

# Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 985042	NANOCOLOR Zinc 6	Page: 1/14
Printing date: 15.05.2024	Date of issue: 01.02.2024	Version: 2.2.2.7

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

### 1.1 Product identifier

REF 985042  
 Product name NANOCOLOR Zinc 6

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.

20 x 4 mL Zinc 6 (R1) (R0) UFI: R4NW-Q3TH-C20R-MK0E  
 1 x 20x 10 mg NANOFIX Zinc 6 (R2)  
 1 x 5 mL Zinc 6 (R3) UFI: P9NW-R369-Y20R-X85J

### 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  
 Valencienner Str. 11, 52355 Düren, Germany  
 Phone: +49 2421 969 0 E-mail: sds@mn-net.com (msds@mn-net.com)

### 1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.  
 DE: Gemeinsames Giftinformationszentrum (GGIZ)  
 99089 Erfurt tel. +49 361 730 730, <<https://www.ggiz-erfurt.de>>

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

## SECTION 2: Hazard identification

### 2.0 Classification of the complete product according to Regulation (EC) 1272/2008



Signal word DANGER

Hazard identification	Hazard classes/categories
H301	Acute Tox. 3 oral
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H360FD	Repr. 1 B

### 2.1 Classification of the substance or mixture according to Regulation (EC) 1272/2008

4 mL Zinc 6 (R1) (R0)



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Signal word	DANGER
<b>Hazard identification</b>	<b>Hazard classes/categories</b>
EUH031	-
H302	Acute Tox. 4 oral
H312	Acute Tox. 4 derm.
H332	Acute Tox. 4 inh.
H360FD	Repr. 1 B

**20x 10 mg NANOFIX Zinc 6 (R2)**

Signal word	Do not need labelling as hazardous
No hazard class	-

**5 mL Zinc 6 (R3)**



Signal word	DANGER
<b>Hazard identification</b>	<b>Hazard classes/categories</b>
H301	Acute Tox. 3 oral
H315	Skin Irrit. 2
H319	Eye Irrit. 2

List of H phrases: see section 16.2

## 2.2 Label elements according regulation (EC) 1272/2008

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identifier(s) (EU 1272/2008 Annex I - 1.5.1.2). Inner packages up to 10 mL need max. 2 symbols (Annex I - 1.5.2.4.1 / 2). Harmful chemicals/mixtures with signal word: **WARNING** must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2).

**4 mL Zinc 6 (R1) (R0)**



Signal word: DANGER  
 H360FD  
 May damage fertility. May damage the unborn child.  
 P201, P202, P280sh, P308+313, P405, P501  
 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/eye protection. IF exposed or concerned: Get medical advice/attention. Store locked up. Dispose of contents/container to regulated waste treatment.

**20x 10 mg NANOFIX Zinc 6 (R2)**  
 Do not need labelling as hazardous  
 Signal word: -

**5 mL Zinc 6 (R3)**



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Signal word: DANGER  
H301  
Toxic if swallowed.  
P264, P270, P301+310, P330, P405, P501  
Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. Store locked up. Dispose of contents/container to regulated waste treatment.

### Label elements of the complete product



Signal word: DANGER  
H301, H360FD  
Toxic if swallowed. May damage fertility. May damage the unborn child.  
P201, P202, P264, P270, P280sh, P301+310, P330, P405, P501  
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/eye protection. IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. Store locked up. Dispose of contents/container to regulated waste treatment.

### 2.3 Other hazards

- Possible hazards from physicochemical properties**  
In the case of pH values are less than 5 or higher than 9 then it is irritant.
- Information pertaining to particular risks to human and possible symptoms**  
Cause severe after oral intake, impairments of health or can lead to death even when only ingested in small quantities. May damage fertility. May damage the unborn child.
- Information pertaining to particular risks to the environment**  
Should not be released into the environment.  
**PBT:** not applicable  
**vPvB:** not applicable
- Possible endocrine disrupting effects**  
no data available

