MORPHISTO Laborchemikalien & Histologieservice

# Safety Data Sheet

according to UK REACH Regulation

## Potassium Ferrocyanide (II) 2 % (Yellow Prussiate)



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

### 1.1. Product identifier

Potassium Ferrocyanide (II) 2 % (Yellow Prussiate)

UFI: RDU5-T1WG-F007-KS1H

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

**Use of the substance/mixture**

Use as laboratory reagent.

**Uses advised against**

Any non-intended use.

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


Company name: MORPHISTO GmbH
Street: Schumannstr. 144
Place: D-63069 Offenbach
Telephone: +49 (0) 69 / 400 3019-60 Telefax: +49 (0) 69 / 400 3019-64
E-mail: info@morphisto.de
Contact person: Morphisto GmbH
E-mail: gefahrstoffmanagement@morphisto.de
Internet: http://www.morphisto.de


### 1.4. Emergency telephone number:

Morphisto GmbH, Tel: +49(0)69 400 3019-60, Mo-Fr.: 09-16Uhr

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**GB CLP Regulation**

This mixture is not classified as hazardous in accordance with GB CLP Regulation.

### 2.2. Label elements

**GB CLP Regulation**

**Special labelling of certain mixtures**

EUH210 Safety data sheet available on request.

### 2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulating and toxic (PBT) or very persistent and very bioaccumulating (vPvB) at levels of 0.1% or higher. Ecological information: The substance/mixture does not contain any components that are considered to be hazardous according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in amounts of 0.1 % or more have endocrine disrupting properties. Toxicological information: The substance/mixture does not contain any components that are to be classified according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Chemical characterization**

aqueous solution

**Hazardous components**

| CAS No | Chemical name | | | Quantity |
|---|---|---|---|---|
| | EC No | Index No | REACH No | |
| | Classification (GB CLP Regulation) | | | |
| 13943-58-3 | Potassium hexacyanoferrate (II) | | | 1 - < 5 % |
| | 237-722-2 | | 01-2120768449-37 | |
| | Aquatic Chronic 3; H412 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 | | |
| 13943-58-3 | 237-722-2 | Potassium hexacyanoferrate (II) | 1 - < 5 % |
| | dermal: LD50 = >2000 mg/kg; oral: LD50 = >5110 mg/kg | | |

**Further Information**

This product contains no substances of very high concern (SVHC) (>0,1%) which are included in the Candidate List according to Article 59 of REACH.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**After inhalation**

Provide fresh air. In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately.

**After contact with skin**

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. In case of skin irritation, seek medical treatment.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water. In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

**After ingestion**

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink 1 glass of of water. Let water be drunken in little sips (dilution effect). In all cases of doubt, or when symptoms persist, seek medical advice.

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

No information available.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings. Carbon dioxide (CO2). Dry extinguishing powder. alcohol resistant foam. Atomized water.

**Unsuitable extinguishing media**

High power water jet.

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

Non-flammable. In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO2). Hydrocyanic acid (hydrocyanic acid).

### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

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**

Wear personal protection equipment. See protective measures under point 7 and 8.

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. No special environmental measures are necessary. Clean contaminated articles and floor according to the environmental legislation.

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

**For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**Other information**

Clean contaminated objects and areas thoroughly observing environmental regulations.

### 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**

Wear personal protection equipment.
Avoid contact with skin, eyes and clothes.

**Advice on protection against fire and explosion**

The product is not: Combustible.
No special fire protection measures are necessary.

**Advice on general occupational hygiene**

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. Always close containers tightly after the removal of product.

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

**Requirements for storage rooms and vessels**

Keep container tightly closed.

**Hints on joint storage**

Do not store together with: Food and fodder

**Further information on storage conditions**

Protect from direct sunlight. Keep away from heat.
storage temperature: 15-25 °C

### 7.3. Specific end use(s)

Use as laboratory reagent.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls

**Appropriate engineering controls**

Use extractor hood (laboratory). Do not breathe dust.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear eye/face protection. Dust protection goggles. (In the case of the formation of dust. )

**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. In case of prolonged or frequently repeated skin contact:
Pull-over gloves of rubber. EN ISO 374
Suitable material:
(penetration time (maximum wearing period): >= 8 h):
Butyl rubber. (0,5 mm)
Protective clothing should be selected, depending on concentration and quantity of the hazardous substance.
The chemical resistance of the products should be discussed with suppliers.

**Skin protection**

Use of protective clothing. Protective clothing.

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection. With correct and proper use, and under normal conditions, breathing protection is not required.
Respiratory protection necessary at:
exceeding exposure limit values
Generation/formation of dust
Suitable respiratory protective equipment:
particulates filter device (DIN EN 143). Type : P1-3

**Environmental exposure controls**

No special measures are necessary.

## SECTION 9: Physical and chemical properties

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

| | | |
|---|---|---|
| Physical state: | liquid | |
| Colour: | slightly yellowish | |
| Odour: | characteristic | |
| Melting point/freezing point: | | not determined |
| Boiling point or initial boiling point and boiling range: | | not determined |
| Flammability: | | not determined |
| Lower explosion limits: | | not determined |
| Upper explosion limits: | | not determined |
| Flash point: | | not determined |
| Auto-ignition temperature: | | not determined |
| Decomposition temperature: | | not determined |
| pH-Value: | | 8,5-9,5 |
| Viscosity / kinematic: | | not determined |

| | |
|---|---|
| Water solubility: | easily soluble |
| Solubility in other solvents | |
| not determined | |
| Partition coefficient n-octanol/water: | not determined |
| Vapour pressure: | not determined |
| Density (at 20 °C): | 1,01 g/cm³ |
| Relative vapour density: | not determined |
| Particle characteristics: | not applicable |

### 9.2. Other information

**Information with regard to physical hazard classes**

Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal storage and handling conditions.

