

# Cyanide Standard, 1000ppm

## Safety Data Sheet 75199

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 07/20/1998

Revision date: 07/15/2013

Supersedes: 09/19/2011

Version: 1.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
 Product name : Cyanide Standard, 1000ppm  
 Product code : LC13545

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For laboratory and manufacturing use only.

#### 1.3. Details of the supplier of the safety data sheet

LabChem Inc  
 Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court  
 Zelienople, PA 16063 - USA  
 T 412-826-5230 - F 724-473-0647  
[info@labchem.com](mailto:info@labchem.com) - [www.labchem.com](http://www.labchem.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Aquatic Acute 3 H402

#### 2.2. Label elements

##### GHS-US labelling

Hazard statements (GHS-US) : H402 - Harmful to aquatic life  
 Precautionary statements (GHS-US) : P273 - Avoid release to the environment  
 P501 - Dispose of contents/container to comply with local, state and federal regulations

#### 2.3. Other hazards

Other hazards not contributing to the classification : None.

#### 2.4. Unknown acute toxicity (GHS-US)

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

Full text of H-phrases: see section 16

#### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Water	(CAS No) 7732-18-5	99.55	Not classified
Potassium Cyanide	(CAS No) 151-50-8	0.25	Acute Tox. 2 (Oral), H300 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Sodium Hydroxide	(CAS No) 1310-73-2	0.2	Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

# Cyanide Standard, 1000ppm

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- |                                       |   |
|---------------------------------------|---|
| First-aid measures general            | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). |
| First-aid measures after inhalation   | : Assure fresh air breathing. Allow the victim to rest.   |
| First-aid measures after skin contact | : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.                 |
| First-aid measures after eye contact  | : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.                          |
| First-aid measures after ingestion    | : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.  |

#### 4.2. Most important symptoms and effects, both acute and delayed

- |                                      |  |
|--------------------------------------|--|
| Symptoms/injuries after inhalation   | : EXPOSURE TO HIGH CONCENTRATIONS: Toxic if inhaled.   |
| Symptoms/injuries after skin contact | : Harmful in contact with skin.  |
| Symptoms/injuries after eye contact  | : May cause slight irritation.   |
| Symptoms/injuries after ingestion    | : AFTER ABSORPTION OF HIGH QUANTITIES: Headache. Dizziness. Feeling of weakness. Cardiac and blood circulation effects. Central nervous system depression. |
| Chronic symptoms                     | : Loss of appetite. Nausea. Headache. Dizziness.   |

#### 4.3. Indication of any immediate medical attention and special treatment needed

Hospitalize at once. Specific treatment is necessary.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- |                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Foam. Dry powder. Carbon dioxide. Water spray. Sand. |
| Unsuitable extinguishing media | : Do not use a heavy water stream.                     |

#### 5.2. Special hazards arising from the substance or mixture

- |                  |   |
|------------------|---|
| Fire hazard      | : Not flammable.  |
| Explosion hazard | : Not applicable.   |
| Reactivity       | : On heating: release of toxic/combustible gases/vapours (hydrogen cyanide). Reacts with (some) acids: release of toxic/combustible gases/vapours (hydrogen cyanide). |

#### 5.3. Advice for firefighters

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|--------------------------------|---|
| Firefighting instructions      | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection.   |

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

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|------------------|---|
| General measures | : Ventilate area. Use chemically protective clothing. |
|------------------|---|

##### 6.1.1. For non-emergency personnel

- |                      |                                   |
|----------------------|-----------------------------------|
| Protective equipment | : Gloves. Safety glasses.         |
| Emergency procedures | : Evacuate unnecessary personnel. |

##### 6.1.2. For emergency responders

- |                      |  |
|----------------------|--|
| Protective equipment | : Equip cleanup crew with proper protection. |
| Emergency procedures | : Ventilate area.                            |

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

- |                         |  |
|-------------------------|--|
| Methods for cleaning up | : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. |
|-------------------------|--|

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- |                                   |   |
|-----------------------------------|---|
| Additional hazards when processed | : Contact with acids (i.e. battery) liberates very toxic gas. |
|-----------------------------------|---|

# Cyanide Standard, 1000ppm

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : incompatible materials. Keep container closed when not in use.
- Incompatible products : Strong oxidizers. Strong acids.
- Incompatible materials : Direct sunlight.
- Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) acids.
- Storage area : Keep container in a well-ventilated place. Meet the legal requirements.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Potassium Cyanide (151-50-8)		
USA ACGIH	ACGIH Ceiling (mg/m³)	5 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 as CN

Sodium Hydroxide (1310-73-2)		
USA ACGIH	ACGIH Ceiling (mg/m³)	2 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	2 mg/m³

### 8.2. Exposure controls

- Appropriate engineering controls : Alarm detectors should be used when toxic gases may be released. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.
- Personal protective equipment : Avoid all unnecessary exposure.
- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or safety glasses.
- Skin and body protection : Wear chemically resistant protective gloves.
- Respiratory protection : Wear appropriate mask.
- Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Clear, colorless liquid.
- Colour : Colourless.
- Odour : characteristic. Bitter almonds.
- Odour threshold : No data available
- pH : No data available
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Self ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapour pressure : No data available
- Relative vapour density at 20 °C : No data available

# Cyanide Standard, 1000ppm

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Relative density	: No data available
Density	: 1 g/ml
Solubility	: Miscible with water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

On heating: release of toxic/combustible gases/vapours (hydrogen cyanide). Reacts with (some) acids: release of toxic/combustible gases/vapours (hydrogen cyanide).

### 10.2. Chemical stability

Not established.

