

Safety data sheet

according to Regulation (EC) No 1907/2006 (REACH)

Printing date 02.02.2017

Version number 3

Revision: 31.01.2017

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

• 1.1 Product identifier

- Trade name: L 4648 / 180 mV
- Article number: 285138784-Set1
- Description: Redox test solution (+180 mV/+220 mV) according to DIN
- Product code: scho0034

• 1.2 Relevant identified uses of the substance or mixture and uses advised against:

- Product category: PC21 Laboratory chemicals
- Process category: PROC15 Use as laboratory reagent
- Application of the substance / the preparation: Test solution

• 1.3 Details of the supplier of the safety data sheet

• Manufacturer/Supplier:

Xylem Analytics Germany GmbH
Dr.-Karl-Slevogt-Str. 1
82362 Weilheim
Germany

Contact: SI Analytics, Mainz
Tel. +49.(0)6131.66.5111

- Further information obtainable from: E-Mail: msds.si@xylem-inc.com

- **1.4 Emergency telephone number:** Chemtrec: (USA & Canada) 800-424-9300 (International) 001 703-527-3887

SECTION 2: Hazards identification

• 2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008:
The product is not classified according to the CLP regulation.

• 2.2 Label elements:

- 2.2.1 Labelling according to Regulation (EC) No 1272/2008: Void
- Hazard pictograms: Void
- Signal word: Void
- Hazard statements: Void
- **2.3 Other hazards** No further relevant information available.

SECTION 3: Composition/information on ingredients

• 3.2 Mixture

- Description:
Mixture, consisting of the following components:
Water, potassium hexacyanoferrate(II) and (III), disodium hydrogenphosphate, potassium dihydrogenphosphate
- Dangerous components: Void
- Additional information: For the wording of the listed hazard phrases refer to section 16.

* SECTION 4: First aid measures

• 4.1 Description of first aid measures

- After inhalation: Supply fresh air.
- After skin contact:
Wash with plenty of water.
Take off contaminated clothing.

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- If skin irritation continues, consult a doctor.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Seek immediate medical advice.
- **4.2 Most important symptoms and effects, both acute and delayed**
 - Gastric or intestinal disorders
 - Vomiting
 - Dizziness
 - Breathing difficulty
 - Cyanosis
- **4.3 Indication of any immediate medical attention and special treatment needed**
 - No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- Suitable extinguishing agents: The product is not flammable. Extinguishing agent to suit environment.
- **5.2 Special hazards arising from the substance or mixture**
 - In case of fire, the following can be released:
 - Nitrogen oxides (NO_x)
 - Hydrogen cyanide (HCN)
- **5.3 Advice for firefighters**
 - Protective equipment: Wear self-contained respiratory protective device.
 - Additional information
 - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 - No special measurements required when handled properly.
- **6.2 Environmental precautions:**
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **6.3 Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- Information about fire - and explosion protection: No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
 - Information about storage in one common storage facility: Do not store together with acids.
 - Further information about storage conditions:
 - Store receptacle in a well ventilated area.
 - Protect from exposure to the light.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- **8.1 Control parameters**
 - Ingredients with limit values that require monitoring at the workplace:
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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- Additional information: The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- Personal protective equipment:
- General protective and hygienic measures:
 - Avoid contact with the eyes and skin.
 - Take off contaminated clothing and wash it before reuse.
 - Wash hands before breaks and at the end of work.
- Respiratory protection: Not required.
- Protection of hands: Protective gloves recommended for frequent or long-term skin contact.
- Material of gloves
 - Recommended thickness of the material: $\geq 0,35$ mm
 - Nitrile rubber, NBR
- Eye protection: Safety glasses
- Body protection: Light weight protective clothing

SECTION 9: Physical and chemical properties

• 9.1 Information on basic physical and chemical properties	
• General Information	
• Appearance:	
Form:	Fluid
Colour:	Light yellow
• Odour:	Odourless
• pH-value at 20 °C:	7
• Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	100 °C
• Flash point:	Not applicable.
• Explosive properties:	Product does not present an explosion hazard.
• Vapour pressure at 20 °C:	23 hPa
• Density at 20 °C:	1,01 g/cm ³
• Solubility in / Miscibility with water:	Fully miscible.
• Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
• 9.2 Other information	No further relevant information available.

* SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- Thermal decomposition / conditions to be avoided: The product is sensitive to light.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** In case of fire, see section 5.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- Acute toxicity Based on available data, the classification criteria are not met.

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- Primary irritant effect:
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity 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.

* SECTION 12: Ecological information

- **12.1 Toxicity**
- Aquatic toxicity: No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- Additional ecological information:
- General notes:
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

• European waste catalogue	
16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 05 00	gases in pressure containers and discarded chemicals
16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

- Uncleaned packaging:
- Recommendation: Empty ampoules can be treated like household refuse.

SECTION 14: Transport information

• 14.1 UN-Number	
• ADR/RID, ADN, IMDG, IATA	Void
• 14.2 UN proper shipping name	
• ADR/RID, ADN, IMDG, IATA	Void
• 14.3 Transport hazard class(es)	
• ADR/RID, ADN, IMDG, IATA	
• Class	Void
• 14.4 Packing group	
• ADR/RID, IMDG, IATA	Void
• 14.5 Environmental hazards:	
• Marine pollutant:	No

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• 14.6 Special precautions for user	Not applicable.
• 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
• UN "Model Regulation":	Void

* SECTION 15: Regulatory information

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

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

• Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organisation
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
 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 Harmonised 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 (division of the American Chemical Society)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative

- * Data compared to the previous version altered.

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