

## SAFETY DATA SHEET

Version 6.10  
Revision Date 03/07/2024  
Print Date 04/06/2024

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Potassium cyanide

Product Number : 31252  
Brand : SIGALD  
Index-No. : 006-007-00-5  
CAS-No. : 151-50-8

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

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

**1.4 Emergency telephone**

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Corrosive to Metals (Category 1), H290  
Acute toxicity, Oral (Category 1), H300  
Acute toxicity, Inhalation (Category 2), H330

SIGALD - 31252

Page 1 of 10

Acute toxicity, Dermal (Category 2), H310  
Specific target organ toxicity - repeated exposure (Category 1), Thyroid, H372  
Short-term (acute) aquatic hazard (Category 1), H400  
Long-term (chronic) aquatic hazard (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard Statements

H290

May be corrosive to metals.

H300 + H310 + H330

Fatal if swallowed, in contact with skin or if inhaled.

H372

Causes damage to organs (Thyroid) through prolonged or repeated exposure.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P234

Keep only in original container.

P260

Do not breathe dust.

P262

Do not get in eyes, on skin, or on clothing.

P264

Wash skin thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P271

Use only outdoors or in a well-ventilated area.

P273

Avoid release to the environment.

P280

Wear protective gloves/ protective clothing.

P284

Wear respiratory protection.

P301 + P310 + P330

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
Rinse mouth.

P302 + P350 + P310

IF ON SKIN: Gently wash with plenty of soap and water.  
Immediately call a POISON CENTER or doctor/ physician.

P304 + P340 + P310

IF INHALED: Remove person to fresh air and keep comfortable  
for breathing. Immediately call a POISON CENTER/ doctor.

P314

Get medical advice/ attention if you feel unwell.

P362

Take off contaminated clothing and wash before reuse.

P390

Absorb spillage to prevent material damage.

P391

Collect spillage.

P403 + P233

Store in a well-ventilated place. Keep container tightly closed.

P405

Store locked up.

P406

Store in corrosive resistant container with a resistant inner  
liner.

P501

Dispose of contents/ container to an approved waste disposal  
plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

SIGALD - 31252

Page 2 of 10

Formula : CKN  
Molecular weight : 65.12 g/mol  
CAS-No. : 151-50-8  
EC-No. : 205-792-3  
Index-No. : 006-007-00-5

Component	Classification	Concentration
<b>Potassium cyanide</b>		
	Met. Corr. 1; Acute Tox. 1; Acute Tox. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H290, H300, H330, H310, H372, H400, H410 M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 1	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

No data available

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

Carbon dioxide (CO<sub>2</sub>) Water Foam

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

Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Potassium oxides  
Not combustible.

### 5.3 Advice for firefighters

No data available

## 5.4 Further information

No data available

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## SECTION 6: Accidental release measures

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

For personal protection see section 8.

### 6.2 Environmental precautions

No data available

### 6.3 Methods and materials for containment and cleaning up

No data available

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

For precautions see section 2.2.

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

Product is sensitive to light and moisture.

#### Storage class

Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Potassium cyanide	151-50-8	C	4.7 ppm 5 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		TWA	5 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Remarks	Skin designation		
		C	5 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		Danger of cutaneous absorption		

		PEL	5 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

## 8.2 Exposure controls

### Personal protective equipment

#### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatrill® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatrill® L

#### Respiratory protection

Recommended Filter type: Filter B-(P3)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### Control of environmental exposure

Prevent product from entering drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |               |                             |
|---------------|-----------------------------|
| a) Appearance | Form: solid<br>Color: white |
| b) Odor       | No data available           |

c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: 634 °C (1173 °F) - lit.
f) Initial boiling point and boiling range	1,625 °C 2,957 °F at 1,013 hPa
g) Flash point	( )Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Density	1.55 g/cm <sup>3</sup> at 20 °C (68 °F)
Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	Not applicable for inorganic substances
p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Contact with acids liberates very toxic gas.