### 10.3. Possibility of hazardous reactions

Contact with acids liberates very toxic gas.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong oxidizers.

### 10.6. Hazardous decomposition products

Hydrogen cyanide. Nitrogen oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Cyanide Standard, 1000ppm	
LD50 oral rat	2390 mg/kg
Potassium Cyanide (151-50-8)	
LD50 oral rat	7.5 mg/kg (Rat)
LD50 dermal rabbit	14 mg/kg (Rabbit)
Sodium Hydroxide (1310-73-2)	
LD50 dermal rabbit	1350 mg/kg (Rabbit; Literature,Rabbit; Literature)
Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

Specific target organ toxicity (repeated exposure) : Not classified

# Cyanide Standard, 1000ppm

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: EXPOSURE TO HIGH CONCENTRATIONS: Toxic if inhaled.
Symptoms/injuries after skin contact	: Harmful in contact with skin.
Symptoms/injuries after eye contact	: May cause slight irritation.
Symptoms/injuries after ingestion	: AFTER ABSORPTION OF HIGH QUANTITIES: Headache. Dizziness. Feeling of weakness. Cardiac and blood circulation effects. Central nervous system depression.
Chronic symptoms	: Loss of appetite. Nausea. Headache. Dizziness.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Harmful to aquatic life.

Cyanide Standard, 1000ppm	
LC50 fishes 1	20.7 mg/kg
Potassium Cyanide (151-50-8)	
LC50 fishes 1	0.043 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
LC50 other aquatic organisms 1	1 - 10 mg/l (96 h)
EC50 Daphnia 1	0.53 - 1.9 mg/l (48 h; Daphnia magna)
LC50 fish 2	0.42 - 0.45 mg/l (48 h; Lepomis macrochirus)
TLM fish 1	0.49 ppm (48 h; Brachydanio rerio)
TLM fish 2	0.45 - 0.57,96 h; Lepomis macrochirus
Threshold limit other aquatic organisms 1	1 - 10,96 h; Pseudomonas putida; Toxicity test
Threshold limit other aquatic organisms 2	0.001 mg/l
Threshold limit algae 1	0.03 mg/l (192 h; Scenedesmus quadricauda; Cyanide ion)
Sodium Hydroxide (1310-73-2)	
LC50 fishes 1	45.4 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Solution >=50%)
EC50 Daphnia 1	40.4 mg/l (48 h; Ceriodaphnia sp.; Nominal concentration)
LC50 fish 2	189 mg/l (48 h; Leuciscus idus)
TLM fish 1	99 mg/l (48 h; Lepomis macrochirus)
TLM fish 2	125 ppm (96 h; Gambusia affinis)

### 12.2. Persistence and degradability

Cyanide Standard, 1000ppm	
Persistence and degradability	Not established.
Potassium Cyanide (151-50-8)	
Persistence and degradability	Not readily biodegradable in water.
Chemical oxygen demand (COD)	0.614 g O <sub>2</sub> /g substance
BOD (% of ThOD)	(7 day(s)) 0
Sodium Hydroxide (1310-73-2)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
Water (7732-18-5)	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

Cyanide Standard, 1000ppm	
Bioaccumulative potential	Not bioaccumulative.
Potassium Cyanide (151-50-8)	
Bioaccumulative potential	Not bioaccumulative.

# Cyanide Standard, 1000ppm

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Sodium Hydroxide (1310-73-2)

Bioaccumulative potential	Bioaccumulation: not applicable.
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### Water (7732-18-5)

Bioaccumulative potential	Not established.
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#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations

### Additional information

Other information : No supplementary information available.

### ADR

Transport document description :

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Potassium Cyanide (151-50-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on SARA Section 302 (Specific toxic chemical listings)

Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	10 lb
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SARA Section 302 Threshold Planning Quantity (TPQ)	100 lb
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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Reactive hazard
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#### Sodium Hydroxide (1310-73-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1000 lb
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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
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#### Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### Cyanide Standard, 1000ppm

WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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# Cyanide Standard, 1000ppm

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Potassium Cyanide (151-50-8)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification

Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects  
Class D Division 2 Subdivision A - Very toxic material causing other toxic effects  
Class D Division 2 Subdivision B - Toxic material causing other toxic effects  
Class E - Corrosive Material

### Sodium Hydroxide (1310-73-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification

Class E - Corrosive Material

### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

### EU-Regulations

No additional information available

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

### Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

### 15.2.2. National regulations

#### Potassium Cyanide (151-50-8)

Listed on the Canadian Ingredient Disclosure List

#### Sodium Hydroxide (1310-73-2)

Listed on the Canadian Ingredient Disclosure List

#### Water (7732-18-5)

Not listed on the Canadian Ingredient Disclosure List

### 15.3. US State regulations

#### Potassium Cyanide (151-50-8)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
			Yes	

## SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 2 (Dermal)	Acute toxicity (dermal), Category 2
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — AcuteHazard, Category 1
Aquatic Acute 3	Hazardous to the aquatic environment — AcuteHazard, Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Skin Corr. 1A	Skin corrosion/irritation, Category 1A

# Cyanide Standard, 1000ppm

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Skin Irrit. 2	Skin corrosion/irritation, Category 2
H300	Fatal if swallowed
H310	Fatal in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H330	Fatal if inhaled
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard

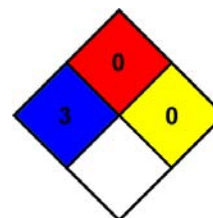
: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard

: 0 - Materials that will not burn.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



### HMIS III Rating

Health

: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability

: 0 Minimal Hazard

Physical

: 0 Minimal Hazard

Personal Protection

: H

SDS US (GHS HazCom 2012)

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