

Safety Data Sheet

according to WHMIS

Potassium Cyanide, ACS

Revision: 22.10.2025

Product code: AC15.04954

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1. Identification**Product identifier**

Potassium Cyanide, ACS

CAS No: 151-50-8

Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**Reagents and laboratory chemicals
Only for laboratory and analysis purposes.**Uses advised against**

Do not use for private purposes (household).

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

Company name: AnalytiChem Services, Unipessoal, Lda
Street: Rua de Júlio Dinis 676 7º
Place: P-4050-320 Porto
Telephone: +351 226002917
E-mail: info@analytichem.com
Contact person: SDS service department
E-mail: SDS@analytichem.com
Internet: www.analytichem.com
Responsible Department: SDS service department

Supplier or manufacturer details

Company name: AnalytiChem Canada Inc.
Street: Québec, CANADA
21800 Clark Graham Ave
Place: CDN-H9X 4B6 Baie-D'Urfé
Telephone: +1 (800) 361-6820 Telefax: +1 (800) 253-5549
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EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20
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USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378
Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701
Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333
Emergency telephone number: +1 703-741-5970 (CHEMTREC)

Further Information

No data available

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2. Hazard identification**Classification of the substance or mixture****WHMIS 2015**

Corrosive to metals: Met. Corr. 1
Acute toxicity: Acute Tox. 1 (dermal)
Acute toxicity: Acute Tox. 2 (inhalation)
Acute toxicity: Acute Tox. 2 (oral)
Specific target organ toxicity - repeated exposure: STOT RE 1
Hazardous to the aquatic environment: Aquatic Acute 1
Hazardous to the aquatic environment: Aquatic Chronic 1

Label elements**WHMIS 2015****Signal word:** Danger**Pictograms:****Hazard statements**

May be corrosive to metals.
Fatal if swallowed, in contact with skin or if inhaled.
Causes damage to organs (thyroid gland) through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

Keep only in original packaging.
Do not breathe dust/fume/gas/mist/vapours/spray.
Do not get in eyes, on skin, or on clothing.
Wash hands and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves/protective clothing and eye protection/face protection.
Wear respiratory protection.
IF SWALLOWED: Immediately call a POISON CENTER/doctor.
Rinse mouth.
IF ON SKIN: Wash with plenty of water.
Immediately call a POISON CENTER/doctor.
Take off immediately all contaminated clothing and wash it before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER/doctor.
Get medical advice/attention if you feel unwell.
Collect spillage.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Store in a corrosion resistant container with a resistant inner liner.
Dispose of contents/container to an appropriate recycling or disposal facility.

Other hazards

No data available

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3. Composition/information on ingredients**Substances**

Sum formula: KCN
Molecular weight: 65.12 g/mol

Relevant ingredients

CAS No	Chemical name	Quantity
151-50-8	Potassium cyanide	80 - 100 % (*)

(*) The actual concentration is withheld as a trade secret.

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

4. First-aid measures**Description of first aid measures****General information**

First aider: Pay attention to self-protection!
Call a physician immediately.
Indication of any immediate medical attention and special treatment needed: Hydrogen cyanide (hydrocyanic acid)
fast help required

After inhalation

Provide fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Call a physician immediately.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.
Call a physician immediately.

After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water.
Remove contact lenses, if present and easy to do. Continue rinsing.
Consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water.
Water, to which activated charcoal may be added
Call a physician immediately.

Most important symptoms and effects, whether acute or delayed

Respiratory complaints
Cardiac arrhythmias
Circulatory collapse
Dyspnoea
Unconsciousness
Irritant
Dizziness
Gastrointestinal complaints
Vomiting
Agitation

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Spasms
death

Indication of immediate medical attention and special treatment needed

Antidote:
Dimethylaminophenol
Cobalt-EDTA
Sodium thiosulfate

5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Water
Carbon dioxide (CO₂)
Foam

Specific hazards arising from the hazardous product

Non-combustible solids
Hazardous combustion products
In case of fire may be liberated:
Hydrogen cyanide (hydrocyanic acid)

Special protective equipment and precautions for fire-fighters

In case of fire: Wear self-contained breathing apparatus.
Wear full chemical protective clothing.
In case of fire and/or explosion do not breathe fumes.

