

Safety Data Sheet

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

REF: 931098

VISOCOLOR ECO Zinc

Page: 1/14

Printing date: 12.01.2023

Date of issue: 30.09.2022

Version: 2.2.2.2

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

1.1 Product identifier

REF 931098
Product name VISOCOLOR ECO Zinc

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 16 mL Zn-1 UFI: 9C7U-V3MR-K20Q-F7F7
1 x 12 mL Zn-2
1 x 27 mL Zn-3 UFI: EUFU-W3P9-720R-0X4U

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
Valenciennner 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



GHS06 GHS07 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H301	Acute Tox. 3 oral
H312	Acute Tox. 4 derm.
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H332	Acute Tox. 4 inh.
H360FD	Repr. 1B
EUH031	031 not defined

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

16 mL Zn-1



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Safety Data Sheet

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

REF: 931098

VISOCOLOR ECO Zinc

Page: 2/14

Printing date: 12.01.2023

Date of issue: 30.09.2022

Version: 2.2.2.2



GHS07



GHS08

Signal word

DANGER

Hazard identification

Hazard classes/categories

EUH031
H312
H332
H360FD

031 not defined
Acute Tox. 4 derm.
Acute Tox. 4 inh.
Repr. 1B

27 mL Zn-3



GHS06



GHS07

Signal word

DANGER

Hazard identification

Hazard classes/categories

H301
H315
H319

Acute Tox. 3 oral
Skin Irrit. 2
Eye Irrit. 2

12 mL Zn-2

Signal word

Do not need labelling as hazardous
-

No hazard class

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). 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).

16 mL Zn-1



GHS07



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.

27 mL Zn-3



GHS06



GHS07

Safety Data Sheet

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

REF: 931098

VISOCOLOR ECO Zinc

Page: 3/14

Printing date: 12.01.2023

Date of issue: 30.09.2022

Version: 2.2.2.2

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.

12 mL Zn-2

Do not need labelling as hazardous

Signal word: -

Label elements of the complete product



GHS06



GHS08

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. Cause after inhalation of vapours/dust, impairments of health when 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

16 mL Zn-1

Substance name: *sodium tetraborate*
CAS No.: 12267-73-1

Substance rating: H319, Eye Irrit. 2, H360FD, Repr. 1B

Formula: $\text{Na}_2\text{B}_4\text{O}_7$

Pseudonym (de): Borax, Dinatriumtetraborat

REACH Reg. No.: 01-2119490790-32-xxxx

SVHC listed: listed (18/06/2010) Cand. Lst. REACH Art59(10)

EC No.: 215-540-4

Indice No.:

005-011-00-4

Concentration: 1 - <4,5 %

acc. CLP (GHS): H360FD, Repr. 1B

Safety Data Sheet

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

REF: 931098	VISOCOLOR ECO Zinc	Page: 4/14
Printing date: 12.01.2023	Date of issue: 30.09.2022	Version: 2.2.2.2

Substance name: *boric acid*
CAS No.: 10043-35-3

Substance rating: H360FD, Repr. 1B
Formula: H_3BO_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: 0,5 - <5,5 %
acc. CLP (GHS): H360FD, Repr. 1B

Substance name: *potassium cyanide*
CAS No.: 151-50-8

Substance rating: H300, Acute Tox. 1 oral, H310, Acute Tox. 1 derm., H330, Acute Tox. 1 inh., H410, Aquatic Chronic 1, EUH032, not defined
Formula: KCN
Pseudonym (de): Cyankali
REACH Reg. No.: 01-2119486407-29-xxxx
EC No.: 205-792-3 Indice No.: 006-007-00-5
Concentration: 0,1 - <1 % Correlation factor: x 0.40 (= %CN -)
The classification refers to the weight percentage of the metal (according to CLP regulation 2008/1272/EG Annex VI, 1.1.3.2 Note 1)
acc. CLP (GHS): H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H332, Acute Tox. 4 inh., EUH031, 031 not defined

12 mL Zn-2

Substance name: *dimethyl sulfoxide*
CAS No.: 67-68-5

Substance rating: No criteria for classification or naming of chemical not required.
Formula: C_2H_6OS
Pseudonym (de): DMSO
REACH Reg. No.: 01-2119431362-50-xxxx
EC No.: 200-664-3
Concentration: 80 - <100 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: *Zincon*
CAS No.: 62625-22-3

Substance rating: H315, Skin Irrit. 2, H319, Eye Irrit. 2
Formula: $C_{20}H_{15}N_4NaO_6S \cdot H_2O$
Pseudonym (de): 2-[[a-(2-Hydroxy-5-sulfophenylazo)-benzyliden]-hydrazino]benzoesäure, Na-Salz
EC No.: 263-651-1
Concentration: 0,1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

27 mL Zn-3

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 Indice No.: 605-014-00-6
Concentration: 10 - <20 %
acc. CLP (GHS): H301, Acute Tox. 3 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2

Safety Data Sheet

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

REF: 931098

VISOCOLOR ECO Zinc

Page: 5/14

Printing date: 12.01.2023

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Version: 2.2.2.2

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.

