



Material Safety Data Sheet

According to 91/155 EEC

Printing date 15.04.2005

Reviewed on 15.04.2005

* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Copper No.2
- **Catalog number:** 00513569, (4)513560, (4)513561, 513563(0)
- **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:

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

Dangerous components:

CAS: 65208-41-5 EINECS: 249-881-5	calcium thioglycollate trihydrate	<input checked="" type="checkbox"/> Xn; R 22-43	2.5-5%
CAS: 124-04-9 EINECS: 204-673-3 EC Number: 607-144-00-9	adipic acid	<input checked="" type="checkbox"/> Xi; R 36	≤ 2.5%

- **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 43 May cause sensitisation by skin contact.

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.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water.

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- **After swallowing**
Drink copious amounts of water, induce vomiting.
Call a doctor immediately.
 - **The following symptoms may occur:**
after inhalation:
coughing
breathing difficulty
irritation
after swallowing:
sickness
vomiting
 - **Danger** risk of skin sensitization
-

* 5 Fire fighting measures

- **Suitable extinguishing agents** 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 (SOx)
 - **Protective equipment:** 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.
Avoid causing dust.
 - **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.
 - **Measures for cleaning/collecting:**
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
Collect mechanically.
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* 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:** store away from solvents
 - **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store under dry conditions.
Protect from humidity and keep away from water.
Protect from the effects of light.
 - **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.

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- **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**
Keep away from foodstuffs, beverages and food.
Take off immediately all contaminated clothing
Wash hands during breaks and at the end of the work.
 - **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 rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
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.
 - **Penetration time of glove material**
Value for the permeation: Level ≥ 6 (480 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Eye protection:** Safety glasses
 - **Body protection:** Protective work clothing.
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* 9 Physical and chemical properties:

· Form:	Tablets
· Colour:	White
· Odour:	Strong
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	300°C
· Flash point:	Not applicable
· Ignition temperature:	420°C
· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive.
· Vapour pressure at 20°C:	2.7 hPa
· Density	Not determined
· Solubility in / Miscibility with Water:	Soluble
· pH-value (9.1 g/l) at 20°C:	5.7
· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** strong heating
- **Dangerous reactions** No dangerous reactions known

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· Dangerous products of decomposition:

 Hydrogen sulphide
 see chapter 5

***11 Toxicological information**

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

 · **LD/LC50 values that are relevant for classification:**
10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight

Oral LD50 2660 mg/kg (rat)

Dermal LD50 > 2000 mg/kg (rat)

65208-41-5 calcium thioglycollate trihydrate

Oral LD50 352 mg/kg (rat)

124-04-9 adipic acid

Oral LD50 5700 mg/kg (rat)

 · **Primary irritant effect:**

 · **on the skin:** Irritant to skin and mucous membranes.

 · **on the eye:** Irritant effect.

 · **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:

Irritant

***12 Ecological information:**

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

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

 · **Behaviour in environmental systems:**
10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight

log P(o/w) 0.76 (25°C) (.)

124-04-9 adipic acid

log P(o/w) 0.093 (25°C) (.)

 · **Ecotoxicological effects:**

 · **Aquatic toxicity:**
10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight

EC50 133 mg/l/48h (Daphnia magna)

124-04-9 adipic acid

EC50 86 mg/l/48h (Daphnia magna)

LC50 511 mg/l/48h (Leuciscus idus)

97 mg/l/96h (Pimephales promelas)

 · **Additional ecological information:**

 · **BSB5-value:**
124-04-9 adipic acid

BSB5 0.598 g/g (-)

 · **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.

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

* 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.
 - **Recommended cleaning agent:** Water, if necessary with cleaning agent.
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* 14 Transport information

- | | |
|--|---|
| · Land transport ADR/RID (cross-border) | |
| · ADR/RID-GGVS/E Class: | - |

- | | |
|-----------------------------------|----|
| · Maritime transport IMDG: | |
| · IMDG Class: | - |
| · Marine pollutant: | No |

- | | |
|--|---|
| · Air transport ICAO-TI and IATA-DGR: | |
| · ICAO/IATA Class: | - |

- **Transport/Additional information:** Not dangerous according to the above specifications.
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* 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
 - **Hazard-determining components of labelling:**
calcium thioglycollate trihydrate
 - **Risk phrases:**
43 May cause sensitisation by skin contact.
 - **Safety phrases:**
24 Avoid contact with skin.
37 Wear suitable gloves.
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.
36 Irritating to eyes.
43 May cause sensitisation by skin contact.
 - **Department issuing data specification sheet:** Technical Department
 - *** Data compared to the previous version altered.**
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