### 10.2. Chemical stability

Stable under normal storage and handling conditions.

Temperature of decomposition (°C): > 60°C

Hazardous decomposition products: Hydrocyanic acid (hydrocyanic acid).

### 10.3. Possibility of hazardous reactions

Kann bei Kontakt mit sehr starker Säure in der Hitze HCN freisetzen.

### 10.4. Conditions to avoid

Stable under normal storage and handling conditions.

### 10.5. Incompatible materials

Oxidizing agents, strong. Reducing agents, strong. Nitrites. Strong acid

### 10.6. Hazardous decomposition products

Resulting from the use of the product: Chlorine. In case of fire may be liberated: Carbon monoxide Carbon dioxide ($CO_2$). Hydrocyanic acid (hydrocyanic acid).

## SECTION 11: Toxicological information

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

**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 |
| 13943-58-3 | Potassium hexacyanoferrate (II) | | | | | |
| | oral | LD50 mg/kg | >5110 | Rat. | ECHA | |
| | dermal | LD50 mg/kg | >2000 | Rat. | ECHA | |

**Irritation and corrosivity**

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

**Sensitising effects**

Based on available data, the classification criteria are not met.
The statement is derived form the properties of the components.
no danger of sensitization.

**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.

### 11.2. Information on other hazards

**Endocrine disrupting properties**

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

**Other information**

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

## SECTION 12: Ecological information

### 12.1. Toxicity

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

| CAS No | Chemical name | | | | | | |
|---|---|---|---|---|---|---|---|
| | Aquatic toxicity | Dose | | [h] \| [d] | Species | Source | Method |
| 13943-58-3 | Potassium hexacyanoferrate (II) | | | | | | |
| | Acute fish toxicity | LC50 | >100 mg/l | 96 h | Cyprinus carpio (Common Carp)<br>Poecilia reticulata | ECHA | |
| | Acute algae toxicity | ErC50 | 3,1 mg/l | 72 h | Pseudokirchneriella subcapitata | ECHA | |
| | Acute crustacea toxicity | EC50 | >100 mg/l | 48 h | Daphnia magna (Big water flea) | ECHA | |

### 12.2. Persistence and degradability

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

### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

No information available.

### 12.5. Results of PBT and vPvB assessment

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

### 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

No information available.

**Further information**

Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.
Contents / container can be disposed of in accordance with national regulations.

**List of Wastes Code - residues/unused products**

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

**List of Wastes Code - used product**

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

**List of Wastes Code - contaminated packaging**

150203 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; absorbents, filter materials, wiping cloths and protective clothing; absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02

**Contaminated packaging**

Wash with plenty of water. Completely emptied packages can be recycled. Non-contaminated packages may be recycled.

## SECTION 14: Transport information

**Land transport (ADR/RID)**

| | |
|---|---|
| **14.1. UN number or ID number:** | No dangerous good in sense of this transport regulation. |
| **14.2. UN proper shipping name:** | No dangerous good in sense of this transport regulation. |
| **14.3. Transport hazard class(es):** | No dangerous good in sense of this transport regulation. |
| **14.4. Packing group:** | No dangerous good in sense of this transport regulation. |

**Inland waterways transport (ADN)**

| | |
|---|---|
| **14.1. UN number or ID number:** | No dangerous good in sense of this transport regulation. |
| **14.2. UN proper shipping name:** | No dangerous good in sense of this transport regulation. |
| **14.3. Transport hazard class(es):** | No dangerous good in sense of this transport regulation. |
| **14.4. Packing group:** | No dangerous good in sense of this transport regulation. |

**Marine transport (IMDG)**

| | |
|---|---|
| **14.1. UN number or ID number:** | No dangerous good in sense of this transport regulation. |
| **14.2. UN proper shipping name:** | No dangerous good in sense of this transport regulation. |
| **14.3. Transport hazard class(es):** | No dangerous good in sense of this transport regulation. |
| **14.4. Packing group:** | No dangerous good in sense of this transport regulation. |

**Air transport (ICAO-TI/IATA-DGR)**

| | |
|---|---|
| **14.1. UN number or ID number:** | No dangerous good in sense of this transport regulation. |
| **14.2. UN proper shipping name:** | No dangerous good in sense of this transport regulation. |
| **14.3. Transport hazard class(es):** | No dangerous good in sense of this transport regulation. |
| **14.4. Packing group:** | No dangerous good in sense of this transport regulation. |

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

### 14.6. Special precautions for user

No information available.

### 14.7. Maritime transport in bulk according to IMO instruments

No information available.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**EU regulatory information**

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

### 15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
Potassium hexacyanoferrate (II)

## SECTION 16: Other information

**Changes**

This data sheet contains changes from the previous version in section(s):
1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.
Rev. 2,0; 11.07.2023, Individual safety data sheet based on 13306_collect

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations
Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
OSHA: Occupational Safety and Health Administration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level
LOAEL: Lowest observed adverse effect level
NOAEC: No observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
DNEL: Derived No Effect Level
PNEC: predicted no effect concentration
TSCA: Toxic Substances Control Act
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
NTP: National Toxicology Program
SARA: Superfund Amendments and Reauthorization Act
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
PBT: Persistent bioaccumulative toxic
SVHC: substance of very high concern
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations

CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide

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

| | |
|---|---|
| H412 | Harmful to aquatic life with long lasting effects. |
| EUH032 | Contact with acids liberates very toxic gas. |
| EUH210 | Safety data sheet available on request. |

**Further Information**

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