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.

Safety Data Sheet

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

REF: 931098	VISOCOLOR ECO Zinc	Page: 6/14
Printing date: 12.01.2023	Date of issue: 30.09.2022	Version: 2.2.2.2

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.

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

16 mL Zn-1

Chemical: sodium tetraborate

CAS No.: 12267-73-1

TRGS 900 (DE): [B] 0.5 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: [als B][MAK] 0,8e*/[STEL] 0,8e* mg/m³

NIOSH: not listed ppm

[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 ppm

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

Chemical: potassium cyanide

CAS No.: 151-50-8

EU value: CN: [TWA] 1 / [STEL] 5 mg/m³

TRGS 900 (DE): [CN 8h] 1 / [15min] 5 mg/m³

E/e respirable

Short-term exposure factor: (4), H

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

SUVA(CH) MAK value: 5 CN e mg/m³

NIOSH: not listed

NIOSH STEL: skin, HCN 4.7 ppm / 5 mg/m³



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

REF: 931098

VISOCOLOR ECO Zinc

Page: 7/14

Printing date: 12.01.2023

Date of issue: 30.09.2022

Version: 2.2.2.2

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

OSHA: EPCRA/SARA Section 302 Extremely Hazardous Substances Yes (TPQ = 100 lbs) n/a; TWA_{skin}, HCN
10 ppm / 11 mg/m³

12 mL Zn-2

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

Chemical: *Zincon*

CAS No.: 62625-22-3

27 mL Zn-3

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

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

16 mL Zn-1

a) State of aggregation:

liquid

b) Colour:

colourless

c) Odor:

bitter almond

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:

10,5-11,5

l) Kinematic viscosity:

no data available



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REF: 931098

VISOCOLOR ECO Zinc

Page: 8/14

Printing date: 12.01.2023

Date of issue: 30.09.2022

Version: 2.2.2.2

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

12 mL Zn-2

a) State of aggregation:	liquid
b) Colour:	slightly yellow
c) Odor:	fusty, mouldy
d) Melting point:	18 °C
e) Boiling point:	189 °C
f) Flammability:	no data available
g) Explosive limits (lower / upper):	1.8 ...63 g/m³
h) Flash point:	87 (95) °C
i) Flashing temperature:	270...300 °C
j) Decomposition temperature:	no data available
k) pH value:	7
l) Kinematic viscosity:	no data available
m) Solubility in water:	0-100 %
n) Dispersion coefficient (o/w) :	no data available
o) Vapour pressure (20°C):	0.6
p) Specific gravity:	1,10 g/cm3
q) Relative vapour density (air=1) :	2,7
r) Particle size:	no data available

27 mL Zn-3

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	chloric
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:	5-6
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.



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

REF: 931098	VISOCOLOR ECO Zinc	Page: 9/14
Printing date: 12.01.2023	Date of issue: 30.09.2022	Version: 2.2.2.2

10.3 Possibility of hazardous reactions

Possible: &H:EUH031& No further data available.

10.4 Conditions to avoid

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.

16 mL Zn-1

Chemical:	<i>sodium tetraborate</i>	CAS No.: 12267-73-1
TSCA Inventory:	not listed	California Proposition 65 List: not listed
Australia NICNAS:	not listed	Canada CEPA 1999: not listed
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-33255	
LD50 orl rat :	2660 mg/kg	

Carcinogenic Effects: May damage fertility. May damage the unborn child.
EU carcinogen: R_D 1B, R_F 1B

Chemical:	<i>boric acid</i>	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

Chemical:	<i>potassium cyanide</i>	CAS No.: 151-50-8
TSCA Inventory:	listed	California Proposition 65 List: not listed
Target Organs:	act on blood or hemato-poietic system: decrease hemoglobin function; deprive body tissues of oxygen	
Symptoms:	cyanosis; loss of consciousness	
Australia NICNAS:	not listed	Canada CEPA 1999: DSL Yes
Japan CSCL/PRTR:	Poisonous substance, PRTR: ≥1,0% CN class I, Japan PDSCL: Poisonous Substance	
Japan ISHL:	listed ≥1,0%/≥1,0%, Article 57-1+2 (Labelling&SDS required)	
South Korea TCCA:	not listed	
Korea Exist.Chem.Inventory:	KE-29092, >1% Toxic 97-1-90	
LD50 orl rat :	5 mg/kg	
LC _{Low} orl hmn :	2,86 mg/kg	
LD50 orl mus :	8,5 mg/kg	
LD50 scu rat :	7,8 mg/kg	
Acute Effects:	Cause after oral intake, inhalation of vapours/dust, skin contact, impairments of health when ingested in small quantities.	
TRGS 905 (DE):	R _F C	