Additional information

Use water spray jet to protect personnel and to cool endangered containers.
Move undamaged containers from immediate hazard area if it can be done safely.
Suppress gases/vapours/mists with water spray jet.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures****General advice**

Do not breathe dust.

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Consult an expert
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

Environmental precautions

Do not allow to enter into surface water or drains.

Methods and material for containment and cleaning up

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For containment

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

- Clean contaminated articles and floor according to the environmental legislation.

Other information

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Reference to other sections

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

7. Handling and storage**Precautions for safe handling****Advice on safe handling**

- Avoid exposure - obtain special instructions before use.
- If handled uncovered, arrangements with local exhaust ventilation have to be used.
- Read label before use. Handle and open container with care.
- When using do not eat, drink, smoke, sniff. Keep container tightly closed.
- Use personal protection equipment. Use extractor hood (laboratory).
- Do not breathe dust. Avoid dust formation.
- Provide adequate ventilation.

Advice on protection against fire and explosion

- Usual measures for fire prevention.

Advice on general occupational hygiene

- Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.
- The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

Further information on handling

- Take off immediately all contaminated clothing and wash it before reuse.
- Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

- Store in a place accessible by authorized persons only.
- Unsuitable container/equipment material:
 - Aluminium
 - tin
 - Zinc

Hints on joint storage

- National regulations

Further information on storage conditions

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

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8. Exposure controls/Personal protection

Control parameters**Exposure limits (ACGIH)**

CAS No	Chemical name	ppm	mg/m ³	Category	Origin
151-50-8	Cyanide salts, as CN: potassium cyanide		5	Peak	ACGIH-2025

Exposure controls**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment**Eye/face protection**

goggles

Hand protection

Tested protective gloves must be worn. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Protective clothing

Take off immediately all contaminated clothing and wash it before reuse.

Wash hands and face before breaks and after work and take a shower if necessary.

Draw up and observe skin protection programme.

Respiratory protection

Respiratory protection necessary at: dust formation

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.

Thermal hazards

No data available

Environmental exposure controls

Do not allow to enter into surface water or drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	solid
Colour:	white
Odour:	like: Bitter almonds
Odour threshold:	No data available
Melting point/freezing point:	634 °C
Boiling point or initial boiling point and boiling range:	1625 °C
Flammability:	not applicable
Lower explosive limits:	No data available
Upper explosive limits:	No data available
Flash point:	not applicable
Auto-ignition temperature:	No data available

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Decomposition temperature:	No data available
pH-Value (at 20 °C):	~ 11 - 12 (20 g/l)
Viscosity / kinematic:	No data available
Water solubility: (at 25 °C)	716 g/l
Solubility in other solvents not determined	
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	1.56 g/cm ³
Relative density:	No data available
Bulk density:	~750 kg/m ³
Relative vapour density:	not determined
Particle characteristics:	No data available

Other information**Information with regard to physical hazard classes**

Explosive properties

No data available

Sustained combustibility:

No data available

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:

not determined

Solvent separation test:

not determined

Solvent content:

No data available

Solid content:

100%

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

No data available:

Viscosity / dynamic:

No data available

Flow time:

not determined

Further Information

No data available

10. Stability and reactivity**Reactivity**

No data available

Chemical stability

Protect against: Humidity

Possibility of hazardous reactions

Fluorine

Oxidizing agent

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permanganates, e.g. potassium permanganate
Peroxides
Water
Hydrogen fluoride
Carbon dioxide (CO₂)
Contact with acids liberates very toxic gas.
Mg, NO₂, NO₃
sodium hypochlorite

Conditions to avoid

Humidity

Incompatible materials

Aluminium
tin
Zinc

Hazardous decomposition products

in case of fire, see:
SECTION 5: Firefighting measures

Further information

No data available

11. Toxicological information**Information on toxicological effects****Toxicokinetics, metabolism and distribution**

Avoid exposure - obtain special instructions before use.

