

11/15/2023

### Kit Components

Product code	Description
<b>RSCN9-SET</b>	<b>Ion Chromatography &amp; Ion Selective Electrode Standards Set of 2 Solutions for Cyanide</b>

Components:

IS-BUF2-500	10M Sodium Hydroxide Buffer
RSCN9-2Y	1000 µg/mL Simple Cyanide

## 1 Identification

- **Product identifier**
- **Product Name:** 10M Sodium Hydroxide Buffer
- **Part Name:** IS-BUF2-500
- **Application of the substance / the mixture** For Laboratory Use Only
- **Uses advised against** Not for Human or Animal Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Spex CertiPrep, LLC.  
203 Norcross Ave, Metuchen,  
NJ 08840 USA  
732-549-7144  
USMet-CRMSales@antylia.com
- **Information department:** product safety department
- **Emergency telephone number:**  
Emergency Phone Number (24 hours)  
CHEMTREC (800-424-9300)  
Outside US: 703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

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



GHS05

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
sodium hydroxide
- **Hazard statements**  
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**  
P260 Do not breathe dusts or mists.  
P264 Wash thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a poison center/doctor.  
P321 Specific treatment (see on this label).  
P363 Wash contaminated clothing before reuse.  
P405 Store locked up.  
P501 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 Health = 3  
FIRE 0 Fire = 0  
REACTIVITY 0 Reactivity = 0

**Product Name: 10M Sodium Hydroxide Buffer**

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- **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:**

1310-73-2	sodium hydroxide	40.0%
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· **Chemical identification of the substance/preparation**

7732-18-5	water, distilled, conductivity or of similar purity	60.0%
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### 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.  
 Do not give anything to eat or drink - Do not induce vomiting
- **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.
- **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:**

1310-73-2	sodium hydroxide	0.5 mg/m <sup>3</sup>
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· **PAC-2:**

1310-73-2	sodium hydroxide	5 mg/m <sup>3</sup>
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· **PAC-3:**

1310-73-2	sodium hydroxide	50 mg/m <sup>3</sup>
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### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
 Ensure good ventilation/exhaustion at the workplace.  
 Prevent formation of aerosols.

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Product Name: 10M Sodium Hydroxide Buffer

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- 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 section 7.
- Control parameters

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

### 1310-73-2 sodium hydroxide

PEL	Long-term value: 2 mg/m <sup>3</sup>
REL	Ceiling limit value: 2 mg/m <sup>3</sup>
TLV	Ceiling limit value: 2 mg/m <sup>3</sup>

· 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.
- Respiratory protection:
  - 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
Odour Threshold:	Not applicable.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	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 applicable.
· <b>Ignition temperature:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not applicable.
<b>Upper:</b>	Not applicable.
· <b>Vapor pressure at 20 °C (68 °F):</b>	23 hPa (17.3 mm Hg)
· <b>Density at 20 °C (68 °F)</b>	1.452 g/cm <sup>3</sup> (12.11694 lbs/gal)
· <b>Relative density</b>	Not applicable.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not applicable.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Water:</b>	60.0 %
<b>VOC content:</b>	0.00 %
<b>Solids content:</b>	40.0 %
· <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.
- **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:**

**1310-73-2 sodium hydroxide**

Oral	LD50	2,000 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** 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.

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Product Name: 10M Sodium Hydroxide Buffer

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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.
- **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**

· UN-Number · DOT, ADR, IMDG, IATA	UN1824
· UN proper shipping name · DOT · ADR · IMDG, IATA	Sodium hydroxide solution 1824 SODIUM HYDROXIDE SOLUTION SODIUM HYDROXIDE SOLUTION
· Transport hazard class(es) · DOT	
	
· Class · Label	8 Corrosive substances 8
· ADR, IMDG, IATA	
	
· Class · Label	8 Corrosive substances 8
· Packing group · DOT, ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Segregation Code	Warning: Corrosive substances 80 F-A,S-B (SGG18) Alkalies A SG35 Stow "separated from" SGG1-acids

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Product Name: 10M Sodium Hydroxide Buffer

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· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.</b>	
· <b>Transport/Additional information:</b>	
· <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>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1824 SODIUM HYDROXIDE SOLUTION, 8, II

**15 Regulatory information**

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

· <b>Section 313 (Specific toxic chemical listings):</b>
None of the ingredients is listed.
· <b>TSCA (Toxic Substances Control Act):</b>
All components have the value ACTIVE.
· <b>Hazardous Air Pollutants</b>
None of the ingredients is listed.
· <b>Proposition 65</b>
· <b>Chemicals known to cause cancer:</b>
None of the ingredients is listed.
· <b>Chemicals known to cause reproductive toxicity for females:</b>
None of the ingredients is listed.
· <b>Chemicals known to cause reproductive toxicity for males:</b>
None of the ingredients is listed.
· <b>Chemicals known to cause developmental toxicity:</b>
None of the ingredients is listed.
· <b>Carcinogenic categories</b>
· <b>EPA (Environmental Protection Agency)</b>
None of the ingredients is listed.
· <b>TLV (Threshold Limit Value)</b>
None of the ingredients is listed.
· <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

· **Signal word** Danger

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

sodium hydroxide

· **Hazard statements**

H314 Causes severe skin burns and eye damage.