## SECTION 3: Composition / information on ingredients

### 3.1 Substances or 3.2 Mixtures

<b>4 mL Zinc 6 (R1) (R0)</b>			
Substance name:	<i>boric acid</i>		
CAS No.:	10043-35-3		
Substance rating:	H360FD, Repr. 1 B		
Formula:	H <sub>3</sub> BO <sub>3</sub>		
Pseudonym (de):	Orthoborsäure, E284		
REACH Reg. No.:	01-2119486683-25-0024		
<b>SVHC listed:</b>	<b>listed (18/06/2010) Cand. Lst. REACH Art59(10)</b>		
EC No.:	233-139-2	Indice No.:	005-007-00-2
Concentration:	0,3 - <0,5 %		
acc. CLP (GHS):	H360FD, Repr. 1 B		



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Substance name: *sodium carbonate*  
 CAS No.: 497-19-8

Substance rating: H319, Eye Irrit. 2  
 Formula:  $\text{Na}_2\text{CO}_3$   
 Pseudonym (de): Soda  
 REACH Reg. No.: 01-2119485498-19-xxxx  
 EC No.: 207-838-8  
 Concentration: 1 - <10 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Indice No.: 011-005-00-2

Substance name: *trisodium citrate dihydrate*  
 CAS No.: 6132-04-3

Substance rating: No criteria for classification or naming of chemical not required.  
 Formula:  $\text{C}_6\text{H}_5\text{Na}_3\text{O}_7 \cdot 2\text{H}_2\text{O}$   
 Pseudonym (de): Na-citrat, E331  
 REACH Reg. No.: 01-2119457027-40-xxxx  
 EC No.: 612-118-5  
 Concentration: 1 - <10 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

**20x 10 mg NANOFIX Zinc 6 (R2)**

Substance name: *4-(2-pyridylazo)resorcinol*  
 CAS No.: 1141-59-9

Substance rating: H315, Skin Irrit. 2, H319, Eye Irrit. 2, H335, resp. irrit. STOT SE 3  
 Formula:  $(\text{HO})_2\text{C}_6\text{H}_3\text{N}=\text{NC}_5\text{H}_4\text{N}$   
 EC No.: 214-528-6  
 Concentration: 0 - <10 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: *sodium hydroxide solution*  
 CAS No.: 1310-73-2

Substance rating: H314, Skin Corr. 1 A  
 Formula:  $\text{NaOH} \cdot \text{H}_2\text{O}$   
 Pseudonym (de): verdünnte Natronlauge  
 REACH Reg. No.: 01-2119457892-27-xxxx  
 EC No.: 215-185-5  
 Concentration: 0,1 - <0,5 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Specific concentration limit: Eye Irrit. 2; H319: 0,5 % ≤ C < 2 % - Skin Corr. 1A; H314: C ≥ 5 % - Skin Corr. 1B;  
 H314: 2 % ≤ C < 5 % - Skin Irrit. 2; H315: 0,5 % ≤ C < 2 %

Indice No.: 011-002-00-6

Substance name: *D-mannitol*  
 CAS No.: 69-65-8

Substance rating: No criteria for classification or naming of chemical not required.  
 Formula:  $\text{C}_6\text{H}_{14}\text{O}_6$   
 Pseudonym (de): Mannitol  
 REACH Reg. No.: exempt, Annex IV  
 EC No.: 200-711-8  
 Concentration: 80 - <100 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.





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## 5.2 Special hazards arising from the substance or mixture

Formation of hazardous and caustic vapour-air mixtures possible.

## 5.3 Advice for firefighters

No, for listed product. Product package burns like paper or plastic. Spray any vapours released with water. Retent fire water. Use only acid-resistant safety equipment.

For great amount - if necessary - protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

## 5.4 Additional information

Danger for environment **only in the event of a large-scale leakage** or formation of hazardous substances.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Wear suitable protective gloves (see 8.2.2). Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

### 6.2 Environmental precautions

Should not be released into the environment.

**PBT:** not applicable

**vPvB:** not applicable

### 6.3 Methods and material for containment and cleaning up

Bind any escaping liquid with inert absorbent. And dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water.

Collect small amounts of leaked liquid and flush with water into drains.

### 6.4 Reference to other sections

see information in section 5.4,7,8 and 13

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product. Use a safety bottle when shaking test tubes.

### 7.2 Conditions for safe storage, including any incompatibilities

Safe storage is guaranteed in the original packaging from MACHEREY-NAGEL. Products which are also classified as toxic must be kept under lock and key. Storage class (German chemical industry): see chapter 12.1

**Storage class (VCI):** 6.1B

**Water hazard class (DE):** 3

### 7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage, so that they are not immediately accessible to outside parties. Use inbreakable container for transport of glass bottles.