Acute toxicity

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

CAS No	Chemical name				
	Route of exposure	Dose	Species	Source	Method
151-50-8	Potassium cyanide				
	oral	LD50 >= 7,49 mg/kg	Rat	Clinical and Experimental Toxicology of	A reputable corporate laboratory
	dermal	LD50 ca. 11,28 mg/kg	Rabbit	J Toxicol – Cut and Ocular Toxicol 13:24	Animals were exposed to a solution of cy
	inhalation vapour	ATE 0,5 mg/l			
	inhalation dust/mist	ATE 0,05 mg/l			
	inhalation (1 h) gas	LC50 63 ppm	Rat	Study report (1981)	OECD Guideline 403

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitizing effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

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Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

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

Causes damage to organs through prolonged or repeated exposure.

Organs affected: thyroid gland

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

Information on other hazards**Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

Other information

No data available

Further information

Respiratory complaints

Cardiac arrhythmias

Circulatory collapse

Dyspnoea

Unconsciousness

Irritant

Dizziness

Gastrointestinal complaints

Vomiting

Agitation

Spasms

death

12. Ecological information**Ecotoxicity**

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
151-50-8	Potassium cyanide					
	Acute fish toxicity	LC50 mg/l	0,1038	96 h	Gasterosteus aculeatus	Study report (2005) other: ASTM E729-96. Standard Guide for
	Acute algae toxicity	ErC50 mg/l	0,116	72 h	Pseudokirchneriella subcapitata	Journal of Hazardous Materials 197 (2011) ISO 8692
	Acute crustacea toxicity	EC50 mg/l	0,21638	48 h	other aquatic crustacea: Acartia tonsa	Study report (2006) other: ASTM E 729-96: Standard Guide for
	Algae toxicity	NOEC	0,1 mg/l	10 d	Chlamydomonas sp.	Bulletin 106. Virginia Water resources R Bartsch, A.F. 1971. Algal Assay Procedur
	Acute bacteria toxicity	EC50 ()	2,3 mg/l	0,5 h	activated sludge, domestic	Acta hydrochim. hydrobiol. 20, 3 (1992) EU Method C.11

Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

No data available

BCF

CAS No	Chemical name	BCF	Species	Source
151-50-8	Potassium cyanide	3,162		United States Enviro

Mobility in soil

No data available

Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

Other adverse effects

No data available

Further information

Do not allow to enter into surface water or drains.
Avoid release to the environment.

13. Disposal considerations**Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not allow to enter into surface water or drains.
Do not mix with other wastes.

Contaminated packaging

This material and its container must be disposed of as hazardous waste.
Handle contaminated packages in the same way as the substance itself.

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14. Transport information

Canadian TDG

UN number:	UN 1680
Proper shipping name:	Potassium cyanide, solid
Hazard classes:	6.1
Packing group:	I
Hazard label:	6.1
Limited quantity:	0

Marine transport (IMDG)

UN number or ID number:	UN 1680
United Nations proper shipping name:	POTASSIUM CYANIDE, SOLID
Transport hazard class(es):	6.1
Packing group:	I
Hazard label:	6.1
Marine pollutant:	P
Special Provisions:	-
Limited quantity:	0
Excepted quantity:	E5
EmS:	F-A, S-A
Segregation group:	6 - cyanides

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number:	UN 1680
United Nations proper shipping name:	POTASSIUM CYANIDE, SOLID
Transport hazard class(es):	6.1
Packing group:	I
Hazard label:	6.1
Limited quantity Passenger:	Forbidden
Passenger LQ:	Forbidden
Excepted quantity:	E5
IATA-packing instructions - Passenger:	666
IATA-max. quantity - Passenger:	5 kg
IATA-packing instructions - Cargo:	673
IATA-max. quantity - Cargo:	50 kg

Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance:	potassium cyanide

15. Regulatory information

Canadian regulations

16. Other information

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Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Further Information

Provide appropriate information, instructions and training to users

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.