

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

Printing date 27.10.2023

Version number 33 (replaces version 32)

Revision: 27.10.2023

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

· **1.1 Product identifier**

· **Product name:** Copper No.2

· **Catalog number:** 00513561, 513560BT, 4513560BT, 513561BT, 4513561BT, 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 (0)231 94510-0
e-mail: sales@lovibond.com

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

phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**

e-mail: sds@lovibond.com
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**

The product is not classified as hazardous according to the GB CLP regulation.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **Additional information:**

EUH031 Contact with acids liberates toxic gas.
EUH210 Safety data sheet available on request.

· **2.3 Other hazards** No further relevant information available.

· **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.

· **Determination of endocrine-disrupting properties**

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of organic and inorganic compounds

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· Dangerous components:		
CAS: 7775-14-6	sodium dithionite	5-10%
EINECS: 231-890-0	⚠ Self-heat. 1, H251; ⚠ Acute Tox. 4, H302, EUH031	
Index No: 016-028-00-1	ATE: LD50 oral: 500 mg/kg	

· **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 continues, consult a doctor.

· **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:

mucosal irritations, cough, shortness of breath

after swallowing:

thirst

sickness

vomiting

· **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

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

Can be released in case of fire:

nitrous gases

Nitrogen oxides (NO_x)

Sulphur oxides (SO_x)

Sodium oxide

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.

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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.

Provide suction extractors if dust is formed.

Keep ignition sources away - Do not smoke.

Hygiene measures:

The usual precautionary measures should be adhered to general rules for handling chemicals.

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**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.**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

Derived No Effect Level (DNEL)

CAS: 7775-14-6 sodium dithionite

Dermal DNEL 8.8 mg/kg (Worker / long-term /systemic effects)

Inhalative DNEL 10 mg/m³ (Worker / 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

Predicted No Effect Concentration (PNEC)

CAS: 7775-14-6 sodium dithionite

PNEC 45.3 mg/l (Sewage treatment plant)

0.1 mg/l (Marine water)

1 mg/l (Fresh water)

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.

Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

Eye/face protection

Safety glasses

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use against the effects of fumes / dust

Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.

Hand protection

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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Other skin protection (body protection): Protective work clothing.**Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.**Recommended filter device for short term use:** Filter P2**Environmental exposure controls** 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

· Physical state	Solid.
· Form:	Tablets
· Colour:	White
· Odour:	Strong
· Odour threshold:	Not determined.
· Melting point/Freezing point:	Not determined.
· Boiling point or initial boiling point and boiling range	Not determined.
· Flammability	The mixture is capable of catching fire or being set on fire.
· Explosive properties:	The product is not capable of dust explosion in the form supplied; enrichment with fine dust causes risk of dust explosion
· Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not applicable (solid).
· Flash point:	>100°C (CAS: 7775-14-6 sodium dithionite)
· Auto-ignition temperature:	>200°C (CAS: 7775-14-6 sodium dithionite)
· Decomposition temperature:	>80 °C
· pH (9 g/l) at 20°C	4.48
· Kinematic viscosity	Not applicable (solid).
· Solubility	
· Water:	Soluble
· Partition coefficient n-octanol/water (log value)	Not applicable (mixture).
· Vapour pressure:	Not applicable (solid).
· Density and/or relative density	
· Density:	Not determined.
· Relative density:	Not determined.
· Relative gas density	Not applicable (solid).
· Particle characteristics	Not determined.

9.2 Other information**Information with regard to physical hazard classes**

· Corrosive to metals	Void
· Other safety characteristics	
· Oxidising properties:	none
· Additional information	
· Solids content:	100 %

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).

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10.3 Possibility of hazardous reactions

Contact with acids releases toxic gases

Reacts with oxidizing agents

--> forms heat

10.4 Conditions to avoid

strong heating

Exposure to moisture.

10.5 Incompatible materials: sodium chlorite**10.6 Hazardous decomposition products:** see section 5**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

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

LD/LC50 values that are relevant for classification:**CAS: 7775-14-6 sodium dithionite**

Oral LD50 500 mg/kg (ATE)

LD50. 2500 mg/kg (rat)
(IUCLID)

- **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: 7775-14-6 sodium dithionite**

Irritation of skin OECD 404 (rabbit: no irritation)

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

- **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.

Additional toxicological information:**CAS: 7775-14-6 sodium dithionite**

(source: GESTIS)

From general professional experience, an irritating effect on the mucous membranes is pointed out.

An irritating effect on the eyes was demonstrated in several tests on the rabbit eye.

Irrespective of the low general toxicity, however, it should be taken into account that released bisulfite/sulfite can trigger acute hypersensitivity reactions in sulfite-sensitive people (often asthmatics) (usually after oral or inhalative intake of small doses).

11.2 Information on other hazards

- **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

Other information

According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:****CAS: 7775-14-6 sodium dithionite**EC50 98 mg/l/48h (Daphnia magna)
MERCKIC50 206 mg/l/72h (Desmodemus subspicatus)
MERCK

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LC50	46–68 mg/l/96h (gold orfe) (DIN 38412) (Merck)
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· **Bacterial toxicity:**

CAS: 7775-14-6 sodium dithionite

EC50	107 mg/l (Pseudomonas putida) IUCLID
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· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential**

Pow = n-octanol/wasser partition coefficient

log Pow < 1 = Does not accumulate in organisms.

CAS: 7775-14-6 sodium dithionite

log Pow	<-4.7 (.) (calculated)
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· **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 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects**

Reacts with water to form toxic decomposition products.

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 06*	laboratory chemicals, consisting of or containing hazardous 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.

SECTION 14: Transport information

· 14.1 UN number or ID 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 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.

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SECTION 15: Regulatory information

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

Poisons Act UK

Regulated explosives precursors

CAS: 100-97-0 methenamine

Listed

Regulated poisons

None of the ingredients is listed.

Reportable explosives precursors

None of the ingredients is listed.

Reportable poisons

None of the ingredients is listed.

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors

not regulated: homogeneous mixture of more than five components with c <1% (w/w) substance Annex I or II

explosives precursors - ANNEX II

CAS: 100-97-0 methenamine

Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)

None of the ingredients is listed.

Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

None of the ingredients is listed.

REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)

None of the ingredients is listed.

LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)

None of the ingredients is listed.

Substances of very high concern (SVHC) according to REACH, Article 57

This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).

Substances of very high concern (SVHC) according to UK REACH

This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).

Directive 2012/18/EU (SEVESO III):

Named dangerous substances - ANNEX I

None of the ingredients is listed.

Information about limitation of use:

Not required.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

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.

Training hints

Provide adequate information, instruction and training for operators.

Relevant phrases

H251 Self-heating; may catch fire.

H302 Harmful if swallowed.

EUH031 Contact with acids liberates toxic gas.

Abbreviations and acronyms:

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

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EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord relatif au transport international 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 (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Self-heat. 1: Self-heating substances and mixtures – Category 1
Acute Tox. 4: Acute toxicity – Category 4

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

GESTIS- Stoffdatenbank (Substance Database, Germany)

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

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