

Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

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

1.1 Product identifier

REF 91853
 Product name NANOCOLOR Copper

REACH Registration number(s): see SECTION 3.1/3.2 or
 A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.

2 x 100 mL Copper R1
 2 x 100 mL Copper R2

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

Relevant identified uses
 Product for analytical use.
 Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
 The exposure scenario is integrated into sections 1-16.

Uses advised against
 not described

1.3 Details of the supplier of the safety data sheet

Manufactured by:
 MACHEREY-NAGEL GmbH & Co. KG
 Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY
 Tel.: +49 2421 969 0

E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 Emergency telephone number

Information not necessary.

You find our current versions of SDS (22 languages) in Internet: <http://www.mn-net.com/SDS>

SECTION 2: Hazard identification

2.0 Classification of the complete product

-

2.1 Classification of the substance or mixture

100 mL Copper R1

Signal word Do not need labelling as hazardous
 -

No hazard class

100 mL Copper R2

Signal word Do not need labelling as hazardous
 -

No hazard class

2.2 Label elements

100 mL Copper R1
 Do not need labelling as hazardous
 Signal word: -



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100 mL Copper R2

Do not need labelling as hazardous
Signal word: -

2.3 Other hazards

Possible hazards from physicochemical properties

According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit. An individual package has considerably less hazardous potential. ---

Information pertaining to particular risks to human and possible symptoms

Information pertaining to particular risks to the environment

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

100 mL Copper R1

Chemical: *citrate buffer solution*
 Classification: No criteria for classification or naming of chemical not required.
 TSCA Inventory: all listed
 KE No.: listed
 Concentration: 10 - <25 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

CAS No.: -

100 mL Copper R2

Chemical: *oxalic acid bis(cyclohexylidenehydrazide)*
 Classification: No criteria for classification or naming of chemical not required.
 Formula: $C_{14}H_{22}N_4O_2$
 Pseudonym: cuprizon, 1,2-bis(2-cyclohexylidenehydrazide)ethanedioic acid
 TSCA Inventory: listed
 EC No.: 206-729-2
 RTECS: RO2520000
 Concentration: < 1,00 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

CAS No.: 370-81-0

MFCD: 00001659

Chemical: *dimethyl sulfoxide*

Classification: No criteria for classification or naming of chemical not required.
 Formula: C_2H_6OS
 Pseudonym: DMSO, 1,1'-sulfinylbis-methane
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119431362-50-xxxx
 EC No.: 200-664-3
 RTECS: PV6210000
 KE No.: KE-32367
 Concentration: 80 - <100 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

CAS No.: 67-68-5

MFCD: 00002089

3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%.

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SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately.

4.1.1 After SKIN Contact

Not necessary.

4.1.2 After EYE Contact

Not necessary.

4.1.3 After INHALATION of vapours

Not necessary. ---

4.1.4 After ORAL Intake

Not necessary. ---

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

No additionally recommendations. ---

SECTION 5: Firefighting measures

5.1 Extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture

None.

5.3 Advice for firefighters

No, for listed product. Product package burns like paper or plastic.

5.4 Additional information

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Not necessary.

6.2 Environmental precautions

not necessary

6.3 Methods and material for containment and cleaning up

Clean working area with water. Flush used water into drains.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product.

7.2 Conditions for safe storage, including any incompatibilities

The original product package of MACHEREY-NAGEL allows a safe storage.

Storage class (VCI): 12

Water hazard class (DE): 3

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)

Product for analytical use.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

100 mL Copper R1

Chemical: citrate buffer solution

CAS No.: -

100 mL Copper R2

Chemical: oxalic acid bis(cyclohexylidenehydrazide)

CAS No.: 370-81-0

Chemical: dimethyl sulfoxide

CAS No.: 67-68-5

DNEL: 394_{inh} mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): 17 mg/L

PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 50 ppm / 160 mg/m³
E/e respirable

Short-term exposure factor: 2 (I), H, Z

skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 50 ppm / 160 mg/m³

8.2 Exposure controls

Not necessary. Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities.

