

## Material Safety Data Sheet According to 91/155 EEC

Reviewed on 24.02.2005

**\* 1 Identification of substance:**

- **Product details:** Reagent for water analysis
- **Product name:** Silica LR Set (Vario Silica LR Amino Acid F10)
- **Catalog number:** 251 411      **Model:** Si-1 TP (LR)
- **Supplier:**  
 WTW Wissenschaftlich-Technische Werkstätten GmbH  
 Dr.-Karl-Slevogt-Str. 1  
 D-82362 Weilheim      Tel.: +49(0)881 183-0      Internet: <http://www.WTW.com>  
 Fax: +49(0)881 183-420      Tel.: +49(0)881 183-100      E-Mail: [Info@WTW.com](mailto:Info@WTW.com)
- **Emergency information:**  
 Poison Center Berlin, Germany  
 Tel.: +49(0)30 19240

**\* 2 Composition/Data on components:**

· **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**

CAS: 7681-57-4 EINECS: 231-673-0 EC Number: 016-063-00-2	disodium disulphite	☒ Xn; R 22-31-41	60-70%
CAS: 55-55-0 EINECS: 200-237-1 EC Number: 650-031-00-4	bis(4-hydroxy-N-methylanilinium) sulphate	☒ Xn, ☒ N; R 22-43-48/22-50/53	25-30%
CAS: 7758-98-7 EINECS: 231-847-6 EC Number: 029-004-00-0	copper sulphate	☒ Xn, ☒ N; R 22-36/38-50/53	0.1-1.0%

· **Additional information** For the wording of the listed risk phrases refer to section 16.

**\* 3 Hazards identification**

· **Hazard designation:**



Xn Harmful  
N Dangerous for the environment

· **Information pertaining to particular dangers for man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- R 22 Harmful if swallowed.
- R 31 Contact with acids liberates toxic gas.
- R 41 Risk of serious damage to eyes.
- R 43 May cause sensitisation by skin contact.
- R 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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**· Classification system**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

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**\* 4 First aid measures**

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**· General information**

Instantly remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation** Supply fresh air; consult doctor in case of symptoms.

**· After skin contact**

Instantly wash with water and soap and rinse thoroughly.

Seek medical treatment.

**· After eye contact**

Rinse opened eye for several minutes under running water.

Call a doctor immediately.

**· After swallowing**

Drink copious amounts of water and provide fresh air. Instantly call for doctor.

Induce vomiting.

**· The following symptoms may occur:**

after inhalation:

breathing difficulty

coughing

mucous membrane irritation

after swallowing:

gastric or intestinal trouble

irritation

· **Danger** risk of skin sensitization

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**\* 5 Fire fighting measures**

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**· Suitable extinguishing agents**

Use fire fighting measures that suit the environment.

CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

**· Special hazards caused by the material, its products of combustion or resulting gases:**

Formation of toxic gases is possible during heating or in case of fire.

Sulphur oxides (SO<sub>x</sub>)

Sodium oxide

**· Protective equipment:**

Wear self-contained breathing apparatus.

Wear full protective suit.

**· Additional information**

Ambient fire may liberate hazardous vapours.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Collect contaminated fire fighting water separately. It must not enter drains.

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**\* 6 Accidental release measures**

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**· Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Avoid causing dust.

**· Measures for environmental protection:**

Do not allow product to reach sewage system or water bodies.

Inform respective authorities in case product reaches water or sewage system.

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- **Measures for cleaning/collecting:**
  - Collect mechanically.
  - Ensure adequate ventilation.
  - Dispose of contaminated material as waste according to item 13.

### \* 7 Handling and storage

- **Handling**
- **Information for safe handling:** No special measures required.
- **Information about protection against explosions and fires:** Protect from heat.
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:**
  - Do not store together with acids.
  - Store away from oxidizing agents.
- **Further information about storage conditions:**
  - Store under dry conditions.
  - Protect from humidity and keep away from water.
  - Protect from the effects of light.
- **Storage class** Not required.

### \* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

<b>7681-57-4 disodium disulphite</b>
OES (Great Britain) Long-term value: 5 mg/m <sup>3</sup>

- **Additional information:** The lists that were valid during the compilation were used as basis.

- **Personal protective equipment**

- **General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Take off immediately all contaminated clothing

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes.

Do not eat, drink or smoke while working.

- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.

- **Recommended filter device for short term use:** Filter P2

- **Protection of hands:**

Only use chemical-protective gloves with CE-labelling of category III.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

After use of gloves apply skin-cleaning agents and skin cosmetics.

- **Material of gloves**

Nitrile

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Recommended thickness of the material:  $\geq 0.11$  mm

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Value for the permeation: Level  $\geq 6$  (480 min)

- **Eye protection:** Tightly sealed safety glasses.

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 · **Body protection:** Protective work clothing.

