

SAFETY DATA SHEET

Creation Date 21-Jan-2011

Revision Date 25-Apr-2019

Revision Number 7

1. Identification

Product Name Potassium cyanide

Cat No. : AC196600000; AC196600025; AC196601000; AC196602500;
AC196605000

CAS-No 151-50-8
Synonyms Cyanide of potassium; Hydrocyanic acid, potassium salt; KCN.

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.
Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|------------|
| Corrosive to metals | Category 1 |
| Acute oral toxicity | Category 1 |
| Acute dermal toxicity | Category 1 |
| Acute Inhalation Toxicity - Dusts and Mists | Category 1 |
| Specific target organ toxicity - (repeated exposure) | Category 1 |
| Target Organs - Heart, Cardiovascular system. | |

Label Elements

Signal Word
Danger

Hazard Statements
May be corrosive to metals
Causes damage to organs through prolonged or repeated exposure

Fatal if swallowed, in contact with skin or if inhaled



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not get in eyes, on skin, or on clothing
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Wear respiratory protection
 Keep only in original container

Response

Get medical attention/advice if you feel unwell

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a POISON CENTER or doctor/physician

Skin

Immediately call a POISON CENTER or doctor/physician
 IF ON SKIN: Gently wash with plenty of soap and water
 Remove/Take off immediately all contaminated clothing
 Wash contaminated clothing before reuse

Ingestion

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

Spills

Absorb spillage to prevent material damage

Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed
 Store in corrosive resistant polypropylene container with a resistant inliner
 Store in a dry place

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects
 Contact with acids liberates very toxic gas
 WARNING. Reproductive Harm - <https://www.p65warnings.ca.gov/>.

3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|-------------------|----------|----------|
| Potassium cyanide | 151-50-8 | >95 |

4. First-aid measures

General Advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact

In the case of contact with eyes, rinse immediately with plenty of water and seek medical

advice. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Ingestion

Do NOT induce vomiting. Call a physician or poison control center immediately.

Most important symptoms and effects

. Systemic Toxicity: Respiratory disorders: Symptoms may include tightness in the chest, flushing, headache, nausea, vomiting, respiratory depression, weakness, irregular heartbeat, abdominal pain, convulsions, and shock: May cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood): Exposure may result in death

Notes to Physician

Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media

No information available

**Flash Point
Method -**

No information available
No information available

Autoignition Temperature

Not applicable

Explosion Limits**Upper**

No data available

Lower

No data available

Sensitivity to Mechanical Impact

No information available

Sensitivity to Static Discharge

No information available

Specific Hazards Arising from the Chemical

Non-combustible. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products

Nitrogen oxides (NO_x). Hydrogen cyanide (hydrocyanic acid). Potassium oxides.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health
4

Flammability
0

Instability
1

Physical hazards
N/A

6. Accidental release measures

Personal Precautions

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

Environmental Precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods for Containment and Clean Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

Up

7. Handling and storage

| | |
|-----------------|--|
| Handling | Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance. |
| Storage | Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed. Keep locked up. Keep away from acids. Keep away from combustible material. Do not store in aluminum containers. |

8. Exposure controls / personal protection

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|-------------------|--------------------------------------|------------------------------------|--|------------------------------|
| Potassium cyanide | Ceiling: 5 mg/m ³ Skin | (Vacated) TWA: 5 mg/m ³ | IDLH: 25 mg/m ³ Ceiling: 4.7 ppm Ceiling: 5 mg/m ³ | Ceiling: 5 mg/m ³ |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

| | |
|---------------------------------|---|
| Eye/face Protection | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. |
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure. |
| Respiratory Protection | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |

9. Physical and chemical properties

| | |
|---|----------------------------|
| Physical State | Powder Solid |
| Appearance | White |
| Odor | bitter almonds |
| Odor Threshold | No information available |
| pH | 11-12 20 g/l aq.sol.(20°C) |
| Melting Point/Range | 634 °C / 1173.2 °F |
| Boiling Point/Range | 1625 °C / 2957 °F |
| Flash Point | No information available |
| Evaporation Rate | Not applicable |
| Flammability (solid,gas) | No information available |
| Flammability or explosive limits | |
| Upper | No data available |
| Lower | No data available |

| | |
|--|--------------------------|
| Vapor Pressure | No information available |
| Vapor Density | Not applicable |
| Specific Gravity | 1.52 @ 16°C |
| Solubility | Soluble in water |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | Not applicable |
| Decomposition Temperature | No information available |
| Viscosity | Not applicable |
| Molecular Formula | C K N |
| Molecular Weight | 65.12 |

10. Stability and reactivity

| | |
|---|---|
| Reactive Hazard | Yes |
| Stability | Moisture sensitive. |
| Conditions to Avoid | Excess heat. Burning produces obnoxious and toxic fumes. Incompatible products. Exposure to light. Exposure to moist air or water. Exposure to air. |
| Incompatible Materials | Acids, Strong oxidizing agents, Bases, Finely powdered metals, Aldehydes, Peroxides, Metals |
| Hazardous Decomposition Products | Nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid), Potassium oxides |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Acute Toxicity

