

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Potassium cyanide, ACS (260-000-224)

Revision: 22.10.2025

Product code: AC15.04954

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1.4. Emergency telephone number: +353 1 901 4670 (CHEMTREC)

Further Information

No data available

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Met. Corr. 1; H290
Acute Tox. 1; H310
Acute Tox. 2; H330
Acute Tox. 2; H300
STOT RE 1; H372
Aquatic Acute 1; H400
Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008****Signal word:** Danger**Pictograms:****Hazard statements**

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 gland) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.
EUH032 Contact with acids liberates very toxic gas.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash hands and face thoroughly after handling.
P280 Wear protective gloves/protective clothing and eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients**3.1. Substances**

Sum formula: KCN
Molecular weight: 65.12 g/mol

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Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
151-50-8	Potassium cyanide			100 %
	205-792-3	006-007-00-5		
	Met. Corr. 1, Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H290 H310 H330 H300 H372 H400 H410 EUH032			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
151-50-8	205-792-3	Potassium cyanide	100 %
	inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); inhalation: LC50 = 63 ppm (gases); dermal: LD50 = ca. 11,28 mg/kg; oral: LD50 = >= 7,49 mg/kg Aquatic Chronic 1; H410: M=10		

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).

SECTION 4: First aid measures

4.1. 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.

4.2. Most important symptoms and effects, both acute and delayed

Respiratory complaints
Cardiac arrhythmias
Circulatory collapse

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Dyspnoea
Unconsciousness
Irritant
Dizziness
Gastrointestinal complaints
Vomiting
Agitation
Spasms
death

4.3. Indication of any immediate medical attention and special treatment needed

Antidote:
Dimethylaminophenol
Cobalt-EDTA
Sodium thiosulfate

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

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

Unsuitable extinguishing media

Water
Carbon dioxide (CO₂)
Foam

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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.

SECTION 6: Accidental release measures**6.1. 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.

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For emergency responders

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

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**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.

6.4. Reference to other sections

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

SECTION 7: Handling and storage**7.1. 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.

7.2. 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

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Hints on joint storage

National regulations

Further information on storage conditions

Store in a well-ventilated place.

Keep container tightly closed and dry.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
151-50-8	Potassium cyanide (as cyanide)	-	1		TWA (8 h)	
		-	5		STEL (15 min)	

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
151-50-8	Potassium cyanide			
Worker DNEL, long-term		inhalation	systemic	0,94 mg/m ³
Worker DNEL, acute		inhalation	systemic	12,5 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,14 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	4,03 mg/kg bw/day

PNEC values

CAS No	Substance	Value
	Environmental compartment	
151-50-8	Potassium cyanide	
Freshwater		0,001 mg/l
Freshwater (intermittent releases)		0,0032 mg/l
Marine water		0,0002 mg/l
Freshwater sediment		0,004 mg/kg
Marine sediment		0,0008 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,05 mg/l
Soil		0,007 mg/kg

8.2. 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

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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.

SECTION 9: Physical and chemical properties**9.1. 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 explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	not applicable
Auto-ignition temperature:	No data available
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

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9.2. 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

SECTION 10: Stability and reactivity**10.1. Reactivity**

No data available

10.2. Chemical stability

Protect against: Humidity

10.3. Possibility of hazardous reactions

Fluorine

Oxidizing agent

permanganates, e.g. potassium permanganate

Peroxides

Water

Hydrogen fluoride

Carbon dioxide (CO₂)

Contact with acids liberates very toxic gas.

Mg, NO₂, NO₃

sodium hypochlorite

10.4. Conditions to avoid

Humidity

10.5. Incompatible materials

Aluminium

tin

Zinc

10.6. Hazardous decomposition products

in case of fire, see:

SECTION 5: Firefighting measures

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Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

Avoid exposure - obtain special instructions before use.

Acute toxicity

Fatal in contact with skin.

Fatal if inhaled.

Fatal if swallowed.

Contact with acids liberates very toxic gas.

CAS No	Chemical name				
	Exposure route	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.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

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Practical experience

No data available

11.2. 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

SECTION 12: Ecological information**12.1. Toxicity**

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

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

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

No data available

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BCF

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

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

No data available

Further information

Do not allow to enter into surface water or drains.

Avoid release to the environment.

SECTION 13: Disposal considerations**13.1. 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.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	UN 1680
14.2. UN proper shipping name:	POTASSIUM CYANIDE, SOLID
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	I
Hazard label:	6.1
Classification code:	T5
Limited quantity:	0
Excepted quantity:	E5
Transport category:	1
Hazard No:	66
Tunnel restriction code:	C/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1680
14.2. UN proper shipping name:	POTASSIUM CYANIDE, SOLID
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	I
Hazard label:	6.1
Classification code:	T5
Special Provisions:	802
Limited quantity:	0

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Excepted quantity: E5

Marine transport (IMDG)

14.1. UN number or ID number: UN 1680
14.2. UN proper shipping name: POTASSIUM CYANIDE, SOLID
14.3. Transport hazard class(es): 6.1
14.4. 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)

14.1. UN number or ID number: UN 1680
14.2. UN proper shipping name: POTASSIUM CYANIDE, SOLID
14.3. Transport hazard class(es): 6.1
14.4. 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

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes
Danger releasing substance: potassium cyanide

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Information according to Directive 2012/18/EU (SEVESO III): H1 ACUTE TOXIC
Additional information: E1

Additional information

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. According to directive 94/33/EC, juveniles are only allowed to handle this product as long as all effects of dangerous substances are prevented.

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water hazard class (D): 3 - highly hazardous to water
Skin resorption/Sensitization: Permeates easily through outer skin and causes poisoning.

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SECTION 16: Other information**Abbreviations and acronyms**

Met. Corr. 1: Corrosive to metals, hazard category 1
Acute Tox. 1: Acute toxicity, hazard category 1
Acute Tox. 2: Acute toxicity, hazard category 2
STOT RE 1: Specific target organ toxicity - repeated exposure, hazard category 1
Aquatic Acute 1: Hazardous to the aquatic environment, hazard category: Acute 1
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard category: Chronic 1
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%

Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
H300	Fatal if swallowed.
H300+H310+H330	Fatal if swallowed, in contact with skin or if inhaled.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H372	Causes damage to organs (thyroid gland) through prolonged or repeated exposure.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH032	Contact with acids liberates very toxic gas.

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.