



# Material Safety Data Sheet

## According to 91/155 EEC

Printing date 01.12.2004

Reviewed on 01.12.2004

### \* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Sulfide No.2
- **Catalog number:** 502940
- **Supplier:**  
Tintometer GmbH  
Schleefstraße 8a-12  
D - 44287 Dortmund  
Made in Germany
- **Informing department:** Department Laboratory
- **Emergency information:**  
Poison Center Berlin, Germany  
phone: +49(0)30 19240

phone: +49(0)231 94510-0

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

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with harmless additions.

**Dangerous components:**

CAS: 10034-88-5 EINECS: 231-665-7 EC Number: 016-046-00-X	sodium hydrogensulphate	<input checked="" type="checkbox"/> Xi; R 41	60-70%
CAS: 124-04-9 EINECS: 204-673-3 EC Number: 607-144-00-9	adipic acid	<input checked="" type="checkbox"/> Xi; R 36	10-20%

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

### \* 3 Hazards identification

- **Hazard designation:**



Xi Irritant

- **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 41 Risk of serious damage to eyes.

- **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.

### \* 4 First aid measures

- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air and call for doctor for safety reasons.

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- **After skin contact**  
Instantly rinse with water.  
If skin irritation continues, consult a doctor.
  - **After eye contact**  
Rinse opened eye for several minutes under running water.  
Call a doctor immediately.
  - **After swallowing**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; instantly call for medical help.
  - **The following symptoms may occur:**  
after absorption:  
allergic reactions  
after inhalation:  
breathing difficulty  
mucous membrane irritation  
after swallowing:  
gastric or intestinal trouble
  - **Danger** Danger of gastric perforation.
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### \* 5 Fire fighting measures

- **Suitable extinguishing agents**  
Water  
Foam  
Use fire fighting measures that suit the environment.
  - **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>)
  - **Protective equipment:**  
Wear full protective suit.  
Wear self-contained breathing apparatus.
  - **Additional information**  
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

- **Person-related safety precautions:**  
Wear protective equipment. Keep unprotected persons away.  
Use breathing protection against the effects of fumes/dust/aerosol.
  - **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.
  - **Measures for cleaning/collecting:**  
Dispose of contaminated material as waste according to item 13.  
Collect mechanically.  
Ensure adequate ventilation.
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### \* 7 Handling and storage

- **Handling**
  - **Information for safe handling:**  
Prevent formation of dust.  
Keep containers tightly sealed.
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- **Information about protection against explosions and fires:**  
Protect from heat.  
The product is not flammable
  - **Storage**
  - **Requirements to be met by storerooms and containers:** Store in cool location.
  - **Information about storage in one common storage facility:** Store away from metals.
  - **Further information about storage conditions:**  
Store under dry conditions.  
Protect from humidity and keep away from water.
  - **Storage class** Not required.
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### \* 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:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - **Additional information:** The lists that were valid during the compilation were used as basis.
  - **Personal protective equipment**
  - **General protective and hygienic measures**  
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 P1
  - **Protection of hands:**  
Preventive skin protection by use of skin-protecting agents is recommended.  
After use of gloves apply skin-cleaning agents and skin cosmetics.
  - **Material of gloves**  
nitrile rubber, NBR  
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:  $\geq 0.1$  mm
  - **Penetration time of glove material**  
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.  
Wert für die Permeation: Level = 6 ( 480 min )
  - **Eye protection:** Tightly sealed safety glasses.
  - **Body protection:** Protective work clothing.
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### \* 9 Physical and chemical properties:

· <b>Form:</b>	Tablets
· <b>Colour:</b>	White
· <b>Odour:</b>	Odourless
· <b>Melting point/Melting range:</b>	Not determined
· <b>Boiling point/Boiling range:</b>	Not applicable
· <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>	1.885 g/cm <sup>3</sup>

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· <b>Solubility in / Miscibility with Water:</b>	Soluble
· <b>pH-value (11.1 g/l) at 20°C:</b>	1.7
· <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:**
  - metals
  - alcohols
- **Dangerous reactions**
  - Corrosive action on metals
  - Corrodes aluminium
  - Liberates acid in contact with water or alcohol.
- **Dangerous products of decomposition:**
  - Sulphur oxides (SO<sub>x</sub>)
  - see chapter 5

### \* 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>10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H<sub>3</sub>BO<sub>3</sub> calculated on the dry weight</b>		
Oral	LD50	2660 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rat)
<b>124-04-9 adipic acid</b>		
Oral	LD50	5700 mg/kg (rat)

- **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:** Sensitizing effect by skin contact is possible by prolonged exposure.
- **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:
  - Irritant

### \* 12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:** Quantitative data on the ecological effect of this product are not available.

· <b>Behaviour in environmental systems:</b>		
<b>10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H<sub>3</sub>BO<sub>3</sub> calculated on the dry weight</b>		
log P(o/w)	0.76 (25°C)	(.)
<b>124-04-9 adipic acid</b>		
log P(o/w)	0.093 (25°C)	(.)

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**· Ecotoxicological effects:**
**· Aquatic toxicity:**
**10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H<sub>3</sub>BO<sub>3</sub> calculated on the dry weight**

EC50	133 mg/l/48h (Daphnia magna)
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**124-04-9 adipic acid**

EC50	86 mg/l/48h (Daphnia magna)
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LC50	511 mg/l/48h (Leuciscus idus)
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	97 mg/l/96h (Pimephales promelas)
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**· Additional ecological information:**
**· BSB5-value:**
**124-04-9 adipic acid**

BSB5	0.598 g/g (-)
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**· 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 bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

### \* 13 Disposal considerations

**· Product:**
**· Recommendation**

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

Hand over to disposers of hazardous waste.

**· European waste catalogue**

16 05 06	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
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**· Uncleaned packagings:**

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

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

### \* 14 Transport information

**· Land transport ADR/RID (cross-border)**


**· ADR/RID-GGVS/E Class:** 8 (C2) Corrosive substances.

**· Kemler Number:** 80

**· UN-Number:** 3260

**· Packaging group:** III

**· Label:** 8

**· Designation of goods:** 2923 CORROSIVE SOLID, TOXIC, N.O.S. (sodium hydrogensulphate, potassium dichromate)

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**· Maritime transport IMDG:**


- **IMDG Class:** 8
- **UN Number:** 3260
- **Label** 8
- **Packaging group:** III
- **EMS Number:** F-A,S-B
- **Marine pollutant:** No
- **Correct technical name:** CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (sodium hydrogensulphate)

**· Air transport ICAO-TI and IATA-DGR:**


- **ICAO/IATA Class:** 8
- **UN/ID Number:** 3260
- **Label** 8
- **Packaging group:** III
- **Correct technical name:** CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (sodium hydrogensulphate)

### \* 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:**

Xi Irritant

**· Risk phrases:**

41 Risk of serious damage to eyes.

**· Safety phrases:**

24 Avoid contact with skin.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

39 Wear eye/face protection.

60 This material and its container must be disposed of as hazardous waste.

**· Special designation of certain preparations:**

Contains potassium dichromate, potassium chromate. May produce an allergic reaction.

### 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**

36 Irritating to eyes.

41 Risk of serious damage to eyes.

**· Department issuing data specification sheet:** Technical Department

**· \* Data compared to the previous version altered.**