### 7.3 Specific end use(s)

Product for analytical use.

## SECTION 8: Exposure controls /personal protection

### 8.1 Control parameters

#### 5 mL Zinc 6 (R3)

Chemical: *chloral hydrate*

CAS No.: 302-17-0

NIOSH: not listed

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

OSHA: not listed

#### 20x 10 mg NANOFIX Zinc 6 (R2)

Chemical: *D-mannitol*

CAS No.: 69-65-8

Chemical: *sodium hydroxide solution*

CAS No.: 1310-73-2



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Chemical: *polyvinylpyrrolidone* CAS No.: 9003-39-8

Chemical: *4-(2-pyridylazo)resorcinol* CAS No.: 1141-59-9

**4 mL Zinc 6 (R1) (R0)**

Chemical: *trisodium citrate dihydrate* CAS No.: 6132-04-3

Chemical: *sodium carbonate* CAS No.: 497-19-8

DNEL: 10 inh mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): -  
E/e respirable

Chemical: *boric acid* CAS No.: 10043-35-3

DNEL: [derm] 392 mg/kg bw/day; [inh] 8.3 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 2.9 mg/L  
PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 0.5 E mg/m<sup>3</sup>  
E/e respirable

Short-term exposure factor: 2 (I), Y  
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: [Bor][MAK] 1,8e/[STEL] 1,8e mg/m<sup>3</sup>

NIOSH: not listed

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

OSHA: not listed

## 8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

### 8.2.1 Respiratory protection

No additional recommendations.

### 8.2.2 Skin protection / Hand protection

Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC, natural latex, Neopren, or Nitril (f.ex. from Ansell or KCL). Use for short times chemical resistant latex gloves with code EN 374-3 level 1.

### 8.2.3 Eye / Face Protection

Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection.

### 8.2.4 Skin protection

Recommended to avoid contamination with these hazards.

### 8.2.5 Personal hygiene

Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

### 8.2.6 Thermal hazards

no data available

## 8.3 Limitation and monitoring of environmental exposure

Do not release product into environment.

# SECTION 9: Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

**5 mL Zinc 6 (R3)**

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	alcoholic
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	no data available



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l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient (K <sub>o/w</sub> ):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

**20x 10 mg NANOFIX Zinc 6 (R2)**

a) State of aggregation:	solid
b) Colour:	yellow
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	no data available
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient (K <sub>o/w</sub> ):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

**4 mL Zinc 6 (R1) (R0)**

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	no data available
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient (K <sub>o/w</sub> ):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

**9.2 Other information**

**9.2.1 Information on physical hazard classes**  
no data available

**9.2.2 Other safety-related parameters**  
No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.



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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no further data available.

### 10.2 Chemical stability

no known instability.

### 10.3 Possibility of hazardous reactions

No further data available.

### 10.4 Conditions to avoid

Observe the storage temperature printed on it. No more required.

### 10.5 Incompatible materials

no additional data available

### 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 the hazard classes according regulation (EC) 1272/2008

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

#### 5 mL Zinc 6 (R3)

Chemical: *chloral hydrate* CAS No.: 302-17-0  
 TSCA Inventory: listed California Proposition 65 List: listed, cancer  
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes  
 Japan CSCL/PRTR: not listed, Japan PDSCL: not listed  
 Japan ISHL: not listed  
 South Korea TCCA: not listed  
 Korea Exist.Chem.Inventory: KE-34070  
 LD50 orl rat : 479 mg/kg  
 LC<sub>LoW</sub> orl hmn : 4 mg/kg  
 LD50 ihl rat : 3030 mg/L  
 Acute Effects: Cause severe after oral intake, impairments of health or can lead to death even when only ingested in small quantities.

