

Date of issue: 20.03.2009

n.ap. = not applicable

n.av. = not available

Version: 0021

SI Analytics

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation

Trade name **Redox-Prüflösung (+180 mV/+220 mV) nach DIN**Product number **scho0034**Substance code **L 4619, L 4648**

1.2 Use of the substance/preparation

The product is used as a laboratory chemical.

1.3 Company/undertaking identification

Address: SI Analytics GmbH

Geb. G12

Hattenbergstrasse 10

D-55122 Mainz

Information: Telephone: int+49-(0)6131-66-5051 or -5116

Fax: int+49-(0)6131-66-5001

e-mail-address of the competent person responsible for this Safety Data Sheet:

urban-finking.gefstoff@t-online.de

1.4 Emergency telephone

Beratungsstelle für Vergiftungserscheinungen und Embryonaltoxikologie, Berlin

Telephone: int+49-(0)30 - 19240

2. Hazards identification

2.1 Hazards identification

The product is not dangerous within the meaning of the current version of Directive 1999/45/EC.

2.2 Critical hazards to man

Risk of formation of hydrocyanic acid after swallowing the product (potassium hexacyanoferrate (III)).

2.3 Critical hazards to the environment

The product is classified as low hazardous to water.

3. Composition/information on ingredients

This product is a preparation.

It is an aqueous solution of potassium hexacyanoferrate (II), potassium hexacyanoferrate (III), disodium hydrogenphosphate and potassium dihydrogenphosphate.

3.1 Substances presenting a health / environmental hazard within the meaning of Directive 67/548/EEC

CAS number	EC number	Identification	m %	Symbols	R phrases
n.ap.	n.ap.	n.ap.	n.ap.	n.ap.	n.ap.

For further details see heading 15.

3.2 Substances for which there are Community workplace exposure limits, which are not already included under heading 3.1 (see also heading 8.)

No substances.

3.3 Additional information

None.

4. First aid measures

4.1 General information

Change soaked clothing.

4.2 after inhalation

Ensure supply of fresh air.

4.3 after contact with skin

In case of contact with skin wash off immediately with plenty of water. Consult a doctor if skin irritation persists.

4.4 after contact with eyes

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

4.5 after ingestion

Seek medical advice immediately.

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4.6 Hints for the physician**Symptoms**

Diarrhoea, vomiting, dizziness, shortness of breath, cyanosis.

Hazards

Risk of formation of hydrocyanic acid after swallowing the product (potassium hexacyanoferrate (III)).

Treatment

Treat symptomatically.

4.7 First aid equipment

Emergency eyewash should be provided in the immediate working surroundings.

4.8 Additional remarks

None.

5. Fire-fighting measures**5.1 Suitable extinguishing media**

Product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

5.2 Extinguishing media which must not be used for safety reasons

Product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

5.3 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

Under certain conditions of combustion traces of toxic substances, such as hydrocyanic acid and nitrous gases, cannot be excluded.

5.4 Special protective equipment for fire-fighters

Use self-contained breathing apparatus.

5.5 Further information

Do not inhale explosion and/or combustion gases. Cool endangered containers with water spray jet. Contaminated firefighting water must be disposed of in accordance with the local regulations.

6. Accidental release measures**6.1 Personal precautions** (see also heading 8., Personal protective equipment)

No special measures necessary if used correctly.

6.2 Environmental precautions (see also heading 13., Disposal considerations)

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods for cleaning up

Pick up with absorbent material (e.g. Chemisorb) and dispose of in accordance with the regulations.

6.4 Additional information

None.

7. Handling and storage (National measures see headings 15. and 16.)**7.1 Handling****7.1.1 Advice on safe handling**

Open and handle container with care.

7.1.2 Advice on protection against fire and explosion

None.

7.2 Storage**7.2.1 Requirements for storage rooms and vessels**

Keep container tightly closed.

7.2.2 Advice on storage compatibility

Do not store together with acids.

7.2.3 Further information on storage conditions

Keep container in a well-ventilated place. Protect from light.

7.2.4 Storage class (for Germany only)

LGK 12 (Non-flammable liquids) in accordance with the VCI Guideline for the mixed storage of chemicals.

7.3 Specific use(s)

No information about specific uses available.

8. Exposure controls/Personal protection**8.1 Exposure limit values**

CAS number	Identification	Limit value	Remarks
n.ap.	n.ap.	n.a.p.	n.ap.

8.2 Exposure controls

See also heading 7.1.

Additional advice on system design

No additional advice.

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8.2.1 Occupational exposure controls**Personal protective equipment****Respiratory protection**

In case of formation of hydrocyanic acid use a respiratory protection apparatus (filter B).

Hand protection

Protective gloves.

Suitable: natural rubber (0.5 mm; breakthrough time ≥ 8 h);
 neoprene (0.5 mm; breakthrough time ≥ 8 h);
 nitrile rubber (0.35 mm; breakthrough time ≥ 8 h);
 butyl rubber (0.5 mm; breakthrough time ≥ 8 h);
 fluorinated rubber (0.4 mm; breakthrough time ≥ 8 h);
 PVC (0.5 mm; breakthrough time ≥ 8 h).

Eye protection

Safety glasses.

Body protection

Light protective clothing.

General protective measures and hygiene measures

Do not inhale vapour. Avoid contact with eyes and skin. Remove soiled or soaked clothing immediately.

At work do not eat, drink, smoke. When handling the product do not consume alcohol.

Wash hands before breaks and after work. Use barrier skin cream.

Emergency eyewash should be provided in the immediate working surroundings.

8.2.2 Environmental exposure controls

See heading 6.