Product Information

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-------------------|---|------------------------------|------------------------------|
| Potassium cyanide | LD50 = 7.49 mg/kg (Rat) LD50 = 5 mg/kg (Rat) | LD50 = 22.3 mg/kg (Rabbit) | LC50 = 0.16 mg/L (Rat) 1 h |

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|------------------------|--|
| Irritation | Irritating to eyes, respiratory system and skin |
| Sensitization | No information available |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|-------------------|----------|------------|------------|------------|------------|------------|
| Potassium cyanide | 151-50-8 | Not listed | Not listed | Not listed | Not listed | Not listed |

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known
STOT - repeated exposure Heart Cardiovascular system

| | |
|---|---|
| Aspiration hazard | No information available |
| Symptoms / effects, both acute and delayed | Systemic Toxicity: Respiratory disorders: Symptoms may include tightness in the chest, flushing, headache, nausea, vomiting, respiratory depression, weakness, irregular heartbeat, abdominal pain, convulsions, and shock: May cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood): Exposure may result in death |
| Endocrine Disruptor Information | No information available |
| Other Adverse Effects | The toxicological properties have not been fully investigated. |

12. Ecological information

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|-------------------|------------------|--|------------|--|
| Potassium cyanide | Not listed | LC50: 0.45 - 0.57 mg/L, 96h flow-through (Lepomis macrochirus) LC50: 0.31 - 0.37 mg/L, 96h static (Pimephales promelas) LC50: = 0.0588 mg/L, 96h flow-through (Poecilia reticulata) LC50: = 0.45 mg/L, 96h (Lepomis macrochirus) LC50: 0.01 - 0.08 mg/L, 96h static (Lepomis macrochirus) LC50: 0.04 - 0.046 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 0.044 - 0.084 mg/L, 96h static (Oncorhynchus mykiss) | Not listed | EC50: = 0.53 mg/L, 24h (Daphnia magna) |

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

| Component | RCRA - U Series Wastes | RCRA - P Series Wastes |
|------------------------------|------------------------|-------------------------|
| Potassium cyanide - 151-50-8 | - | not otherwise specified |

14. Transport information

DOT

| | |
|-----------------------------|--------------------------|
| UN-No | UN1680 |
| Proper Shipping Name | POTASSIUM CYANIDE, SOLID |
| Hazard Class | 6.1 |
| Packing Group | I |

TDG

| | |
|--------------|--------|
| UN-No | UN1680 |
|--------------|--------|

| | |
|--------------------------------|--------------------------|
| Proper Shipping Name | POTASSIUM CYANIDE, SOLID |
| Hazard Class | 6.1 |
| Packing Group | I |
| IATA | |
| UN-No | UN1680 |
| Proper Shipping Name | POTASSIUM CYANIDE, SOLID |
| Hazard Class | 6.1 |
| Packing Group | I |
| IMDG/IMO | |
| UN-No | UN1680 |
| Proper Shipping Name | POTASSIUM CYANIDE, SOLID |
| Hazard Class | 6.1 |
| Subsidiary Hazard Class | P |
| Packing Group | I |

15. Regulatory information

United States of America Inventory

| Component | CAS-No | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|-------------------|----------|------|---|-----------------------------|
| Potassium cyanide | 151-50-8 | X | ACTIVE | - |

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component | CAS-No | DSL | NDSL | EINECS | PICCS | ENCS | AICS | IECSC | KECL |
|-------------------|----------|-----|------|-----------|-------|------|------|-------|----------|
| Potassium cyanide | 151-50-8 | X | - | 205-792-3 | X | X | X | X | KE-29092 |

U.S. Federal Regulations

SARA 313

| Component | CAS-No | Weight % | SARA 313 - Threshold Values % |
|-------------------|----------|----------|-------------------------------|
| Potassium cyanide | 151-50-8 | >95 | 1.0 |

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act)

| Component | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|-------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Potassium cyanide | X | 10 lb | X | X |

Clean Air Act

| Component | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|-------------------|-----------|-------------------------|-------------------------|
| Potassium cyanide | X | | - |

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|-------------------|--------------------------|----------------|
| Potassium cyanide | 10 lb | 10 lb |

California Proposition 65 This product contains the following Proposition 65 chemicals.

| Component | CAS-No | California Prop. 65 | Prop 65 NSRL | Category |
|-------------------|----------|---------------------|--------------|----------|
| Potassium cyanide | 151-50-8 | Male Reproductive | - | |

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------------|---------------|------------|--------------|----------|--------------|
| Potassium cyanide | X | X | X | X | X |

U.S. Department of Transportation

Reportable Quantity (RQ): N
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product contains the following DHS chemicals:
Legend - STQs = Screening Threshold Quantities, APA = A placarded amount

| Component | DHS Chemical Facility Anti-Terrorism Standard |
|-------------------|---|
| Potassium cyanide | APA |

Other International Regulations

Mexico - Grade No information available

16. Other information

Prepared By Regulatory Affairs
 Thermo Fisher Scientific
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Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS