

SAFETY DATA SHEET

1. Identification

Product identifier: POTASSIUM CYANIDE

Other means of identification

Product No.: 3080, 6881

Recommended use and restriction on use

Recommended use: Not available.

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company Name: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway, Suite 200
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax:
Contact Person: Environmental Health & Safety
e-mail: info@avantormaterials.com

Emergency telephone number:

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

2. Hazard(s) identification

Hazard classification

Health hazards

Acute toxicity (Oral) Category 1

Environmental hazards

Acute hazards to the aquatic environment Category 1

Label elements

Hazard symbol:



Signal word: Danger

Hazard statement: Fatal if swallowed.
Very toxic to aquatic life.

Precautionary statement

Prevention: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment.

Response:	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. Specific treatment (see this label). Collect spillage.
Storage:	Store locked up.
Disposal:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification:	None.

3. Composition/information on ingredients

Substances

Chemical identity	Common name and synonyms	CAS number	Content in percent (%)*
POTASSIUM CYANIDE		151-50-8	96 - 100%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information:	Get medical attention immediately. Show this safety data sheet to the doctor in attendance.
Ingestion:	Call a physician or poison control center immediately. Never give liquid to an unconscious person. Give activated charcoal and keep patient quiet, in a dark place if possible. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Rinse mouth. Ensure unobstructed airway.
Inhalation:	Call a physician or poison control center immediately. Move to fresh air. Ensure unobstructed airway. Administer antidote kit and oxygen per pre-planned instructions if symptoms occur. Do not give mouth-to-mouth resuscitation.
Skin contact:	Call a physician or poison control center immediately. Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Eye contact:	Call a physician or poison control center immediately. Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.

Most important symptoms/effects, acute and delayed

Symptoms:	Fatal if swallowed.
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Indication of immediate medical attention and special treatment needed

Treatment:	Treat symptomatically.
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5. Fire-fighting measures

General fire hazards:	No data available.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Dry chemical. Dry sand.

Unsuitable extinguishing media: Water, CO₂ or Foam

Specific hazards arising from the chemical: Combustion by-products include oxides of nitrogen, hydrogen cyanide, and other irritants and toxic gases.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move containers from fire area if you can do so without risk.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 of the MSDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. Ventilate closed spaces before entering them.

Methods and material for containment and cleaning up: Remove material, as much as possible, using mechanical equipment. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into closed container. Clean surface thoroughly to remove residual contamination.

Notification Procedures: Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Environmental precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

7. Handling and storage

Precautions for safe handling: Do not get in eyes, on skin, on clothing. Wash hands thoroughly after handling. Do not taste or swallow. Wash thoroughly after handling. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. See Section 8 of the MSDS for Personal Protective Equipment. Avoid dust formation. Use only with adequate ventilation. Wash at the end of each work shift and before eating, smoking and using the toilet. Immediately change contaminated clothes. Contaminated work clothing should not be allowed out of the workplace. Ensure no residue on outside of container before returning to storage. Use only in controlled area. Carefully open container. Toxic or caustic vapors may escape.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed. Store in cool, dry place. Store in a well-ventilated place. Store in original container. Store locked up.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
POTASSIUM CYANIDE - as CN	Ceiling	5 mg/m3	US. ACGIH Threshold Limit Values (02 2012)
	Ceil_Time	4.7 ppm 5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA PEL	5 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)

Appropriate engineering controls

No data available.

Individual protection measures, such as personal protective equipment

General information:	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
Eyeface protection:	Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.
Skin protection	
Hand protection:	Chemical resistant gloves
Other:	Wear suitable protective clothing. Gloves made from: Natural rubber. Nitrile rubber.
Respiratory protection:	In case of inadequate ventilation and work of brief duration, use suitable respiratory equipment.
Hygiene measures:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using the product. Wash contaminated clothing before reuse. Observe good industrial hygiene practices. Do not get this material in contact with skin. Wash hands before breaks and immediately after handling the product. Wash hands after handling.