· **Precautionary statements**

P260 Do not breathe dusts or mists.

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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Printing date 11/15/2023

Reviewed on 09/06/2023

**Product Name: 10M Sodium Hydroxide Buffer**

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- P310 *Immediately call a poison center/doctor.*
- P321 *Specific treatment (see on this label).*
- P363 *Wash contaminated clothing before reuse.*
- P405 *Store locked up.*
- P501 *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:** *product safety department*

· **Contact:**

*Spex CertiPrep, LLC.  
1-732-549-7144*

· **Date of preparation / last revision** *11/15/2023*

· **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 Corrosion 1A: Skin corrosion/irritation – Category 1A*

*Eye Damage 1: Serious eye damage/eye irritation – Category 1*

## 1 Identification

- **Product identifier**
- **Product Name:** 1000 µg/mL Simple Cyanide
- **Part Name:**  
RSCN9-2Y  
RSCN9-2X
- **Application of the substance / the mixture** For Laboratory Use Only
- **Uses advised against** Not for Human or Animal Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Spex CertiPrep, LLC.  
203 Norcross Ave, Metuchen,  
NJ 08840 USA  
732-549-7144  
USMet-CRMSales@antylia.com
- **Information department:** product safety department
- **Emergency telephone number:**  
Emergency Phone Number (24 hours)  
CHEMTREC (800-424-9300)  
Outside US: 703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

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



GHS07

Acute Toxicity - Dermal 4      H312 Harmful in contact with skin.  
Acute Toxicity - Inhalation 4      H332 Harmful if inhaled.

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



GHS05



GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
potassium hydroxide  
potassium cyanide

- **Hazard statements**  
H312+H332 Harmful in contact with skin or if inhaled.  
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**  
P260 Do not breathe dusts or mists.  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a poison center/doctor.  
P321 Specific treatment (see on this label).  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P363 Wash contaminated clothing before reuse.  
P405 Store locked up.

Product Name: 1000 µg/mL Simple Cyanide

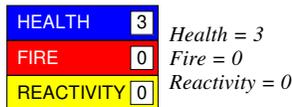
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P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
- NFPA ratings (scale 0 - 4)



- HMIS-ratings (scale 0 - 4)



- 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:

1310-58-3	potassium hydroxide	2.0%
151-50-8	potassium cyanide	0.25%

· Chemical identification of the substance/preparation

7732-18-5	water, distilled, conductivity or of similar purity	97.75%
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### 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:  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.
- 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: Do not give anything to eat or drink - Do not induce vomiting
- 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.
- 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.

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**Product Name: 1000 µg/mL Simple Cyanide**

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See Section 13 for disposal information.

**Protective Action Criteria for Chemicals**

<b>· PAC-1:</b>		
1310-58-3	potassium hydroxide	0.18 mg/m <sup>3</sup>
151-50-8	potassium cyanide	5.3 mg/m <sup>3</sup>
<b>· PAC-2:</b>		
1310-58-3	potassium hydroxide	2 mg/m <sup>3</sup>
151-50-8	potassium cyanide	19 mg/m <sup>3</sup>
<b>· PAC-3:</b>		
1310-58-3	potassium hydroxide	54 mg/m <sup>3</sup>
151-50-8	potassium cyanide	40 mg/m <sup>3</sup>

**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 section 7.

**Control parameters**

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

<b>1310-58-3 potassium hydroxide</b>	
REL	Ceiling limit value: 2 mg/m <sup>3</sup>
TLV	Ceiling limit value: 2 mg/m <sup>3</sup>
<b>151-50-8 potassium cyanide</b>	
PEL	Long-term value: 5 mg/m <sup>3</sup> as CN; Skin
REL	Ceiling limit value: 5* mg/m <sup>3</sup> , 4.7* ppm as CN; *10-min
TLV	Ceiling limit value: 5 mg/m <sup>3</sup> , 4.7 ppm as CN; Skin

- **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.

**Respiratory protection:**

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

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**Product Name: 1000 µg/mL Simple Cyanide**

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**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>Odour Threshold:</b>	Not applicable.

**pH-value:** Not applicable.

**Change in condition**

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

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Decomposition temperature:** Not applicable.

