: 151-50-8	Potassium Cyanide	19 mg/m <sup>3</sup>
CAS: 1310-58-3	Potassium Hydroxide	2 mg/m <sup>3</sup>
<b>· PAC-3:</b>		
CAS: 151-50-8	Potassium Cyanide	40 mg/m <sup>3</sup>
CAS: 1310-58-3	Potassium Hydroxide	54 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **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:** None.
- **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:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **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.

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- **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:** *Goggles recommended during refilling.*
- **Body protection:** *Protective work clothing*

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

<b>Form:</b>	Liquid
<b>Color:</b>	Clear
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.

#### · Change in condition

<b>Melting point/Melting range:</b>	0 °C (32 °F)
<b>Boiling point/Boiling range:</b>	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:

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

· **Vapor pressure at 20 °C (68 °F):** 23 hPa (17.3 mm Hg)

· **Density at 20 °C (68 °F):** 1.00001 g/cm<sup>3</sup> (8.34508 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:

<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.

#### · Solvent content:

<b>Water:</b>	100.0 %
<b>VOC content:</b>	0.00 %
	0.0 g/l / 0.00 lb/gal

**Solids content:** 0.0 %

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· **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:** *No irritant effect.*
- **on the eye:** *No irritating effect.*
- **Sensitization:** *No sensitizing effects known.*
- **Additional toxicological information:**  
*The product is not subject to classification according to internally approved calculation methods for preparations.*  
*When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.*

- **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.*
- **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.*
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*

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- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **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"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> </ul>  | <p>Not regulated</p>   |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT, ADN, IATA</b></li> <li>· <b>IMDG</b></li> </ul>           | <p>Not regulated</p> <p>Not Regulated</p> <p>Not regulated</p> |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> <li>· <b>Class</b></li> </ul> | <p>Not regulated</p>   |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>   | <p>Not regulated</p>   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>                                | <p>No</p>  |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> </ul>  | <p>Not applicable.</p>   |
| <ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>                   | <p>Not applicable.</p>   |
| <ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> <li>· <b>DOT</b></li> <li>· <b>Remarks:</b></li> </ul>        | <p>Not regulated</p>   |
| <ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Remarks:</b></li> </ul>   | <p>Not regulated</p>   |
| <ul style="list-style-type: none"> <li>· <b>IATA</b></li> <li>· <b>Remarks:</b></li> </ul>   | <p>Not regulated</p>   |
| <ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>  | <p>Not regulated</p>   |

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
 No further relevant information available.

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· **Sara**

· **Section 355 (extremely hazardous substances):**

CAS: 151-50-8	Potassium Cyanide
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· **Section 313 (Specific toxic chemical listings):**

CAS: 151-50-8	Potassium Cyanide
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· **TSCA (Toxic Substances Control Act):**

Water	ACTIVE
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Potassium Cyanide	ACTIVE
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Potassium Hydroxide	ACTIVE
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· **Hazardous Air Pollutants**

CAS: 151-50-8	Potassium Cyanide
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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:**

CAS: 151-50-8	Potassium Cyanide
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· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

CAS: 151-50-8	Potassium Cyanide	II
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· **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** Not Applicable

· **Hazard pictograms** Not Applicable

· **Signal word** Not Applicable

· **Hazard statements** Not Applicable

· **Precautionary statements**

If swallowed: Call a poison center/doctor if you feel unwell.

If on skin: Wash with plenty of water.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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:**

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*Date of Preparation / Last Revision:*

· **Date of preparation / last revision**

Revision 1.2, 05/20/2024: Reviewed SDS for accuracy. MH/STN

Creation date for SDS 12-01-2021. STN

05/20/2024

· **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

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

· **\* Data compared to the previous version altered.**

US