### \* 9 Physical and chemical properties:

· <b>Form:</b>	Powder
· <b>Colour:</b>	White
· <b>Odour:</b>	Odourless
· <b>Melting point/Melting range:</b>	Not determined
· <b>Boiling point/Boiling range:</b>	Not determined
· <b>Flash point:</b>	Not applicable
· <b>Self-inflammability:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive.
· <b>Density at 20°C</b>	1.255 g/cm <sup>3</sup>
· <b>Solubility in / Miscibility with Water:</b>	Soluble
· <b>pH-value (4 g/l) at 20°C:</b>	5.3
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
· <b>Solids content:</b>	100.0 %

### \* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** strong heating
- **Materials to be avoided:**
  - oxidizing agents
  - > forms heat
  - acids
- **Dangerous reactions**
  - Reacts with strong acids and oxidizing agents
  - Contact with acids releases toxic gases
- **Dangerous products of decomposition:**
  - Carbon monoxide and carbon dioxide
  - Nitrogen oxides (NO<sub>x</sub>)
  - Sulphur oxides (SO<sub>x</sub>)

### \* 11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>7681-57-4 disodium disulphite</b>		
Oral	LD50	1540 mg/kg (rat)
<b>55-55-0 bis(4-hydroxy-N-methylanilinium) sulphate</b>		
Oral	LD50	237 mg/kg (rat)
Dermal	LD50	> 1000 mg/kg (rat)
<b>7758-98-7 copper sulphate</b>		
Oral	LD50	300 mg/kg (rat)
	LDLo	50 mg/kg (human)

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**· Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible by skin contact.

**· Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Harmful  
Irritant

### \* 12 Ecological information:

**· Information about elimination (persistence and degradability):**

- **Other information:** Quantitative data on the ecological effect of this product are not available.

**· Ecotoxic effects:**
**· Aquatic toxicity:**
**7681-57-4 disodium disulphite**

EC50	89 mg/l/48h (Daphnia magna)
LC50	150-220 mg/l/96h (Onchorhynchus mykiss)

**55-55-0 bis(4-hydroxy-N-methylanilinium) sulphate**

Dermal	Daphnia EC50	0.019 mg/l/96h (Daphnia magna)
	LC50	0.25 mg/l/96h (Pimephales promelas)

**7758-98-7 copper sulphate**

EC50	0.024 mg/l/48h (Daphnia magna)
LC50	0.1-2.5 mg/l/96h (fish)

**· Remark:**

Toxic for fish:  
sulphates > 7 g/l

- **Algeal toxicity:** CAS No. 7681-57-4 Desmodesmus subspicatus IC50: 48mg/l/72 h

- **Bacterial toxicity:** CAS No. 7681-57-4 Pseudomonas putida EC50: 56 mg/l/17 h

**· Additional ecological information:**
**· CSB-value:**
**7681-57-4 disodium disulphite**

COD 0.168 g/g (.)

**· General notes:**

Very toxic for aquatic organisms  
copper ions at concentration below 1 mg/l  
Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water.  
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into soil.  
The product contains materials that are harmful to the environment.

### \* 13 Disposal considerations

**· Product:**

- **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**· European waste catalogue**

16 05 06 | laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals

**· Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

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**· Recommended cleaning agent:** Water, if necessary with cleaning agent.

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### \* 14 Transport information

**· ADR/GGVSE:** UN 3316 CHEMIE-TESTSATZ, 9, II**· IMDG/GGVSee:** UN 3316 CHEMICAL KIT, 9, II**· EMS-Number:** F-A S-P**· ICAO/IATA:** CHEMICAL KIT, 9, UN 3316, II

### \* 15 Regulatory information

**· Designation according to EC guidelines:**

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

**· Code letter and hazard designation of product:**

Xn Harmful

N Dangerous for the environment

**· Hazard-determining components of labelling:**

bis(4-hydroxy-N-methylanilinium) sulphate

disodium disulphite

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**· Risk phrases:**

- 22 Harmful if swallowed.
- 31 Contact with acids liberates toxic gas.
- 41 Risk of serious damage to eyes.
- 43 May cause sensitisation by skin contact.
- 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**· Safety phrases:**

- 24 Avoid contact with skin.
  - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  - 37/39 Wear suitable gloves and eye/face protection.
  - 57 Use appropriate container to avoid environmental contamination.
  - 60 This material and its container must be disposed of as hazardous waste.
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### 16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Relevant R-phrases**

- 22 Harmful if swallowed.
- 31 Contact with acids liberates toxic gas.
- 36/38 Irritating to eyes and skin.
- 41 Risk of serious damage to eyes.
- 43 May cause sensitisation by skin contact.
- 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**· Department issuing data specification sheet:** Department TSS, Dr. Manfred Kaul**· Data compared to the previous version altered.**

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