9. Physical and chemical properties

Appearance

Physical state:	Solid
Form:	Granules
Color:	White
Odor:	Bitter almond-like odor
Odor threshold:	No data available.
pH:	11.0 0.1 N Aqueous solution
Melting point/freezing point:	634 °C
Initial boiling point and boiling range:	1,625 °C

Flash Point:	Not applicable
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	1.55 (20 °C)
Solubility(ies)	
Solubility in water:	Very Soluble
Solubility (other):	water: 720 g/l (77 °F)
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical stability:	No data available.
Possibility of hazardous reactions:	Hazardous polymerization does not occur. Contact with water liberates toxic gas.
Conditions to avoid:	Heat. Moisture. Sunlight. Contact with incompatible materials.
Incompatible materials:	Acids. Acid salts. Strong oxidizing agents. Fluorine. Alcohols. Aluminum. Copper. Magnesium. Zinc. Isocyanates.
Hazardous decomposition products:	Cyanides. Nitrogen Oxides

11. Toxicological information

Information on likely routes of exposure

Ingestion:	Fatal if swallowed.
Inhalation:	No data available.
Skin contact:	Fatal in contact with skin. Causes mild skin irritation.
Eye contact:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral	
Product:	LD 50 (Rat): 5 mg/kg
Dermal	
Product:	No data available.
Inhalation	
Product:	No data available.

Repeated dose toxicity

Product: No data available.

Skin corrosion/irritation

Product: No data available.

Serious eye damage/eye irritation

Product: No data available.

Respiratory or skin sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ cell mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific target organ toxicity - single exposure

Product: No data available.

Specific target organ toxicity - repeated exposure

Product: No data available.

Aspiration hazard

Product: No data available.

Other effects:

No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

POTASSIUM CYANIDE

LC 50 (Bluegill (Lepomis macrochirus), 96 h): 0.01 - 0.08 mg/l Mortality

LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 0.071 -

0.079 mg/l Mortality
LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 0.04 - 0.046 mg/l Mortality

Aquatic invertebrates

Product: No data available.

Specified substance(s):

POTASSIUM CYANIDE LC 50 (Water flea (Daphnia magna), 48 h): 2 - 3 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and degradability

Biodegradation

Product: There are no data on the degradability of this product.

BOD/COD ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration factor (BCF)

Product: No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: The product is water soluble and may spread in water systems.

Other adverse effects: Very toxic to aquatic life with long lasting effects.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws. Do not allow to enter drains, sewers or watercourses.

Contaminated packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number:	UN 1680
UN proper shipping name:	Potassium cyanide, solid
Transport hazard class(es)	
Class(es):	6.1
Label(s):	6.1
Packing group:	I
Marine Pollutant:	No

IMDG

UN number:	UN 1680
UN proper shipping name:	POTASSIUM CYANIDE, SOLID
Transport hazard class(es)	
Class(es):	6.1
Label(s):	6.1
EmS No.:	F-A, S-A
Packing group:	I
Marine Pollutant:	Yes

IATA

UN number:	UN 1680
Proper Shipping Name:	Potassium cyanide, solid
Transport hazard class(es):	
Class(es):	6.1
Label(s):	6.1
Marine Pollutant:	No
Packing group:	I

15. Regulatory information
US federal regulations
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

POTASSIUM CYANIDE Reportable quantity: 10 lbs.

Superfund amendments and reauthorization act of 1986 (SARA)
Hazard categories

☒ Acute (Immediate)	☒ Chronic (Delayed)	☐ Fire	☐ Reactive	☐ Pressure Generating
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SARA 302 Extremely hazardous substance

Chemical identity	RQ	Threshold Planning Quantity
POTASSIUM CYANIDE	10 lbs.	100 lbs.

SARA 304 Emergency release notification

Chemical identity	RQ
POTASSIUM CYANIDE	10 lbs.

SARA 311/312 Hazardous chemical

Chemical identity	Threshold Planning Quantity
POTASSIUM CYANIDE	100lbs

SARA 313 (TRI reporting)

Chemical identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
POTASSIUM CYANIDE	10000 lbs	25000 lbs.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

POTASSIUM CYANIDE Reportable quantity: 10 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US state regulations

US. California Proposition 65

POTASSIUM CYANIDE Male reproductive toxin. WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

US. New Jersey Worker and Community Right-to-Know Act

POTASSIUM CYANIDE Listed

US. Massachusetts RTK - Substance List

POTASSIUM CYANIDE Listed

US. Pennsylvania RTK - Hazardous Substances

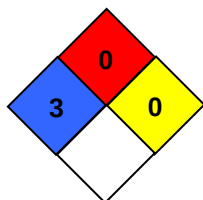
POTASSIUM CYANIDE Listed

US. Rhode Island RTK

POTASSIUM CYANIDE Listed

16. Other information, including date of preparation or last revision

NFPA Hazard ID



	Flammability
	Health
	Reactivity
	Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue date: 05-05-2014

Revision date: No data available.

Version #: 1.0

Further information: No data available.

Disclaimer:

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