8.2.1 Respiratory protection

Not necessary.

8.2.2 Hand protection

Not necessary.

8.2.3 Eye protection

Not necessary.

8.2.4 Skin protection

Not necessary.

8.2.5 Personal hygiene

Information not necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

100 mL Copper R1

Appearance: liquid

Colour: colourless

Odor: aminic

pH: 8-9

Solubility in water: 0-100 %

100 mL Copper R2

Appearance: liquid

Colour: colourless

Odor: fusty, mouldy

pH: -

Flash point: 95 °C

Solubility in water: 0-100 %

9.2 Other information

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

Relevant Properties of Substance Group

SECTION 10: Stability and reactivity

10.1 Reactivity

None

10.2 Chemical stability

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No known instability.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Not known. Observe labeled storage temperature. ---

10.5 Incompatible materials

Not known.

10.6 Hazardous decomposition products

In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

100 mL Copper R1

Chemical: citrate buffer solution
 TSCA Inventory: all listed
 Korea Exist.Chem.Inventory: listed

CAS No.: -

100 mL Copper R2

Chemical: oxalic acid bis(cyclohexylidenehydrazide)
 TSCA Inventory: listed

CAS No.: 370-81-0

Chemical: dimethyl sulfoxide
 TSCA Inventory: listed
 Korea Exist.Chem.Inventory: KE-32367
 LD50_{orl rat}: 14.5 g/kg
 LD50_{drm rat}: 40 g/kg

CAS No.: 67-68-5

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

100 mL Copper R1

Chemical: citrate buffer solution
 Water hazard class (DE): 0
 Storage class (VCI): 12

CAS No.: -

100 mL Copper R2

Chemical: oxalic acid bis(cyclohexylidenehydrazide)
 Water hazard class (DE): 3
 Storage class (VCI): 12

CAS No.: 370-81-0

Chemical: dimethyl sulfoxide
 PNEC(fresh water): 17 mg/L
 PNEC = Predicted No Effect Concentration
 LC50_{fish/96h}: 38.5 g/L
 EC50_{daphnia/48h}: 24.6 g/L
 EC10_{pseudomonas putida/16h}: EC/16h: 7100 mg/L
 Water hazard class (DE): 1 WGK No.: 5050
 Dispersion coefficient(octanol-water): -1.35
 Storage class (VCI): 12

CAS No.: 67-68-5

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- 12.2 Persistence and degradability**
not necessary
- 12.3 Bioaccumulative potential**
not necessary
- 12.4 Mobility in soil**
not necessary
- 12.5 Results of PBT and vPvB assessment**
no data available
- 12.6 Other adverse effects**
no additional data available

SECTION 13: Disposal considerations

Not necessary.

- 13.1 Waste treatment methods**
GENERAL: Empty solids into municipal waste, empty liquids diluted into drains. Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14: Transport information

14.1 - 14.4 Not necessary

- 14.5 Environmental hazards**
none
- 14.6 Special precautions for user**
not necessary
- 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**
not applicable

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013
German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC
MN Leaflet/User manual, also see www.mn-net.com
Look for your country-specific regulations.
- 15.2 Chemical safety assessment**

SECTION 16: Other information

- 16.1 List of H and P phrases**
- 16.1.1 List of relevant H phrases**
- 16.1.2 List of relevant P phrases**
- 16.2 Training advice**
Regular safety training.
- 16.3 Recommended restriction on use**
None
- 16.4 Further information**
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from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

16.5 Sources of key data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS

Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress

Regulation 669/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress

TRGS 900, German engineering rules governing limits in air at work, updated 03/2018

SUVA .CH, Limits in air at work 2009, revised on 01.2009

KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Revisions/Updates

Reason for Revision: 2016-03 Adaptation of regulation 1221/2015/EU