



<a href="#">Gold(I) Potassium Cyanide</a>		<a href="#">Pricing &gt;</a>
Linear Formula	KAu(CN) <sub>2</sub>	
Pubchem CID	159710	
MDL Number	MFCD00011414	
EC No.	237-748-4	
IUPAC Name	potassium; gold(3+); dicyanide	
Beilstein/Reaxys No.	6235525	
SMILES	[Au+].[K+].[C-]#N.[C-]#N	
Inchl Identifier	InChI=1S/2CN.Au.K/c2*1-2;;/q2*-1;2*+1	
Inchl Key	XTFKWYDMKGAZKK-UHFFFAOYSA-N	
Signal Word	Danger	
Hazard Statements	H290-H300-H310-H330-H315-H318	
Hazard Codes	C, T+	
Precautionary Statements	P301+P310-P304+P340-P305+P351+P338-P320-P330-P405-P501	
Risk Codes	26/27/28-32-50/53	
Safety Statements	7-28-29-45-60-61	
RTECS Number	CK6270000	
Transport Information	UN 1588 6.1/PG 1	
WGK Germany	3	
GHS Pictograms	<a href="#">GHS05 Corrosive</a>  <a href="#">GHS06 Skull and Crossbones</a> 	

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## SAFETY DATA SHEET

Date Accessed: 05/04/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #13967-50-5

**Relevant identified uses of the substance:**  
Scientific research and development

Supplier details:  
American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351

Emergency telephone number:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS06 Skull and crossbones

Acute Tox. 1 H300 Fatal if swallowed.

Acute Tox. 1 H310 Fatal in contact with skin.

Acute Tox. 1 H330 Fatal if inhaled.

GHS05 Corrosion

Met. Corr.1

H290 May be corrosive to metals.

Eye Dam. 1 H318 Causes serious eye damage.

GHS07

Skin Irrit. 2

H315 Causes skin irritation.

Hazards not otherwise classified

No information known.

Label elements

GHS label elements

The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS05

GHS06

Signal word

Danger

Hazard statements

H290

May be corrosive to metals.

H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.

H315

Causes skin irritation.

H318

Causes serious eye damage.

Precautionary statements

P260

Do not breathe dust/fume/gas/mist/vapors/spray.

P301+P310

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P320

Specific treatment is urgent (see on this label).

P405

Store locked up.

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

D1A - Very toxic material causing immediate and serious toxic effects

D2B - Toxic material causing other toxic effects

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

Health (acute effects) = 3

Flammability = 0

Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical characterization: Substances

CAS# Description:

13967-50-5 Gold(I) potassium cyanide

Concentration:

≤100%

Identification number(s):

EC number:

237-748-4

Index number:

006-007-00-5

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### **SECTION 4. FIRST AID MEASURES**

Description of first aid measures

General information

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated

clothing has been completely removed.  
In case of irregular breathing or respiratory arrest  
provide artificial respiration.  
After inhalation  
Supply fresh air. If required, provide artificial  
respiration. Keep patient warm.  
Seek immediate medical advice.  
After skin contact  
Immediately wash with water and soap and rinse  
thoroughly.  
Seek immediate medical advice.  
After eye contact  
Rinse opened eye for several minutes under running  
water. Then consult a doctor.  
After swallowing  
Do not induce vomiting; immediately call for medical  
help.  
Information for doctor  
Most important symptoms and effects, both acute and  
delayed  
Causes skin irritation.  
Fatal if inhaled.  
Fatal in contact with skin.  
Fatal if swallowed.  
Causes serious eye damage.  
Indication of any immediate medical attention and  
special treatment needed  
No further relevant information available.

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media  
Suitable extinguishing agents  
Product is not flammable. Use fire-fighting measures  
that suit the surrounding fire.  
Special hazards arising from the substance or mixture  
If this product is involved in a fire, the following can be  
released:  
Carbon monoxide and carbon dioxide  
Hydrogen cyanide (HCN)  
Nitrogen oxides (NO<sub>x</sub>)  
Potassium oxide  
Gold oxide  
Advice for firefighters  
Protective equipment:  
Wear self-contained respirator.  
Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Environmental precautions:  
Do not allow material to be released to the environment without proper governmental permits.  
Methods and material for containment and cleaning up:  
Dispose of contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
Prevention of secondary hazards:  
No special measures required.  
Reference to other sections  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.  
Protective Action Criteria for Chemicals  
PAC-1:  
Substance is not listed.  
PAC-2:  
Substance is not listed.  
PAC-3:  
Substance is not listed.