#### 20x 10 mg NANOFIX Zinc 6 (R2)

Chemical: *D-mannitol* CAS No.: 69-65-8  
 TSCA Inventory: listed  
 Korea Exist.Chem.Inventory: KE-23061  
 LD50 orl rat : 13500 mg/kg  
 LD50 orl mus : 22000 mg/kg

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 Exposure Routes: inhalation, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system  
 Symptoms: -  
 Japan CSCL/PRTR: not listed, Japan PDSCL: not listed  
 Japan ISHL: listed ≥1,0%/≥1,0% SDS required  
 Korea Exist.Chem.Inventory: KE-31487  
 LD50 orl rat : [
 LD50 orl mus : [

Chemical: *polyvinylpyrrolidone* CAS No.: 9003-39-8  
 TSCA Inventory: listed  
 Korea Exist.Chem.Inventory: KE-13324  
 LD50 orl rat : > 2000 mg/kg



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Chemical: *4-(2-pyridylazo)resorcinol* CAS No.: 1141-59-9

**4 mL Zinc 6 (R1) (R0)**

Chemical: *trisodium citrate dihydrate* CAS No.: 6132-04-3  
 TSCA Inventory: listed (CAS 68-04-2)  
 Korea Exist.Chem.Inventory: KE-20843  
 LD50 orl rat : > 8000 mg/kg

Chemical: *sodium carbonate* CAS No.: 497-19-8  
 TSCA Inventory: listed  
 Korea Exist.Chem.Inventory: KE-31380  
 LD50 orl rat : 4090 mg/kg  
 LC<sub>Low</sub> orl rat : 4000 mg/kg  
 LC50 ihl rat : 2,300 mg/L/2H

Chemical: *boric acid* CAS No.: 10043-35-3  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 Australia NICNAS: not listed Canada CEPA 1999: DSL yes  
 Japan CSCL/PRTR: PRTR: ≥1,0%B class I, Japan PDSCL: not listed  
 Japan ISHL: not listed  
 South Korea TCCA: not listed  
 Korea Exist.Chem.Inventory: KE-03499  
 LD50 orl rat : > 3765 mg/kg  
 LC50 ihl rat : 2,12 mg/L/4H

Carcinogenic Effects: May damage fertility. May damage the unborn child.  
 EU carcinogen: R<sub>D</sub> 1B, R<sub>F</sub> 1B  
 TRGS 905 (DE): R<sub>E</sub> 2, R<sub>F</sub> 2

## 11.2 Other hazards

**Possible endocrine disrupting effects**  
 no data available

**Other information**  
 no additional data available

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

**5 mL Zinc 6 (R3)**

Substance name: *chloral hydrate* CAS-Nr.: 302-17-0  
 Do not release into the environment.  
 Water hazard class (DE): 2 WGK No.: 0051  
 Storage class (VCI): 6.1 D

**20x 10 mg NANOFIX Zinc 6 (R2)**

Substance name: *D-mannitol* CAS-Nr.: 69-65-8  
 Storage class (VCI): 11

Substance name: *sodium hydroxide solution* CAS-Nr.: 1310-73-2  
 LC50 leuciscus idus/96h : 35-189 mg/L  
 LC50 fish/96h : 45.4 mg/L  
 EC50 daphnia/48h : >100 mg/L  
 Water hazard class (DE): nwg WGK No.: 0142  
 Storage class (VCI): 12-13

Substance name: *polyvinylpyrrolidone* CAS-Nr.: 9003-39-8  
 Water hazard class (DE): 1  
 Storage class (VCI): 10-11



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Substance name: *4-(2-pyridylazo)resorcinol* CAS-Nr.: 1141-59-9

**4 mL Zinc 6 (R1) (R0)**

Substance name: *trisodium citrate dihydrate* CAS-Nr.: 6132-04-3  
 LC50 fish/96h : 18-32 g/L  
 EC50 daphnia/48h : 5.6-10 g/L  
 EC50 chlorella vulgaris/5d : >18-32 g/L  
 EC10 pseudomonas putida/16h : EC50 ps. fluorescens/8h : >1.8-3.2 g/L  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

Substance name: *sodium carbonate* CAS-Nr.: 497-19-8  
 LC50 fish/96h : 300 mg/L  
 EC50 daphnia/48h : 265 mg/L  
 Water hazard class (DE): 1 WGK No.: 0222  
 Storage class (VCI): 12-13