**Ignition temperature:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

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

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

**Density at 20 °C (68 °F)** 1.0222 g/cm<sup>3</sup> (8.53026 lbs/gal)

**Relative density** Not applicable.

**Vapor density** Not applicable.

**Evaporation rate** Not applicable.

**Solubility in / Miscibility with**

**Water:** Fully miscible.

**Partition coefficient (n-octanol/water):** Not applicable.

**Viscosity:**

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

**Solvent content:**

<b>Water:</b>	97.8 %
<b>VOC content:</b>	0.00 %

**Solids content:** 2.3 %

**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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Product Name: 1000 µg/mL Simple Cyanide

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### 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**1310-58-3 potassium hydroxide**

Oral	LD50	273 mg/kg (rat)
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· **Primary irritant effect:**

· **on the skin:** 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:

Harmful

Corrosive

Irritant

· **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:**

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.

· **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

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

UN1814

· **UN proper shipping name**

· **DOT**

Potassium hydroxide, solution

· **ADR**

1814 POTASSIUM HYDROXIDE SOLUTION

· **IMDG, IATA**

POTASSIUM HYDROXIDE SOLUTION

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Product Name: 1000 µg/mL Simple Cyanide

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<p>· <b>Transport hazard class(es)</b></p> <p>· <b>DOT</b></p> 	
<p>· <b>Class</b></p> <p>· <b>Label</b></p>	<p>8 Corrosive substances</p> <p>8</p>
<p>· <b>ADR, IMDG, IATA</b></p> 	
<p>· <b>Class</b></p> <p>· <b>Label</b></p>	<p>8 Corrosive substances</p> <p>8</p>
<p>· <b>Packing group</b></p> <p>· <b>DOT, ADR, IMDG, IATA</b></p>	<p>III</p>
<p>· <b>Environmental hazards:</b></p>	<p>Not applicable.</p>
<p>· <b>Special precautions for user</b></p> <p>· <b>Hazard identification number (Kemler code):</b></p> <p>· <b>EMS Number:</b></p> <p>· <b>Segregation groups</b></p> <p>· <b>Stowage Category</b></p> <p>· <b>Segregation Code</b></p>	<p>Warning: Corrosive substances</p> <p>80</p> <p>F-A,S-B</p> <p>(SGG18) Alkalis</p> <p>A</p> <p>SG35 Stow "separated from" SGG1-acids</p>
<p>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> Not applicable.</p>	
<p>· <b>Transport/Additional information:</b></p>	
<p>· <b>ADR</b></p> <p>· <b>Excepted quantities (EQ)</b></p>	<p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 1000 ml</p>
<p>· <b>IMDG</b></p> <p>· <b>Limited quantities (LQ)</b></p> <p>· <b>Excepted quantities (EQ)</b></p>	<p>5L</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 1000 ml</p>
<p>· <b>UN "Model Regulation":</b></p>	<p>UN 1814 POTASSIUM HYDROXIDE SOLUTION, 8, III</p>

**15 Regulatory information**

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

· **Sara**

<p>· <b>Section 313 (Specific toxic chemical listings):</b></p> <p>151-50-8   potassium cyanide</p>
<p>· <b>TSCA (Toxic Substances Control Act):</b></p> <p>All components have the value ACTIVE.</p>
<p>· <b>Hazardous Air Pollutants</b></p> <p>151-50-8   potassium cyanide</p>
<p>· <b>Proposition 65</b></p>
<p>· <b>Chemicals known to cause cancer:</b></p> <p>None of the ingredients is listed.</p>
<p>· <b>Chemicals known to cause reproductive toxicity for females:</b></p> <p>None of the ingredients is listed.</p>
<p>· <b>Chemicals known to cause reproductive toxicity for males:</b></p> <p>151-50-8   potassium cyanide</p>
<p>· <b>Chemicals known to cause developmental toxicity:</b></p> <p>None of the ingredients is listed.</p>

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Product Name: 1000 µg/mL Simple Cyanide

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· **Carcinogenic categories**

· <b>EPA (Environmental Protection Agency)</b>	151-50-8   potassium cyanide	II
· <b>TLV (Threshold Limit Value)</b>	None of the ingredients is listed.	
· <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**



· **Signal word** Danger

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

potassium hydroxide  
potassium cyanide

· **Hazard statements**

H312+H332 Harmful in contact with skin or if inhaled.  
H314 Causes severe skin burns and eye damage.

· **Precautionary statements**

P260 Do not breathe dusts or mists.  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a poison center/doctor.  
P321 Specific treatment (see on this label).  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P363 Wash contaminated clothing before reuse.  
P405 Store locked up.  
P501 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:** product safety department

· **Contact:**

Spex CertiPrep, LLC.  
1-732-549-7144

· **Date of preparation / last revision** 11/15/2023

· **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  
Acute Toxicity - Dermal 4: Acute toxicity – Category 4  
Skin Corrosion 1B: Skin corrosion/irritation – Category 1B  
Eye Damage 1: Serious eye damage/eye irritation – Category 1