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## **SECTION 7. HANDLING AND STORAGE**

### Handling

Precautions for safe handling  
Keep container tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation at the workplace.  
Open and handle container with care.  
Only handle and refill product in closed systems.  
Information about protection against explosions and fires:

The product is not flammable  
Conditions for safe storage, including any incompatibilities

### Storage

Requirements to be met by storerooms and receptacles:  
No special requirements.  
Information about storage in one common storage facility:  
Do not store together with acids.  
Store away from oxidizing agents.  
Store away from metals.  
Further information about storage conditions:

Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.  
Specific end use(s)  
No further relevant information available.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

13967-50-5 Gold(I) potassium cyanide (100.0%)

PEL (USA) Long-term value: 5 mg/m<sup>3</sup> as CN; Skin

REL (USA) Ceiling limit value: 5\* mg/m<sup>3</sup>, 4.7\* ppm as CN; \*10-min

TLV (USA) Ceiling limit value: 5 mg/m<sup>3</sup>, 4.7 ppm as CN; Skin

Additional information:

No data

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use self-contained respiratory protective device in emergency situations.

Recommended filter device for short term use:

Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from

manufacturer to manufacturer.

Material of gloves

Nitrile rubber, NBR

Penetration time of glove material (in minutes)

480

Glove thickness:

0.11 mm

Eye protection:

Tightly sealed goggles

Safety glasses with side shields / NIOSH (US) or EN

166(EU)

Body protection:

Protective work clothing.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

General Information

Appearance:

Form:

Crystalline powder

Odor:

Odorless

Odor threshold:

Not determined.

pH-value:

Not applicable.

Change in condition

Melting point/Melting range:

Decomposes

Boiling point/Boiling range:

Not determined

Sublimation temperature / start:

Not determined

Flammability (solid, gaseous)

Not determined.

Ignition temperature:

Not determined

Decomposition temperature:

Not determined

Auto igniting:

Not determined.

Danger of explosion:

Not determined.

Explosion limits:

Lower:

Not determined

Upper:

Not determined

Vapor pressure:

Not applicable.

Density at 20 °C (68 °F):

3.45 g/cm<sup>3</sup> (28.79 lbs/gal)  
Relative density  
Not determined.  
Vapor density  
Not applicable.  
Evaporation rate  
Not applicable.  
Solubility in / Miscibility with  
Water:  
Soluble  
Partition coefficient (n-octanol/water):  
Not determined.  
Viscosity:  
dynamic:  
Not applicable.  
kinematic:  
Not applicable.  
Other information  
No further relevant information available.

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity  
Contact with acids liberates very toxic gas.  
Chemical stability  
Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided:  
Decomposition will not occur if used and stored  
according to specifications.  
Possibility of hazardous reactions  
Reacts with strong oxidizing agents  
Contact with acids liberates very toxic gas.  
Conditions to avoid  
No further relevant information available.  
Incompatible materials:  
Oxidizing agents  
Metals  
Acids  
Hazardous decomposition products:  
Hydrogen cyanide  
Nitrogen oxides  
Potassium oxide  
Carbon monoxide and carbon dioxide  
Gold oxide

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity:  
Fatal in contact with skin.



Fatal if swallowed.  
Fatal if inhaled.  
Danger through skin absorption.  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.  
LD/LC50 values that are relevant for classification:  
No data  
Skin irritation or corrosion:  
Causes skin irritation.  
Eye irritation or corrosion:  
Causes serious eye damage.  
Sensitization:  
No sensitizing effects known.  
Germ cell mutagenicity:  
No effects known.  
Carcinogenicity:  
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.  
Reproductive toxicity:  
No effects known.  
Specific target organ system toxicity - repeated exposure:  
No effects known.  
Specific target organ system toxicity - single exposure:  
No effects known.  
Aspiration hazard:  
No effects known.  
Subacute to chronic toxicity:  
No effects known.  
Additional toxicological information:  
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity  
Aquatic toxicity:  
No further relevant information available.  
Persistence and degradability  
No further relevant information available.  
Bioaccumulative potential  
No further relevant information available.  
Mobility in soil  
No further relevant information available.  
Ecotoxicological effects:  
Remark:  
Very toxic for aquatic organisms  
Additional ecological information:  
General notes:  
Do not allow material to be released to the

environment without proper governmental permits.  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
May cause long lasting harmful effects to aquatic life.  
Avoid transfer into the environment.  
Very toxic for aquatic organisms  
Results of PBT and vPvB assessment  
PBT:  
Not applicable.  
vPvB:  
Not applicable.  
Other adverse effects  
No further relevant information available.