12 mL Zn-2

Chemical:	<i>dimethyl sulfoxide</i>	CAS No.: 67-68-5
TSCA Inventory:	listed	
Korea Exist.Chem.Inventory:	KE-32367	
LD50 orl rat :	14500 mg/kg	



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Safety Data Sheet

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REF: 931098

VISOCOLOR ECO Zinc

Page: 10/14

Printing date: 12.01.2023

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Version: 2.2.2.2

Chemical: *Zincon*
TSCA Inventory: listed
LD50 orl rat : > 2000 mg/kg

CAS No.: 62625-22-3

27 mL Zn-3

Chemical: *chloral hydrate*
TSCA Inventory: listed
Australia NICNAS: not listed
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

CAS No.: 302-17-0
California Proposition 65 List: listed, cancer
Canada CEPA 1999: DSL Yes

Acute Effects: Cause severe after oral intake, impairments of health or can lead to death even when only ingested in small quantities.

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.

16 mL Zn-1

Chemical: *sodium tetraborate*
LC50 fish/96h : 74 mg/L
EC50 daphnia/48h : 242 24h mg/L
IC50 scenedesmus quadricauda/72h : EC10/96h: 24 mg/L
Water hazard class (DE): 1 WGK No.: 0037
Storage class (VCI): 6.1 D

CAS No.: 12267-73-1

Chemical: *boric acid*

PNEC (fresh water) : 2.9 mg/L
PNEC = Predicted No Effect Concentration
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
Dispersion coefficient (o/w) : -1,09
Storage class (VCI): 6.1 D

CAS No.: 10043-35-3

Chemical: *potassium cyanide*

LC50 daphnia magna/48h : 2 48h ; 0.53 24h mg/L
LC50 fish/96h : 0.45 mg/L
EC50 daphnia/48h : 0.041 mg/L
IC50 scenedesmus quadricauda/72h : 0.03 8d mg/L
EC10 pseudomonas putida/16h : EC10/16h: 0.001 mg/L
Water hazard class (DE): 3 WGK No.: 338
Storage class (VCI): 6.1 B

CAS No.: 151-50-8

12 mL Zn-2

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

CAS No.: 67-68-5



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Safety Data Sheet

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

REF: 931098

VISOCOLOR ECO Zinc

Page: 11/14

Printing date: 12.01.2023

Date of issue: 30.09.2022

Version: 2.2.2.2

EC10 *pseudomonas putida*/16h : EC/16h: 7100 mg/L
Water hazard class (DE): 1 WGK No.: 5050
Dispersion coefficient (o/w) : -1,35
Storage class (VCI): 12

Chemical: *Zincon* CAS No.: 62625-22-3
Water hazard class (DE): 3
Storage class (VCI): 12-13

27 mL Zn-3
Chemical: *chloral hydrate* CAS No.: 302-17-0
Water hazard class (DE): 2 WGK No.: 0051
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

Do not collect in acidic waste. May form toxic gases.

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

Normally it is possible to empty small amounts (diluted!) into drains.
Dispose of contents/container to regulated waste treatment.

SECTION 14: Transport information

14.1 - 14.4: No dangerous goods according the transport regulations

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



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REF: 931098

VISOCOLOR ECO Zinc

Page: 12/14

Printing date: 12.01.2023

Date of issue: 30.09.2022

Version: 2.2.2.2

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.

15.2 Chemical safety assessment

not necessary for these small amounts

SECTION 16: Other information

16.1 Changes compared to the last version

in preparation

16.2 List of H and P phrases

16.2.1 List of relevant H phrases

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H360FD	May damage fertility. May damage the unborn child.
EUH031	Contact with acids liberates toxic gas.

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



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

REF: 931098
Printing date: 12.01.2023

VISOCOLOR ECO Zinc
Date of issue: 30.09.2022

Page: 13/14
Version: 2.2.2.2

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
onchorhynchus mykiss: fisch, 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: fisch, 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

Safety Data Sheet

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

REF: 931098	VISOCOLOR ECO Zinc	Page: 14/14
Printing date: 12.01.2023	Date of issue: 30.09.2022	Version: 2.2.2.2

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.