

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 814205
 Product name 2 indiv.comp.cation test mixt. 2x8 mL

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.

1 x 8 mL Reference solution Copper
 1 x 8 mL Reference solution Manganese

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

8 mL Reference solution Copper

Do not need labelling as hazardous

Signal word -

No hazard class

8 mL Reference solution Manganese

Do not need labelling as hazardous

Signal word -

No hazard class

2.2 Label elements

8 mL Reference solution Copper

Do not need labelling as hazardous
 Signal word: -

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8 mL Reference solution Manganese

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

8 mL Reference solution Copper

Chemical:	<i>copper(II) sulfate (pentahydrate)</i>	CAS No.:	7758-98-7
Classification:	H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H400, Aquatic Acute 1, H410, Aquatic Chronic 1		
Formula:	CuSO ₄		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119520566-40-xxxx	Indice No.:	029-004-00-0
EC No.:	231-847-6		
RTECS:	GL8800000		
Concentration:	0.1 - <1 %	Correlation factor:	0.40 (= %Cu)
The classification refers to weight percent of the metal (according to CLP Regulation 2008/1272/EC Annex VI, 1.1.3.2 Note 1)			
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

8 mL Reference solution Manganese

Chemical:	<i>manganese(II) sulfate (monohydrate)</i>	CAS No.:	10034-96-5
Classification:	H373, STOT RE 2, H411, Aquatic Chronic 2		
Formula:	MnSO ₄ · H ₂ O		
TSCA Inventory:	listed (CAS 7785-87-7)		
REACH Reg. No.:	01-2119456624-35-xxxx	Indice No.:	025-003-00-4
EC No.:	232-089-9		
RTECS:	OP0893500		
Concentration:	0.1 - <1 %	Correlation factor:	x 0.36 (= %Mn)
The classification refers to weight percent of the metal (according to CLP Regulation 2008/1272/EC Annex VI, 1.1.3.2 Note 1)			
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

3.3 Remarks

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

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.

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- 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): 2
- 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.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8 mL Reference solution Copper

Chemical: *copper(II) sulfate (pentahydrate)*

CAS No.: 7758-98-7

TRGS 900 (DE): 1 (0,1) E mg/m³

A/a aveoles passing, E/e respirable, G total

Short-term exposure factor: 4

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

SUVA(CH) MAK value: [als Cu][MAK]0,1 e/[STEL] 0,2 e mg/m³

www.mn-net.com



MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6-8 · 52355 Düren · Germany

DE/international:

CH:

FR:

US:

Tel.: +49 24 21 969-0

Tel.: +41 62 388 55 00

Tel.: +33 388 68 22 68

Tel.: +1 484 821 0984

Fax: +49 24 21 969-199

Fax: +41 62 388 55 05

Fax: +33 388 51 76 88

Fax: +1 484 821 1272

E-mail: info@mn-net.com

E-mail: sales-ch@mn-net.com

E-mail: sales-fr@mn-net.com

E-mail: sales-us@mn-net.com

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8 mL Reference solution Manganese

Chemical: *manganese(II) sulfate (monohydrate)*

CAS No.: 10034-96-5

EU value: [Mn, TWA] 0.2E / 0.05A mg/m³TRGS 900 (DE): [Mn] 0.02A; 0.2E mg/m³
A/a aveoles passing, E/e respirable, G total

Short-term exposure factor: 8 (II), Y

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

TRGS 903 (DE): nicht mehr gelistet

B blood, U urine, a no limitation, b end of exposition or shift

NIOSH: [TWA] 1 / [STEL] 3 mg/m³

[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: [C] 5 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

8 mL Reference solution Copper

Appearance: liquid

Colour: blue

Odor: odorless

8 mL Reference solution Manganese

Appearance: liquid

Colour: colourless

Odor: odorless

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

No known instability.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Not known. ---

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.

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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.

8 mL Reference solution Copper

Chemical:	<i>copper(II) sulfate (pentahydrate)</i>	CAS No.: 7758-98-7
TSCA Inventory:	listed	
Japan ISHL:	listed $\geq 1,0\%$ / $\geq 0,1\%$	
LD50 _{orl rat} :	300 mg/kg	
LC _{LoWorl hmn} :	50 mg/kg	
LD50 _{drm rbt} :	>2000 mg/kg	
TRGS 905 (DE):	R _F C	

8 mL Reference solution Manganese

Chemical:	<i>manganese(II) sulfate (monohydrate)</i>	CAS No.: 10034-96-5
TSCA Inventory:	listed (CAS 7785-87-7)	
Exposure Routes:	inhalation, ingestion	
Symptoms:	Manganism; asthenia, insomnia, mental confusion; metal fume fever: dry throat, cough, chest tightness, dyspnea (breathing difficulty), rales, flu-like	
Japan CSCL/PRTR:	PRTR: $\geq 1,0\%$ Mn class I, Japan PDSCL: not listed	
Japan ISHL:	listed $\geq 1,0\%$ / $\geq 0,1\%$	
LD50 _{orl rat} :	2150 mg/kg	

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

8 mL Reference solution Copper

Chemical:	<i>copper(II) sulfate (pentahydrate)</i>	CAS No.: 7758-98-7
LC50 _{pimephales promelas/96h} :	0.1-2.5 mg/L	
EC50 _{daphnia/48h} :	0.82 mg/L	
Water hazard class (DE):	2	WGK No.: 0141
Storage class (VCI):	12	

8 mL Reference solution Manganese

Chemical:	<i>manganese(II) sulfate (monohydrate)</i>	CAS No.: 10034-96-5
Water hazard class (DE):	1	
Storage class (VCI):	12-13	

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

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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

MACHEREY-NAGEL GmbH & Co. KG provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

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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

Regulation 1480/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress

TRGS 900, German engineering rules governing limits in air at work, updated 03/2019

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

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

Revisions/Updates

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