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

Exothermic reaction with:  
Fluorine

SIGALD - 31252

Page 6 of 10

magnesium  
sodium hypochlorite  
Risk of explosion with:  
chlorates  
nitrites  
nitrates  
Strong oxidizing agents  
permanganates  
anhydrides  
mercury(II) nitrate  
nitrogen trichloride  
Peroxides  
perchloryl fluoride  
A risk of explosion and/or of toxic gas formation exists with the following substances:  
Water  
Hydrogen fluoride  
Carbon dioxide (CO<sub>2</sub>)

#### **10.4 Conditions to avoid**

Avoid moisture.

#### **10.5 Incompatible materials**

No data available

#### **10.6 Hazardous decomposition products**

In the event of fire: see section 5

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### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

##### **Acute toxicity**

Acute toxicity estimate Oral - 0.51 mg/kg

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Inhalation - 0.051 mg/l - dust/mist

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Dermal - 50.1 mg/kg

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

##### **Skin corrosion/irritation**

No data available

##### **Serious eye damage/eye irritation**

No data available

##### **Respiratory or skin sensitization**

No data available

##### **Germ cell mutagenicity**

Test Type: In vitro mammalian cell gene mutation test  
Test system: Chinese hamster lung cells  
Metabolic activation: with and without metabolic activation  
Method: Regulation (EC) No. 440/2008, Annex, B.17  
Result: negative

### **Carcinogenicity**

- IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

### **Reproductive toxicity**

No data available

### **Specific target organ toxicity - single exposure**

No data available

### **Specific target organ toxicity - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.  
- Thyroid

### **Aspiration hazard**

No data available

## **11.2 Additional Information**

RTECS: TS8750000

Lung irritation, Cyanosis, Central nervous system depression, May cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver)., Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Inhalation may provoke the following symptoms:, spasm, inflammation and edema of the bronchi, Aspiration or inhalation may cause chemical pneumonitis., pulmonary edema, Lungs, CNS depression with hypertension or circulatory failure, and respiratory depression  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

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## **SECTION 12: Ecological information**

### **12.1 Toxicity**

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia pulex (Water flea) - 0.11 mg/l - 48 h Remarks: (ECHA)
Toxicity to bacteria	static test EC50 - activated sludge - 2.3 mg/l - 30 min Remarks: (IUCLID)

SIGALD - 31252

Page 8 of 10



Toxicity to fish(Chronic toxicity) NOEC - Oncorhynchus mykiss (rainbow trout) - 0.01 mg/l - 20 d  
Remarks: (ECOTOX Database)  
The value is given in analogy to the following substances: hydrogen cyanide

#### **12.2 Persistence and degradability**

The methods for determining biodegradability are not applicable to inorganic substances.

#### **12.3 Bioaccumulative potential**

No data available

#### **12.4 Mobility in soil**

No data available

#### **12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

#### **12.6 Endocrine disrupting properties**

No data available

#### **12.7 Other adverse effects**

No data available

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### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

No data available

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### **SECTION 14: Transport information**

#### **DOT (US)**

UN number: 1680 Class: 6.1 Packing group: I  
Proper shipping name: Potassium cyanide, solid  
Reportable Quantity (RQ): 10 lbs  
Marine pollutant: yes Poison Inhalation Hazard: No

#### **IMDG**

UN number: 1680 Class: 6.1 Packing group: I EMS-No: F-A, S-A  
Proper shipping name: POTASSIUM CYANIDE, SOLID  
Marine pollutant : yes  
Marine pollutant : yes

#### **IATA**

UN number: 1680 Class: 6.1 Packing group: I  
Proper shipping name: Potassium cyanide, solid

SIGALD - 31252

Page 9 of 10

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**SECTION 15: Regulatory information****SARA 302 Components**

Potassium cyanide

CAS-No.  
151-50-8Revision Date  
1993-02-16**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:

Potassium cyanide

CAS-No.  
151-50-8Revision Date  
1993-02-16**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

Potassium cyanide

CAS-No.  
151-50-8Revision Date  
1993-02-16**Pennsylvania Right To Know Components**

Potassium cyanide

CAS-No.  
151-50-8Revision Date  
1993-02-16**California Prop. 65 Components**

, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov). Potassium cyanide

CAS-No.  
151-50-8Revision Date  
2013-08-15

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**SECTION 16: Other information**

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).

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