

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 18.07.2018

Numéro de version 30 (valid until batch U0KA)

Revision: 17.07.2018

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

· 1.1 Product identifier

· Product name: **Copper No.2**

· Catalog number: 00513561, (4)513560BT, (4)513561BT, 513563(0)BT, 00513569BT

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

· Application of the substance / the preparation: Reagent for water analysis

· 1.3 Details of the supplier of the safety data sheet

· Supplier:

Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com

phone: +49 231 94510-0
e-mail: sales@tintometer.de

Tintometer GmbH
Division AQUALYTIC®
Schleefstr. 12
44287 Dortmund
Made in Germany
www.aqualytic.de

phone: +49 231 94510-755
e-mail: sales@aqualytic.de

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom

phone : +44 1980 664800
e-mail: SDS@tintometer.com

· Informing department:

e-mail: sds@tintometer.de
Product Safety Department

· 1.4 Emergency telephone number:

+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS07

· Signal word Warning

(Contd. on page 2)

GB

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according to 1907/2006/EC, Article 31

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Numéro de version 30 (valid until batch U0KA)

Revision: 17.07.2018

Product name: Copper No.2

(Contd. of page 1)

Hazard-determining components of labelling:

calcium thioglycolate trihydrate

Hazard statements

H317 May cause an allergic skin reaction.

Precautionary statements

P261 Avoid breathing dust.

P280 Wear protective gloves / eye protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

2.3 Other hazards CAS 65208-41-5: Danger by skin resorption.**Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

SECTION 3: Composition/information on ingredients

3.2 Mixtures**Description:** Mixture contains organic compounds.**Dangerous components:**

CAS: 65208-41-5 EINECS: 249-881-5	calcium thioglycolate trihydrate ⚠ Met. Corr. 1, H290; ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	5-<10%
CAS: 124-04-9 EINECS: 204-673-3 Index No: 607-144-00-9 Reg.nr.: 01-2119457561-38-XXXX	adipic acid ⚠ Eye Irrit. 2, H319	0.1-≤2.5%

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**General information** Instantly remove any clothing soiled by the product.**After inhalation** Supply fresh air; consult doctor in case of symptoms.**After skin contact**

Instantly rinse with water.

If skin irritation or rash occurs: Get medical advice/attention.

After eye contact

Rinse opened eye for several minutes under running water (at least 15 min). If symptoms persist, consult doctor.

After swallowing

Rinse out mouth and then drink 1-2 glasses of water.

Seek medical treatment in case of complaints.

4.2 Most important symptoms and effects, both acute and delayed:

after inhalation:

coughing

breathing difficulty

irritations

after swallowing:

gastric or intestinal trouble

sickness

vomiting

Danger risk of skin sensitization**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** Use fire fighting measures that suit the environment.**5.2 Special hazards arising from the substance or mixture**

combustible

(Contd. on page 3)

GB

Safety data sheet

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Numéro de version 30 (valid until batch U0KA)

Revision: 17.07.2018

Product name: Copper No.2

(Contd. of page 2)

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

Nitrogen oxides (NO_x)Sulphur oxides (SO_x)Carbon monoxide (CO) and carbon dioxide (CO₂)

- **5.3 Advice for firefighters**

- **Protective equipment:**

Wear self-contained breathing apparatus.

Wear full protective suit.

- **Additional information**

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

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

Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

- **Advice for non-emergency personnel:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

- **Advice for emergency responders:** Protective equipment: see section 8

- **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.

- **6.3 Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

Collect mechanically.

Dispose of contaminated material as waste according to item 13.

- **6.4 Reference to other sections**

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

- **Advice on safe handling:** Prevent formation of dust.

- **Hygiene measures:**

Avoid contact with the skin.

Take off immediately all contaminated clothing.

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

Do not eat, drink or smoke when using this product.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage**

- **Requirements to be met by storerooms and containers:** Store in cool location.

- **Information about storage in one common storage facility:** Store away from oxidising agents.

- **Further information about storage conditions:**

Protect from heat and direct sunlight.

Protect from the effects of light.

Store under dry conditions.

Protect from humidity and keep away from water.

- **Recommended storage temperature:** 20°C +/- 5°C

- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **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.

