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SEC	TION 1: Identification	
1.1	Product identifier	
	Identification of the substance	Potassium ferricyanide
	CAS number	13746-66-2
1.2	Relevant identified uses of the substance or mi	ixture and uses advised against
	Relevant identified uses	Components of water analysis test kits
1.3	Details of the supplier of the safety data sheet	
	AquaPhoenix Scientific, Inc. 860 Gitts Run Road Hanover PA 17331 United States	
	Telephone: (717) 632-1291 e-mail: info@aquaphoenixsci.com Website: https://www.aquaphoenixsci.com/	
	e-mail (competent person)	scraig@aquaphoenixsci.com (Stephen Craig)
1.4	Emergency telephone number	
	Emergency information service	ChemTel Inc.: 1-800-255-3924, +01-813-248-0585
SEC	TION 2: Hazard(s) identification	
2.1	Classification of the substance or mixture	
	Classification acc. to GHS	

Hazard class	Category	Hazard class and cat- egory	Hazard state- ment
acute toxicity (dermal)	5	Acute Tox. 5	H313
hazardous to the aquatic environment - acute hazard	2	Aquatic Acute 2	H401

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

# 2.2 Label elements

Labeling

- Signal word warning



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- Pictograms	not required
- Hazard statements	
H313	May be harmful in contact with skin.
H401	Toxic to aquatic life.

- Precautionary statements		
P273	Avoid release to the environment.	
P302+P317	IF ON SKIN: Get medical help.	
P501	Dispose of contents/container to industrial combustion plant.	

## 2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of  $\ge 0.1\%$ .

# **SECTION 3: Composition/information on ingredients**

## 3.1 Substances

Name of substance	potassium ferricyanide
Identifiers	

CAS No

13746-66-2

# SECTION 4: First-aid measures

#### 4.1 Description of first-aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

#### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.



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#### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

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

none

#### **SECTION 5: Fire-fighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing media

Water, Foam, Alcohol resistant foam, ABC-powder

Unsuitable extinguishing media

Water jet

#### 5.2 Special hazards arising from the substance or mixture

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

#### For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

#### 6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains, Take up mechanically

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Advice on how to clean up a spill

Take up mechanically.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### 6.4 Reference to other sections

Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

#### Recommendations

Wear impact- and splash-resistant eyewear.

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

#### - Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

#### Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

#### 7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Removal of dust deposits.

Control of the effects

Protect against external exposure, such as

heat, high temperatures, light, UV-radiation/sunlight



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# **SECTION 8: Exposure controls/personal protection**

## 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits) this information is not available

Human health values

Relevant DNELs and other threshold levels					
	Endpoint Threshold level Protection goal, route of exposure		Used in	Exposure time	
	DNEL	9 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

## **Environment values**

Relevant	Relevant PNECs and other threshold levels			
Endpoint	Threshold level	Organism	Environmental compart- ment	Exposure time
PNEC	59 <sup>µg</sup> / <sub>l</sub>	aquatic organisms	freshwater	short-term (single instance)
PNEC	5.9 <sup>µg</sup> / <sub>l</sub>	aquatic organisms	marine water	short-term (single instance)
PNEC	100 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)

#### 8.2 Exposure controls

#### Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

In the case of wanting to use the gloves again, clean them before taking off and air them well.

- Other protection measures

Wash hands thoroughly after handling.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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#### Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

## **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

Product description: Tip Coating: Crystalline solid on tip of glass ampoules. The tip of each R-8012 ampoule is coated with approximately 0.03 g of solid chemical. The tip of each K-8003, R-8012A, R8012B, R-8012C, R-8012D, and K-8023 ampoule is coated with approximately 0.05 g of solid chemical

Physical state	solid (crystals)
Color	yellow, orange or red
Odor	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Evaporation rate	not determined
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not applicable
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not applicable
Kinematic viscosity	not relevant

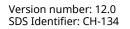
## Solubility(ies)

Water solubility	363 <sup>g</sup> /l
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#### Partition coefficient

Partition coefficient n-octanol/water (log value)	not relevant (inorganic)	
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Vapor pressure	not determined	

#### Density and/or relative density

Density	1.893 <sup>g</sup> / <sub>cm³</sub> at 20 °C
Relative vapour density	information on this property is not available

Particle characteristics	no data available	
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# **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

#### 10.2 Chemical stability

See below "Conditions to avoid".

