

Safety Data Sheet

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

REF: 985042	NANOCOLOR Zinc 6	Page: 1/14
Printing date: 12.01.2023	Date of issue: 15.06.2022	Version: 2.2.2.4

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>>

Lieferant / supplier:
 Carl Roth GmbH + Co KG
 Schöpperlenstr. 3-5
 76185 Karlsruhe, Germany
 +49 721 5606 0
 sicherheit@carlroth.de

SECTION 2: Hazard identification

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



GHS06 GHS07 GHS08

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

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

4 mL Zinc 6 (R1) (R0)



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GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H360FD	Repr. 1B

20x 10 mg NANOFIX Zinc 6 (R2)

Signal word Do not need labelling as hazardous
-

No hazard class

5 mL Zinc 6 (R3)



GHS06



GHS07

Signal word DANGER

Hazard identification	Hazard classes/categories
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)



GHS08

Signal word: DANGER
H360FD
May damage fertility. May damage the unborn child.
P201, P280sh, P405
Obtain special instructions before use. Wear protective gloves/eye protection. Store locked up.

20x 10 mg NANOFIX Zinc 6 (R2)

Do not need labelling as hazardous
Signal word: -

5 mL Zinc 6 (R3)



GHS06



GHS07



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Signal word: DANGER
H301
Toxic if swallowed.
P280sh, P301+310, P405
Wear protective gloves/eye protection.IF SWALLOWED: Immediately call a POISON CENTER/ doctor.Store locked up.

Label elements of the complete product



Signal word: DANGER
H301, H360FD
Toxic if swallowed.May damage fertility. May damage the unborn child.
P201, P280sh, P301+310, P405
Obtain special instructions before use.Wear protective gloves/eye protection.IF SWALLOWED: Immediately call a POISON CENTER/ doctor.Store locked up.

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

Avoid contact of substance/mixture to 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

5 mL Zinc 6 (R3)

Substance name: *chloral hydrate*
CAS No.: 302-17-0

Substance rating: H301, Acute Tox. 3 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2
Formula: $C_2H_3Cl_3O_2 \cdot H_2O$
Pseudonym (de): Trichloroacetaldehydhydrat
REACH Reg. No.: -
EC No.: 206-117-5
Concentration: 10 - <20 %
acc. CLP (GHS): H301, Acute Tox. 3 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2

Indice No.: 605-014-00-6

20x 10 mg NANOFIX Zinc 6 (R2)

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

Substance rating: No criteria for classification or naming of chemical not required.
Formula: $C_6H_{14}O_6$
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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Substance name: *sodium hydroxide solution*
 CAS No.: 1310-73-2

Substance rating: H314, Skin Corr. 1A
 Formula: NaOH·H₂O
 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.

Indice No.: 011-002-00-6

Substance name: *polyvinylpyrrolidone*
 CAS No.: 9003-39-8

Substance rating: No criteria for classification or naming of chemical not required.
 Formula: (C₆H₉NO)_n
 EC No.: 201-800-4
 Concentration: 10 - <20 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

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

Substance rating: H315, Skin Irrit. 2, H319, Eye Irrit. 2, H335, STOT SE 3
 Formula: (HO)₂C₆H₃N=NC₅H₄N
 EC No.: 214-528-6
 Concentration: 0,01 - <10 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

4 mL Zinc 6 (R1) (R0)

Substance name: *tri-sodium citrate*
 CAS No.: 6132-04-3

Substance rating: No criteria for classification or naming of chemical not required.
 Formula: C₆H₅Na₃O₇·2H₂O
 Pseudonym (de): Na-citrat, E331
 REACH Reg. No.: 01-2119457027-40-xxxx
 EC No.: 200-675-3
 Concentration: 1 - <10 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

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

Substance rating: H319, Eye Irrit. 2
 Formula: Na₂CO₃
 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



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

3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%. List of H and P phrases: see section 16.2.

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice. Remove contaminated clothing. Show product package, packing insert and this material safety data sheet to the doctor.

4.1.1 After SKIN Contact

Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

4.1.2 After EYE Contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

4.1.3 After INHALATION of vapours

After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. If vomiting and if insensible place patient in recovery position and keep airways free. ---

4.1.4 After ORAL Intake

After oral intake lots of water with activated charcoal supplement should be drunk after it has been ingested.

4.2 Most important symptoms and effects, both acute and delayed

CMR Effekte:

4.3 Indication of any immediate medical attention and special treatment needed

TOXIFICATION: Treat symptomatically. Secure the breathing, heart and circulatory function. Remove the substance quickly from the body. Mechanically induce vomiting or ensure the patient eats medicinal charcoal compressed tablets or drinks aluminium oxide drug suspensions. In order to ensure rapid passage through the colon (administer 2 tablespoons of dissolved Glauber's salt). Alleviation of pain, if necessary sedation. Shock treatment. Administer a prophylaxis to counter pulmonary oedema. ---

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.1.1 Suitable 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.

5.1.2 Unsuitable extinguishing media

no data available

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.



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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

Avoid contact of substance/mixture to 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 . 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

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

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

4 mL Zinc 6 (R1) (R0)

Chemical: *tri-sodium citrate* CAS No.: 6132-04-3

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

DNEL: 10 inh mg/m³

DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): -
E/e respirable



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Chemical: *boric acid* CAS No.: 10043-35-3
 DNEL: [derm] 392 mg/kg bw/day; [inh] 8.3 mg/m³
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/m³
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/m³
 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
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient (o/w):	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



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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 (o/w):	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 (o/w):	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

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.

Properties relevant to substance groups

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



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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_Low 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 : [$< 1\%$] > 50000 mg/kg
 LD50 orl mus : [$< 1\%$] > 4000 mg/kg

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

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

4 mL Zinc 6 (R1) (R0)

Chemical: *tri-sodium citrate* 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_Low orl rat : 4000 mg/kg
 LC50 ihl rat : 2,300 mg/L/2H



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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_D 1B, R_F 1B
 TRGS 905 (DE): R_E 2, R_F 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)

Chemical: *chloral hydrate* CAS No.: 302-17-0
 Water hazard class (DE): 2 WGK No.: 0051
 Storage class (VCI): 6.1 D

20x 10 mg NANOFIX Zinc 6 (R2)

Chemical: *D-mannitol* CAS No.: 69-65-8
 Storage class (VCI): 11

Chemical: *sodium hydroxide solution* CAS No.: 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

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

Water hazard class (DE): 1
 Storage class (VCI): 10-11

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

4 mL Zinc 6 (R1) (R0)

Chemical: *tri-sodium citrate* CAS No.: 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

Chemical: *sodium carbonate* CAS No.: 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

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

PNEC (fresh water) : 2.9 mg/L
 PNEC = Predicted No Effect Concentration
 LC50 fish/96h : [4d] 79.7 mg/L



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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
Dispersion coefficient (o/w) :	-1,09
Storage class (VCI):	6.1 D

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

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

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

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
 If necessary, observe other country-specific regulations.



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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 2.2.2.4 and 2.2.2.2 following changes were applied: - 2 substance data corrected

16.2 List of H and P phrases

16.2.1 List of relevant H phrases

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.
P280sh	Wear protective gloves/eye protection.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P405	Store locked up.

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)

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)

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:	lethal concentration 50%
LD50:	lethal dose 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
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



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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.



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