- **DNELs**

- **CAS: 124-04-9 adipic acid**

Oral	DNEL	19 mg/kg (Consumer / acute / systemic effects)
		19 mg/kg (Consumer / long-term / systemic effects)

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2018

Numéro de version 30 (valid until batch U0KA)

Revision: 17.07.2018

Product name: Copper No.2

(Contd. of page 3)

Dermal	DNEL	38 mg/kg (Worker / acute / systemic effects)
		38 mg/kg (Worker / long-term / systemic effects)
		19 mg/kg (Consumer / acute / systemic effects)
		19 mg/kg (Consumer / long-term / systemic effects)
Inhalative	DNEL	5 mg/m ³ (Worker / acute / local effects)
		264 mg/m ³ (Worker / acute / systemic effects)
		5 mg/m ³ (Worker / long-term / local effects)
		264 mg/m ³ (Worker / long-term / systemic effects)
		65 mg/m ³ (Consumer / acute / systemic effects)
		65 mg/m ³ (Consumer / long-term / systemic effects)

- **Recommended monitoring procedures:**

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

- **PNECs**

CAS: 124-04-9 adipic acid

PNEC	59.1 mg/l (Sewage treatment plant)
	0.0126 mg/l (Marine water)
	0.46 mg/l (Aquatic intermittent release)
	0.126 mg/l (Fresh water)
PNEC	0.0228 mg/kg (Soil)
	0.0484 mg/kg (Marine sediment)
	0.484 mg/kg (Fresh water sediment)

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

- **8.2 Exposure controls**

- **Engineering measures:**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

- **Personal protective equipment**

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

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

- **Protection of hands:**

Protective gloves.

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

Recommended thickness of the material: ≥ 0.11 mm

- **Penetration time of glove material**

Value for the permeation: Level = 1 (< 10 min)

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

- **Eye protection:**

Safety glasses

use against the effects of fumes / dust

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

- **Limitation and supervision of exposure into the environment:** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **Appearance:**

Form / Physical state: Tablets

Colour: White

- **Odour:** Strong

- **Odour threshold:** Not determined.

(Contd. on page 5)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2018

Numéro de version 30 (valid until batch U0KA)

Revision: 17.07.2018

Product name: Copper No.2

(Contd. of page 4)

· pH-value (9.1 g/l) at 20°C:	6.1
· Melting point/Freezing point:	Not determined
· Initial boiling point and boiling range:	Not determined
· Flash point:	Not applicable
· Flammability (solid, gas):	Not determined.
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not self-igniting.
· Explosive properties:	The product is not capable of dust explosion in the form supplied; enrichment with fine dust causes risk of dust explosion
· Flammability or explosive limits:	
Lower:	Not determined.
Upper:	Not determined.
· Oxidising properties:	none
· Vapour pressure:	Not applicable.
· Density:	Not determined
· Relative density:	Not determined.
· Vapour density:	Not applicable.
· Evaporation rate:	Not applicable.
· Solubility(ies):	
Water:	Soluble
· Partition coefficient: n-octanol/water:	Not applicable.
· Viscosity:	Not applicable.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	100.0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Dust can combine with air to form an explosive mixture.
- **10.2 Chemical stability** Stable at ambient temperature (room temperature).
- **10.3 Possibility of hazardous reactions** Reacts with oxidizing agents
- **10.4 Conditions to avoid** Strong heating (decomposition)
- **10.5 Incompatible materials:** metals
- **10.6 Hazardous decomposition products:**
hydrogen sulphide
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.

· LD/LC50 values that are relevant for classification:

CAS: 65208-41-5 calcium thioglycolate trihydrate

Oral	LD50	352 mg/kg (rat) (Merck)
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CAS: 124-04-9 adipic acid

Oral	LD50	5700 mg/kg (rat) (MERCK)
Dermal	LD50	>7940 mg/kg (rabbit) (Registrant, ECHA: no deaths occurred)

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

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Numéro de version 30 (valid until batch U0KA)

Revision: 17.07.2018

Product name: Copper No.2

(Contd. of page 5)

Inhalative	LC50.	>7.7 mg/l/4h (rat) (dust, aerosol) (Registrant, ECHA: no deaths occurred)
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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.