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

#### **10.5** Incompatible materials

There is no additional information.

#### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

## **SECTION 11: Toxicological information**

#### **11.1** Information on toxicological effects

#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

#### Acute toxicity

May be harmful in contact with skin.



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- Acute toxicity estimate (ATE) Dermal >2,000 <sup>mg</sup>/<sub>kg</sub>

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

#### Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

#### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

#### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

# **11.2** Information on other hazards

There is no additional information.

## **SECTION 12: Ecological information**

#### 12.1 Toxicity

Toxic to aquatic life.

Aquatic toxicity (acute)					
	Endpoint	Value	Species	Exposure time	
	LC50	>100 <sup>mg</sup> / <sub>l</sub>	fish	96 h	
	EC50	59 <sup>mg</sup> / <sub>l</sub>	aquatic invertebrates	48 h	
	ErC50	3.1 <sup>mg</sup> / <sub>l</sub>	algae	72 h	



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## 12.2 Persistence and degradability

Data are not available.

#### 12.3 Bioaccumulative potential

Data are not available.

#### 12.4 Mobility in soil

Data are not available.

#### 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

#### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of  $\ge 0.1\%$ .

#### 12.7 Other adverse effects

Data are not available.

#### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Waste treatment-relevant information

Recycling/reclamation of other inorganic materials.

Please consider the relevant national or regional provisions.

#### **SECTION 14: Transport information**

14.1	UN number	not subject to transport regulations
14.2	UN proper shipping name	not relevant
14.3	Transport hazard class(es)	none
14.4	Packing group	not assigned
14.5	Environmental hazards	non-environmentally hazardous acc. to the danger- ous goods regulations

#### 14.6 Other relevant information

Shipping container markings and labels, received from CHEMetrics, may vary from the above information. Products that are regulated for transport will be packaged by CHEMetrics as Dangerous Goods in Excepted Quantities according to IATA, US DOT, and IMDG regulations. CHEMetrics may also elect to ship certain products as UN 3316 Chemical Kit, Hazard Class 9, Packing Group II or III. In case of reshipment, it is the responsibility of the shipper to determine appropriate labels and markings in accordance with applicable transportation regulations.



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# 14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

# Information for each of the UN Model Regulations

## Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Not subject to transport regulations.

# International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

# International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information Not subject to ICAO-IATA.

Not subject to ICAO-IATA.

# **SECTION 15: Regulatory information**

# 15.1 Safety, health and environmental regulations specific for the product in question

**National regulations (United States)** 

Toxic Substance Control Act (TSCA)substance is listed (ACTIVE)

# Superfund Amendment and Reauthorization Act (SARA TITLE III )

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

not listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

not listed

# Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4) not listed

## **Clean Air Act**

not listed

## **Right to Know Hazardous Substance List**

- Hazardous Substance List (NJ-RTK)

not listed

# California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

not listed



# **National inventories**

Country Inventory Status US TSCA substance is listed (ACTIVE) AIIC AU substance is listed CA DSL substance is listed IECSC CN substance is listed EU ECSI substance is listed EU REACH Reg. substance is listed JP CSCL-ENCS substance is listed KR KECI substance is listed NZ NZIoC substance is listed PICCS PH substance is listed CICR substance is listed ΤR ΤW TCSI substance is listed VN NCI substance is listed

# Leg<u>end</u>

Legena	
AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
KECI	Korea Existing Chemicals Inventory
NCI	National Chemical Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

# 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.



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# SECTION 16: Other information, including date of preparation or last revision

#### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
ΙΑΤΑ	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
NLP	No-Longer Polymer
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
vPvB	Very Persistent and very Bioaccumulative

## Key literature references and sources for data

Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).



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# List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text	
H313	May be harmful in contact with skin.	
H401	Toxic to aquatic life.	

## Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.