9. Physical and chemical properties**9.1 General information**

Physical state: liquid **Colour:** light yellow **Odour:** odourless

9.2 Important health, safety and environmental information

pH (as supplied): 7.0 (of an aqueous solution): n.av.

Boiling point / boiling range (°C): approx. +100

Melting point (°C): n.av.

Thermal decomposition: n.av.

Flash point (°C), c.c.: n.ap.

Ignition temperature (°C): n.ap.

Lower explosion limit: n.ap. Upper explosion limit: n.ap.

Vapour pressure (25°C): n.av.

Relative density / bulk density: approx. 1.0 g/cm³

Solubility in water: soluble

Viscosity (25°C): n.av.

9.3 Other information

None

10. Stability and reactivity**10.1 Conditions to avoid**

If product is heated risk if the solution dries out (reaction with sodium nitrite or chromium oxide: risk of explosion).

The product is light-sensitive.

10.2 Materials to avoid

Solution may contain traces of hydrocyanic acid.

Contact with acids liberates toxic gases (hydrogen cyanide).

If product is heated risk if the solution dries out (reaction with sodium nitrite or chromium oxide: risk of explosion).

10.3 Hazardous decomposition products

Hazardous decomposition products: hydrogen cyanide, nitrous gases.

10.4 Additional information

None.

11. Toxicological information**11.1 Toxicokinetics, metabolism and distribution**

No data are available for the product.

11.2 Acute effects (acute toxicity, irritation and corrosivity)

LD50 rat, oral (mg/kg) n.av.

LD50 rabbit, dermal (mg/kg) n.av.

LC50 rat, inhalation (mg/l/4h) n.av.

Irritant effect on skin n.av.

Irritant effect on eyes n.av.

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11.3 Sensitisation

No data are available for the product.

11.4 Repeated dose (sub-acute, sub-chronic, chronic)

No data are available for the product.

11.5 CMR effects (carcinogenicity, mutagenicity, toxicity for the reproduction)

Carcinogenicity n.av.

Mutagenicity n.av.

Toxicity for the reproduction n.av.

11.6 Comprehensive evaluation of the CMR properties of substances subject to registration

No data available.

11.7 Experiences made in practice

Risk of formation of hydrocyanic acid after swallowing the product (potassium hexacyanoferrate (III)).

11.8 General remarks

The product has not been tested.

12. Ecological information**12.1 Ecotoxicity****Aquatic toxicity**

LC50 (fish) n.av.

EC50 (daphnia) n.av.

IC50 (algae) n.av.

Behaviour in sewage works:

The behaviour of the product in sewage treatment plants has not been tested.

12.2 Mobility

The product has not been tested.

12.3 Persistence and degradability

The product has not been tested.

12.4 Bioaccumulative potential

The product has not been tested.

12.5 Results of PBT assessment

No data available.

12.6 Other adverse effects

Ozone depletion potential n.av.

Photochemical ozone creation potential n.av.

Global warming potential n.av.

AOX-hint Not to apply.

12.7 Further information

Chemical oxygen demand (COD) n.av.

Biochemical oxygen demand (BOD) n.av.

The product is classified as low hazardous to water.

Contains according to the formulation following compounds of directives 2006/11/EC and 80/68/EEC:

List II: inorganic phosphorous compounds.

13. Disposal considerations**13.1 Product / unused product**

Waste disposal corresponding to European Waste Catalogue.

Wastes must be classified with respect to their origin and depending on different processing steps. The waste codes mentioned as follows are only constituted as our recommendations. Referring to the particular case they should be completed or revised.

Waste type Wastes not otherwise specified in the list

Waste notation Gases in pressure containers and discarded chemicals

EC waste code 16 05 09 discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

Disposal operations D 9 Physico-chemical treatment

Recovery operations R 4 Recycling/reclamation of metals and metal compound

13.2 Contaminated packaging

Recommendation Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Recommended cleansing agent Packaging that cannot be cleaned should be disposed off as product waste. Water

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14. Transport information**14.1 Land transport ADR / RID**

No dangerous good in accordance with the regulations.

14.2 Marine transport / IMDG-Code

No dangerous good in accordance with the regulations.

14.3 Air transport ICAO / IATA-DGR

No dangerous good in accordance with the regulation.

15. Regulatory information**15.1 Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for a substance in the product.

15.2 Labelling in accordance with Directive EC

Symbol(s) of danger: n.ap.

Indication(s) of danger: n.ap.

Hazardous component(s) to be indicated on label: n.ap.

R phrases: n.ap.

S phrases: n.ap.

Special labelling for certain preparations: n.ap.

Remarks: The normal safety precautions for handling of chemicals must be observed.**15.3 Further Community legislation**

None.

15.4 National measures (for Germany only)

Indications on restriction of occupation: n.ap.

Major-accident Regulation: n.ap.

Fire and explosion hazards: n.ap.

Regulation on clean air (TA Luft): n.ap.

Water hazard class: 1 (calculation according to KBwS)

The Federal State Enactment for Facilities to Handle Water Endangering Substances (German VAWS-Anlagenverordnung) has to be observed.

German Ordinance on Hazardous Substances
(in accordance with Directive 98/24/EC):

Article 7 must be observed

16. Other information**16.1 Keeping (restrictions)**

n.ap.

Distribution

for industry consumer, for the general public

16.2 Full text of the R phrases referred to under heading 3 of the Safety Data Sheet

Not to apply.

16.3 Technical contact pointSI Analytics GmbH, Herr Dr. M. Lange
SI Analytics GmbH, Herr H. Becker

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Version 0021: replacement of version 0020 dated 31.01.2009

Revised headings: page headers, 1.3, 16.3 (change of company identification)

16.4 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.

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