· Information on components:		
CAS: 65208-41-5 calcium thioglycolate trihydrate		
Irritation of skin	OECD 404	(rabbit: slight irritation)
Irritation of eyes	OECD 405	(rabbit: irritation)
CAS: 124-04-9 adipic acid		
Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: severe irritations)

- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.

· Information on components:		
CAS: 65208-41-5 calcium thioglycolate trihydrate		
Sensitisation	OECD 429	(positive) (mouse)
CAS: 124-04-9 adipic acid		
Sensitisation	OECD 406	(guinea pig: negative) (IUCLID)

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** The following statements refer to the mixture:
- **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 (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

- **Information on components:**
OECD 414: Teratogenicity testing
OECD 473: Mutagenicity testing
OECD 471, 474, 476, 487: Germ cell mutagenicity testing

CAS: 124-04-9 adipic acid		
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test) (IUCLID)	
OECD 474	(negative) (Mammalian Erythrocyte Micronucleus Test)	

SECTION 12: Ecological information

- **12.1 Toxicity**

· Aquatic toxicity:		
CAS: 124-04-9 adipic acid		
LC50	511 mg/l/48h (gold orfe)	
EC50	86 mg/l/48h (Daphnia magna) (OECD 202)	
IC50	31 mg/l/72h (Desmodemus subspicatus) (IUCLID)	
LC50	97 mg/l/96h (fathhead minnow) (ECOTOX)	
· Bacterial toxicity:		
CAS: 124-04-9 adipic acid		
EC50	92 mg/l (Pseudomonas putida) (DIN 38412) (IUCLID)	

(Contd. on page 7)

GB

Safety data sheet

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Numéro de version 30 (valid until batch U0KA)

Revision: 17.07.2018

Product name: Copper No.2

(Contd. of page 6)

· 12.2 Persistence and degradability	
CAS: 124-04-9 adipic acid	
OECD 301 B	100 % / 28 d (readily biodegradable) (CO2 Evolution Test)
· 12.3 Bioaccumulative potential	
Pow = n-octanol/wasser partition coefficient	
log Pow < 1 = Does not accumulate in organisms.	
CAS: 124-04-9 adipic acid	
log Pow	0.081 (.) (25°C, OECD 107)
· 12.4 Mobility in soil No further relevant information available.	
· 12.5 Results of PBT and vPvB assessment	
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.	
· 12.6 Other adverse effects Avoid transfer into the environment.	
· Water hazard:	
Do not allow product to reach ground water, water bodies or sewage system.	
Danger to drinking water if even small quantities leak into soil.	

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods	
· 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 08*	discarded organic chemicals consisting of or containing hazardous substances
· Uncleaned packagings:	
· Recommendation: Disposal must be made according to official regulations.	
· Recommended cleaning agent: Water, if necessary with cleaning agent.	

SECTION 14: Transport information

· 14.1 UN-Number	
· ADR, IMDG, IATA	Void
· 14.2 UN proper shipping name	
· ADR, IMDG, IATA	Void
· 14.3 Transport hazard class(es)	
· ADR, IMDG, IATA	
· Class	Void
· 14.4 Packing group	
· ADR, IMDG, IATA	Void
· 14.5 Environmental hazards:	Not applicable.
· 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.
· Transport/Additional information:	Not dangerous according to the above specifications.

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:	
None of the ingredients is listed.	

(Contd. on page 8)

GB

Safety data sheet

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Numéro de version 30 (valid until batch U0KA)

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Product name: Copper No.2

(Contd. of page 7)

- **Directive 2012/18/EU (SEVESO III):**
 - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
 - **Information about limitation of use:**
Observe employment restrictions for pregnant and nursing mothers according to the 'mother protection guideline' (92/85/EEC) .
Employment restrictions concerning young persons must be observed.
 - **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.
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* SECTION 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 phrases**

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

- **Training hints** Provide adequate information, instruction and training for operators.

- **Abbreviations and acronyms:**

OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Met. Corr. 1: Corrosive to metals – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- **Sources**

Data arise from safety data sheets, reference works and literature.
ECHA: European CHemicals Agency <http://echa.europa.eu>
IUCLID (International Uniform Chemical Information Database)
ECOTOX Database