

## Kaliumhexacyanoferrat(III)-Lösung 0,575 mol/l in Wasser

Revision date: 10.08.2023

Product code: 30240

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## 1.1. Product identifier

Kaliumhexacyanoferrat(III)-Lösung 0,575 mol/l in Wasser

UFI:

28RP-R25M-F009-7E55

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

## Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

## Uses advised against

Do not use for private purposes (household).

#### 1.3. Details of the supplier of the safety data sheet

Company name:	AnalytiChem GmbH	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
E-mail:	info@analytichem.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
E-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.de	
Responsible Department:	Abteilung Produktsicherheit	
1.4. Emergency telephone	For Hazardous Materials [or Danger	rous Goods] Incidents Spill, Leak, Fire,
number:	Exposure, or Accident Call CHEMTI	REC Day or Night Within USA and Canada:
	1-800-424-9300 Outside USA and 0	Canada: +1 703-741-5970 (collect calls
	accepted)	

#### **Further Information**

inapplicable, this product is a mixture REACH registration number see section 3

## **SECTION 2: Hazards identification**

## 2.1. Classification of the substance or mixture

## GB CLP Regulation

Eye Irrit. 2; H319 Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

#### 2.2. Label elements

## **GB CLP Regulation**

Signal word:

Pictograms:

Warning



# Hazard statements

h	1319	
H	4412	2

Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

#### **Precautionary statements**

P264

Wash hands thoroughly after handling.



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P273	Avoid release to the environment.	
P280	Wear protective gloves and eye/face protection.	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P337+P313	If eye irritation persists: Get medical advice/attention.	

#### Special labelling of certain mixtures

Contact with acids liberates very toxic gas.

#### 2.3. Other hazards

EUH032

No information available.

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

#### 3.2. Mixtures

## Chemical characterization

Mixtures in aqueous solution

## Hazardous components

CAS No	Chemical name	Chemical name			
	EC No Index No REACH No				
	Classification (GB CLP Regulation)				
13746-66-2	tripotassium hexacyanoferrate			15 - < 20 %	
	237-323-3				
	Eye Irrit. 2, Aquatic Chronic 2; H319 H411 EUH032				

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

## Specific Conc. Limits, M-factors and ATE

CAS No	EC No	EC No Chemical name				
	Specific Conc. Limits, M-factors and ATE					
13746-66-2	237-323-3 tripotassium hexacyanoferrate		15 - < 20 %			
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5110 mg/kg					

#### **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**

No data available

## After inhalation

Provide fresh air. Call a doctor if you feel unwell.

#### After contact with skin

Wash immediately with: Water Take off immediately all contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

#### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing.

## After ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately.



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

Irritant

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

No data available

## **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

#### Suitable extinguishing media

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

## Unsuitable extinguishing media

no restriction

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

Non-combustible liquids 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. In case of fire and/or explosion do not breathe fumes. Avoid contact with skin, eyes and clothes.

#### Additional information

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

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

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

## General advice

Do not breathe vapour/aerosol.

# 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

## 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.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

## For cleaning up

Clean contaminated articles and floor according to the environmental legislation.



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#### 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

Read label before use. When using do not eat, drink, smoke, sniff. Handle and open container with care. Use personal protection equipment. Provide adequate ventilation. Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothes.

#### Advice on protection against fire and explosion

Usual measures for fire prevention.

#### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. 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. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

#### Further information on handling

Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. Take off immediately all contaminated clothing and wash it before reuse.

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

## Requirements for storage rooms and vessels

Protect against: Light

## Hints on joint storage

national regulations Do not store together with: Acid.

## Further information on storage conditions

Keep container tightly closed.

## 7.3. Specific end use(s)

Laboratory chemicals

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

## 8.1. Control parameters



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## **DNEL/DMEL** values

CAS No	Substance				
DNEL type		Exposure route	Effect	Value	
13746-66-2	tripotassium hexacyanoferrate				
Worker DNEL, long-term		dermal	systemic	9 mg/kg bw/day	
Consumer DNEL, long-term		dermal	systemic	4,5 mg/kg bw/day	
Consumer DNEL, long-term		oral	systemic	4,5 mg/kg bw/day	

## **PNEC** values

CAS No	Substance			
Environmental compartment Value		Value		
13746-66-2	tripotassium hexacyanoferrate			
Freshwater 0,055		0,059 mg/l		
Marine water 0,0059 n		0,0059 mg/l		
Micro-organisms in sewage treatment plants (STP) 100 mg/l		100 mg/l		

#### 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 Wear eye/face protection.

#### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. 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.

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: vertrieb@kcl.de with the following specification (test according to EN 374):

By long-term hand contact Trade name/designation: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11 mm Wearing time with permanent contact: > 480 min

By short-term hand contact Trade name/designation: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11 mm Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).



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## Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing. Wash hands before breaks and after work.

## **Respiratory protection**

Respiratory protection necessary at: aerosol or mist formation

## 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:	Liquid	
	Colour:	brown	
	Odour:	odourless	
	Odour threshold:	No data available	
	Melting point/freezing point:		No data available
	Boiling point or initial boiling point and		No data available
	boiling range:		
	Flammability:		not applicable
			not applicable
	Lower explosion limits:		No data available
	Upper explosion limits:		No data available
	Flash point:		No data available
	Auto-ignition temperature:		No data available
	Decomposition temperature:		No data available
	pH-Value:		6,3
	Viscosity / kinematic:		No data available
	Solubility in other solvents		
	No data available		
	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 (at 20 °C):		1,0943 g/cm³
	Relative density:		No data available
	Bulk density:		No data available
	Relative vapour density:		No data available
	Particle characteristics:		No data available
<u>9</u> .	2. Other information		
	Information with regard to physical haz	ard classes	
	Explosive properties		
	No data available		
	Sustaining combustion:		No data available
	Self-ignition temperature		
	Solid:		not applicable
	Gas:		not applicable
	Oxidizing properties		
	Not oxidising.		