Substance name: *boric acid* CAS-Nr.: 10043-35-3  
 PNEC (fresh water) : 2.9 mg/L  
 PNEC = Predicted No Effect Concentration = concentration at which no effect on the environment is expected  
 LC50 fish/96h : [4d] 79.7 mg/L  
 EC50 daphnia/48h : 91-165 mg/L  
 IC50 scenedesmus quadricauda/72h : [72h] 52.4 mg/L  
 EC10 pseudomonas putida/16h : [EC10] 10 mg/L  
 Water hazard class (DE): 1 WGK No.: 0315  
 Storage class (VCI): 6.1 D

**12.2 Persistence and degradability**

**12.3 Bioaccumulative potential**

Substance name: *boric acid* CAS-Nr.: 10043-35-3  
 Dispersion coefficient (K<sub>ow</sub>): -1,09

**12.4 Mobility in soil**

**12.5 Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Endocrine disrupting properties**

no data available

**12.7 Other adverse effects**

no additional data available

**SECTION 13: Disposal considerations**

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06). Close container tightly.

**13.1 Waste treatment methods**

Not necessary, see above.

**SECTION 14: Transport information**

14.1 - 14.4 Not necessary

**14.5 Environmental hazards**

none, contains only small quantities of hazardous substances

**14.6 Special precautions for user**



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not necessary

## 14.7 Carriage in bulk by sea in accordance with IMO instruments

Not applicable.

## SECTION 15: Regulatory information

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

Chemicals Prohibition Ordinance - (DE: ChemVerbotsV), aktualisiert Jan 2017  
 Dangerous Substances Protection Act (DE: Chemikaliengesetz - ChemG), Aug 2013, Stand: Okt 2020  
 Ordinance on protection against dangerous substances (E: Gefahrstoffverordnung - GefStoffV), Nov 2010, Stand: Mrz 2017  
 TRGS 201, Classification and labeling of activities involving hazardous substances, Feb 2017  
 TRGS 220, National aspects when preparing safety data sheets, Jan 2017  
 TRGS 400, Risk assessment for activities involving hazardous substances, Jul 2017  
 BekGS 408, Application of the GefStoffV and the TRGS with the entry into force of the CLP regulation, December 2009, status: Jan 2012  
 TRGS 500, Protective measures, Mai 2008  
 TRGS 510, Storage of hazardous substances in portable containers from March 2013, status: Oct 2015  
 Wasserhaushaltsgesetz - WHG, Section 3 Handling substances hazardous to water, Jul 2009, status: Aug 2016  
 MN leaflet/instructions for use, also at [www.mn-net.com](http://www.mn-net.com)  
 If necessary, observe other country-specific regulations.

### 15.2 Chemical safety assessment

not necessary for these small amounts

## SECTION 16: Other information

### 16.1 Changes compared to the last version

Between versions 2.2.2.7 and 2.2.2.2 following changes were applied: - 5 substance data corrected

### 16.2 List of H and P phrases

#### 16.2.1 List of relevant H phrases

H Between versions 2.2.2.7 and 2.2.2.2 following changes were applied: - 5 substance data corrected  
 H301 Toxic if swallowed.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H360FD May damage fertility. May damage the unborn child.

#### 16.2.2 List of relevant P phrases

P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P264 Wash hands thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P280sh Wear protective gloves/eye protection.  
 P301+310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
 P330 Rinse mouth.  
 P405 Store locked up.  
 P501 Dispose of contents/container to regulated waste treatment.

### 16.3 Recommended restriction on use

Only for professional user.  
 Look about employee restrictions for young people (f. ex. 94/33/EC or DE § 22 JArbSchG)!  
 Look about employee restrictions for pregnant women and nursing women (f.ex. 92/85/EEC or for DE §§ 11-13 MuSchG 2017)!  
 An individual package of this product or test kit has a moderate hazardous potential.

