SAFETY DATA SHEET

Creation Date 21-Jan-2011 **Revision Date** 25-Apr-2019 **Revision Number** 7

1. Identification

Product Name **Potassium cyanide**

Cat No. : **AC388310000; AC388310025; AC388310100; AC388311000; AC388315000**

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
Fatal if swallowed
Fatal in contact with skin

Fatal if inhaled
Causes damage to organs through prolonged or repeated exposure

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	Move 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. Dry powder.
Unsuitable Extinguishing Media	No information available
Flash Point	No information available
Method -	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 (NOx) 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	Flammability	Instability	Physical hazards
4	0	1	N/A

6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment. 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 Up	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling

Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Avoid dust formation. Use only under a chemical fume hood. Do not breathe vapors/dust. Do not ingest.

Storage

Keep in a dry, cool and well-ventilated place. 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/m³ Skin	(Vacated) TWA: 5 mg/m³	IDLH: 25 mg/m³ Ceiling: 4.7 ppm Ceiling: 5 mg/m³	Ceiling: 5 mg/m³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or 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

Long sleeved clothing.

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 almond
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, Powdered metal salts, 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 Systemic Toxicity: Respiratory disorders: Symptoms may include tightness in the chest,

delayed 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: = 0.0588 mg/L, 96h flow-through (Poecilia reticulata) LC50: 0.31 - 0.37 mg/L, 96h static (Pimephales promelas) LC50: 0.45 - 0.57 mg/L, 96h flow-through (Lepomis macrochirus) LC50: = 0.45 mg/L, 96h (Lepomis macrochirus) LC50: 0.01 - 0.08 mg/L, 96h static (Lepomis macrochirus) LC50: 0.044 - 0.084 mg/L, 96h static (Oncorhynchus mykiss) LC50: 0.04 - 0.046 mg/L, 96h flow-through (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

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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