## Other safety characteristics



#### Kaliumhexacyanoferrat(III)-Lösung 0,575 mol/l in Wasser Product code: 30240 Revision date: 10.08.2023 Page 7 of 11 No data available Evaporation rate: Solvent separation test: No data available Solvent content: 0 Solid content: 0 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: No data available

## Further Information

No data available

## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Decomposition with: Acid.

## 10.2. Chemical stability

Protect against: Light

#### 10.3. Possibility of hazardous reactions

Contact with acids liberates toxic gas.

## 10.4. Conditions to avoid

Light

## 10.5. Incompatible materials

Do not mix with acids.

## 10.6. Hazardous decomposition products

Contact with acids liberates toxic gas.

## **Further information**

No data available

## **SECTION 11: Toxicological information**

## 11.1. Information on hazard classes as defined in GB CLP Regulation

## Toxicocinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

## Acute toxicity

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

## **ATEmix calculated**

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name						
	Exposure route	Dose		Species	Source	Method	
13746-66-2	tripotassium hexacyanofe	ripotassium hexacyanoferrate					
		LD50 > mg/kg	> 5110	Rat	Study report (1984)	OECD Guideline 401	
	dermal		> 2000	Rat	Study report (2013)	OECD Guideline 402	

#### Irritation and corrosivity



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## Causes serious eye irritation.

Skin corrosion/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

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

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

#### Aspiration hazard

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

#### Information on likely routes of exposure

There are no data available on the preparation/mixture itself.

## Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

#### Additional information on tests

There are no data available on the preparation/mixture itself.

#### **Practical experience**

There are no data available on the preparation/mixture itself.

## 11.2. Information on other hazards

Endocrine disrupting properties

There are no data available on the preparation/mixture itself.

## Other information

There are no data available on the preparation/mixture itself.

#### **Further information**

There are no data available on the preparation/mixture itself.

## **SECTION 12: Ecological information**

#### 12.1. Toxicity

There are no data available on the preparation/mixture itself.

CAS No	Chemical name							
	Aquatic toxicity	Dose		[h]   [d]	Species	Source	Method	
13746-66-2	tripotassium hexacyanofe	rrate						
	Acute fish toxicity     LC50     > 100     96 h     Cyprinus carpio     REACh     OECD Guideline       mg/l     0     0     0     0     0     0     0						OECD Guideline 203	
	Acute algae toxicity	ErC50	3,1 mg/l		Pseudokirchneriella subcapitata	REACh Registration Dossier	OECD Guideline 201	
	Acute crustacea toxicity	EC50	59 mg/l	48 h	Daphnia magna	REACh Registration Dossier	OECD Guideline 202	
	Acute bacteria toxicity	(EC50 mg/l)	> 1000		activated sludge of a predominantly domestic sewag	Study report (2013)	OECD Guideline 209	

## 12.2. Persistence and degradability

There are no data available on the preparation/mixture itself.

## 12.3. Bioaccumulative potential



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There are no data available on the preparation/mixture itself.

## 12.4. Mobility in soil

There are no data available on the preparation/mixture itself.

#### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

There are no data available on the mixture itself.

## 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

#### 12.7. Other adverse effects

Discharge into the environment must be avoided.

## **Further information**

Do not allow to enter into surface water or drains.

## **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 empty into drains.

#### **Contaminated packaging**

Handle contaminated packages in the same way as the substance itself. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

## **SECTION 14: Transport information**

#### Land transport (ADR/RID)

 14.1. UN number or ID number:

 14.2. UN proper shipping name:

 14.3. Transport hazard class(es):

 14.4. Packing group:

 Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u> <u>14.2. UN proper shipping name:</u> <u>14.3. Transport hazard class(es):</u> <u>14.4. Packing group:</u> Marine transport (IMDG) <u>14.1. UN number or ID number:</u>

14.2. UN proper shipping name: 14.3. Transport hazard class(es):

14.4. Packing group:

Air transport (ICAO-TI/IATA-DGR) <u>14.1. UN number or ID number:</u> <u>14.2. UN proper shipping name:</u> <u>14.3. Transport hazard class(es):</u> <u>14.4. Packing group:</u>

## 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:

#### 14.6. Special precautions for user

No dangerous good in sense of this transport regulation. No dangerous good in sense of this transport regulation. No dangerous good in sense of this transport regulation. No dangerous good in sense of this transport regulation.

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No information available.

## 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

Restrictions on use (REACH, annex XVII): Entry 3 Information according to 2012/18/EU Not subject to 2012/18/EU (SEVESO III) (SEVESO III):

## National regulatory information

Water hazard class (D):

2 - obviously hazardous to water

## **SECTION 16: Other information**

#### Changes

This data sheet contains changes from the previous version in section(s): 4,5,6,7,8,9,10,11,12,13,14,15,16.

## 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% Eye Irrit: Eye irritation Aquatic Chronic: Chronic aquatic hazard

#### Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure		
Eye Irrit. 2; H319	Calculation method		
Aquatic Chronic 3; H412	Calculation method		

#### Relevant H and EUH statements (number and full text)

H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH032	Contact with acids liberates very toxic gas.

#### **Further Information**

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.



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(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)