### 16.4 Sources of key data

KÜHN, BIRETT, Leaflets on hazardous materials, 2021  
 Directive 1999/92/EG Minimum requirements to improve the safety and health protection of workers at risk from potentially explosive atmospheres  
 Directive 2004/37/EC on the protection of workers from the risk of carcinogens or mutagens at workSUVA .CH, limit values in the air at work 2009, revised on 01/2009  
 Regulation 790/2009/EU, adaptation of Regulation 1272/2008/EU to technical and scientific progress (1st ATP)  
 Regulation 453/2010/EU, adaptation of the REACH regulation 1907/2006/EG  
 Regulation 487/2013/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (4th ATP)  
 Regulation 1221/2015/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (7th ATP)  
 Regulation 776/2017/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (10th ATP)  
 TRGS 905, German rules of technology for carcinogenic and mutagenic substances, as of March 18, 2016  
 Regulation 669/2018/EU, adaptation of Regulation 1272/2008/EC to technical and scientific progressText (11th ATP)



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Regulation 1480/2018/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (13th ATP)  
 Regulation 521/2019/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (12th ATP)  
 TRGS 900, German rules of technology on limit values in the air at work, as of 03/2019  
 Regulation 217/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (14th ATP)  
 Regulation 878/2020/EU, adaptation of Annex II of the REACH regulation 1907/2006/EG  
 Regulation 1182/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (15th ATP)  
 Regulation 643/2021/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (16th ATP)  
 Regulation 849/2021/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (17th ATP)  
 Regulation 692/2022/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (18th ATP)

**revisions/updates**

*Reason for revision:* 2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary  
 2014-04 adjustment according Regulation 487/2013/EU  
 2016-03 adjustment according Regulation 1221/2015/EU  
  
 2017-11 adjustment according the ECHA registration dossier  
 2022-11 adjustment according Regulation 878/2020/EU

**16.5 Further information**

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**16.6 Legend / Abbreviations**

- acc: according
- ADR: Convention concerning the International Carriage of Dangerous Goods by Road
- Act: acute
- BAT: biological workplace tolerance value
- CAO: Cargo Aircraft Only
- Carc: carcinogen
- CAS: Chemical Abstracts Service
- CLP: Classification, Labelling and Packaging regulation
- CMR: carcinogen, mutagen, reproduction toxic
- Corr: corrosive
- COD: chemical oxygen demand
- CSCL: Chemical Substance Control Law (Jp)
- Dam: damage
- DNEL: Derived No-Effect Level (for workers)
- derm: dermal
- dog: dog
- EC10: Concentration causing a toxic effect in 10% of the test organisms
- EC: European Community
- EC-Nr: Substance number of the EC substance inventory
- EmS: Guide to accident management measures on ships
- EU: European Union
- fish: fish (not specified)
- GHS: Global Harmonized System of Classification and Labeling of Chemicals
- gpg: guinea pig
- ICAO: International Civil Aviation Organization
- ihl: inhaled
- IMDG: International Maritime Dangerous Goods Code
- intrav: intravenous
- ipt: intraperitoneal
- ISHL: Industrial Safety and Health Law (Jp)
- LC50: letale concentration 50%
- LD50: letale dosis 50%
- leuciscus idus: fisch, ide, orfe
- MAK: maximum workplace concentration
- Met: Metall
- mus: mouse
- Muta: mutagen
- NIOSH: National Institute for Occupational Safety and Health (US)
- NRD: Non-rapidly degradable



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- onchorhynchus mykiss: fish, rainbow trout
- orl: oral
- OSHA: Occupational Safety and Health Administration
- PAX: transport on passenger planes allowed
- PBT: persistent, bioaccumulating, toxic substance
- pH: pH value
- pimephales promelas: fish, fathead minnow
- PNEC: Predicted No Effect Concentration
- PROC 15: Process category 'for laboratory use'
- PRTR: Law for PRTR and Promotion of Chemical Management (Jp)
- PVC: polyvinyl chloride
- quail: bird, quail
- rat: rat
- rbt: rabbit
- RD: rapidly degradable
- RE: repeated
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- REF: item number, reference number
- Reg.No.: rRegistration number
- Repr: harmful to reproduction
- Resp: respiratory
- RIP: REACH Implementations Projects
- scu: sub cutan
- SDS: safety data sheet
- Sens: sensitisation
- STEL: short term exposure limit
- STOT: Specific Target Organ Toxicity
- SVHC: Substance of Very High Concern
- t/a: tons per year
- TCCA: Toxic Chemicals Control Act (S. Korea)
- Tox: toxic
- TSCA: The Toxic Substances Control Act (US)
- TWA: time weighted average
- TRGS: technical regulations (DE)
- vPvB: very persistent, very bioaccumulating substance

## 16.7 Training advice

Regular safety training. Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.