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods  
Recommendation  
Consult state, local or national regulations to ensure proper disposal.  
Uncleaned packagings:  
Recommendation:  
Disposal must be made according to official regulations.  
Recommended cleansing agent:  
Water, if necessary with cleansing agents.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT, IMDG, IATA  
UN1588  
UN proper shipping name  
DOT  
Cyanides, inorganic, solid, n.o.s.  
ADR  
1588 Cyanides, inorganic, solid, n.o.s.  
(Gold(I) potassium cyanide)  
IMDG  
CYANIDES, INORGANIC, SOLID, N.O.S. (Gold(I) potassium cyanide), MARINE  
POLLUTANT  
IATA  
CYANIDES, INORGANIC, SOLID, N.O.S. (Gold(I) potassium cyanide)  
Transport hazard class(es)  
DOT

Class  
6.1 Toxic substances  
Label  
6.1  
ADR  
Class  
6.1 (T5) Toxic substances  
Label  
6.1  
IMDG  
Class  
6.1 Toxic substances  
Label  
6.1  
IATA  
Class  
6.1 Toxic substances  
Label  
6.1  
Packing group  
DOT, ADR, IMDG, IATA  
I  
Environmental hazards:  
Marine pollutant (IMDG):  
Yes (DOT)  
Symbol (fish and tree)  
Special precautions for user  
Warning: Toxic substances  
EMS Number:  
F-A,S-A  
Segregation groups  
Cyanides  
Stowage Category  
A  
Segregation Code  
SG35 Stow "separated from" acids.  
Transport in bulk according to Annex II of  
MARPOL73/78 and the IBC Code  
Not applicable.  
Transport/Additional information:  
DOT  
Quantity limitations  
On passenger aircraft/rail: 5 kg  
On cargo aircraft only: 50 kg  
Hazardous substance:  
10 lbs, 4.54 kg  
Marine Pollutant (DOT):  
No  
Remarks:  
Special marking with the symbol (fish and tree).  
IMDG  
Limited quantities (LQ)  
  
Excepted quantities (EQ)  
Code: E5

Maximum net quantity per inner packaging: 1 g  
Maximum net quantity per outer packaging: 300 g  
UN "Model Regulation":  
UN 1588 CYANIDES, INORGANIC, SOLID, N.O.S.  
(GOLD(I) POTASSIUM  
CYANIDE), 6.1, I

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental  
regulations/legislation specific for the substance or  
mixture  
GHS label elements  
The product is classified and labeled in  
accordance with 29 CFR 1910 (OSHA HCS)  
Hazard pictograms  
GHS05  
GHS06  
Signal word  
Danger  
Hazard statements  
H290  
May be corrosive to metals.  
H300+H310+H330 Fatal if swallowed, in contact with  
skin or if inhaled.  
H315  
Causes skin irritation.  
H318  
Causes serious eye damage.  
Precautionary statements  
P260  
Do not breathe dust/fume/gas/mist/vapors/spray.  
P301+P310  
IF SWALLOWED: Immediately call a POISON  
CENTER/ doctor.  
P305+P351+P338 If in eyes: Rinse cautiously with  
water for several minutes. Remove contact lenses, if  
present and easy to do. Continue rinsing.  
P320  
Specific treatment is urgent (see on this label).  
P405  
Store locked up.  
P501  
Dispose of contents/container in accordance with  
local/regional/national/international regulations.  
National regulations  
All components of this product are listed in the U.S.  
Environmental Protection Agency Toxic Substances  
Control Act Chemical substance Inventory.  
All components of this product are listed on the  
Canadian Domestic Substances List (DSL).  
SARA Section 313 (specific toxic chemical listings)

13967-50-5 Gold(I) potassium cyanide  
California Proposition 65  
Prop 65 - Chemicals known to cause cancer  
Substance is not listed.  
Prop 65 - Developmental toxicity  
Substance is not listed.  
Prop 65 - Developmental toxicity, female  
Substance is not listed.  
Prop 65 - Developmental toxicity, male  
13967-50-5 Gold(I) potassium cyanide  
Information about limitation of use:  
For use only by technically qualified individuals.  
This product is subject to the reporting requirements  
of section 313 of the Emergency Planning and  
Community Right to Know Act of 1986 and  
40CFR372.  
Other regulations, limitations and prohibitive  
regulations  
Substance of Very High Concern (SVHC) according to  
the REACH Regulations (EC) No. 1907/2006.  
Substance is not listed.  
The conditions of restrictions according to Article 67  
and Annex XVII of the Regulation (EC) No 1907/2006  
(REACH) for the manufacturing, placing on the market  
and use must be observed.  
Substance is not listed.  
Annex XIV of the REACH Regulations (requiring  
Authorisation for use)  
Substance is not listed.  
Chemical safety assessment:  
A Chemical Safety Assessment has not been carried  
out.

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## **16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

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