SAFETY DATA SHEET

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

1.1 Product identifiers

Product name : Potassium cyanide
Product Number : 11813
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

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
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

SIGALD - 11813
Pictogram

Signal Word Danger

Hazard statement(s)
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 statement(s)
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

SECTION 3: Composition/information on ingredients

3.1 Substances

| 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 |

SIGALD - 11813
Potassium cyanide

| 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 |
| <= 100 % |

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

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

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 (CO2) Water Foam

5.2 Special hazards arising from the substance or mixture
Carbon oxides
Nitrogen oxides (NOx)
Potassium oxides
Not combustible.

5.3 Advice for firefighters
No data available

5.4 Further information
No data available

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.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Ingredients with workplace control parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
</tr>
<tr>
<td>Potassium cyanide</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Remarks</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

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 EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® 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 EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® 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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Form: solid</td>
</tr>
<tr>
<td></td>
<td>Color: white</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Melting point/range: 634 °C (1173 °F) - lit.</td>
</tr>
<tr>
<td>Initial boiling point</td>
<td>1,625 °C 2,957 °F at 1,013 hPa</td>
</tr>
<tr>
<td>and boiling range</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>() Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada
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/cm³ 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

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
   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 (CO2)

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

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
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

### 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) |
| 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

SECTION 13: Disposal considerations

13.1 Waste treatment methods
No data available

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
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

SECTION 15: Regulatory information

SARA 302 Components
Potassium cyanide    CAS-No.    Revision Date
151-50-8    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.    Revision Date
151-50-8    1993-02-16

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

SIGALD - 11813
<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
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<td>Pennsylvania Right To Know Components</td>
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<td>Potassium cyanide</td>
<td>151-50-8</td>
<td>1993-02-16</td>
</tr>
<tr>
<td>California Prop. 65 Components</td>
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**SECTION 16: Other information**

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Version: 6.7  Revision Date: 08/07/2023  Print Date: 08/12/2023