

Safety Data Sheet

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

REF: 931098	VISOCOLOR ECO Zinc	Page: 1/10
Printing date: 01.10.2019	Date of issue: 21.06.2018	

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

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
 1 x 12 mL Zn-2
 1 x 27 mL Zn-3

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

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

Uses advised against
 not described

1.3 Details of the supplier of the safety data sheet

Manufactured by:
 MACHEREY-NAGEL GmbH & Co. KG
 Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY
 Tel.: +49 2421 969 0 E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 Emergency telephone number

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

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

SECTION 2: Hazard identification

2.0 Classification of the complete product



GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
EUH031	031 not defined
H302	Acute Tox. 4 oral
H312	Acute Tox. 4 derm.
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H332	Acute Tox. 4 inh.

2.1 Classification of the substance or mixture

16 mL Zn-1

Safety Data Sheet

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

REF: 931098

VISOCOLOR ECO Zinc

Page: 2/10

Printing date: 01.10.2019

Date of issue: 21.06.2018



GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

EUH031
H302
H312
H332

031 not defined
Acute Tox. 4 oral
Acute Tox. 4 derm.
Acute Tox. 4 inh.

12 mL Zn-2

Signal word

Do not need labelling as hazardous

No hazard class

-

27 mL Zn-3



GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H302
H315
H319

Acute Tox. 4 oral
Skin Irrit. 2
Eye Irrit. 2

2.2 Label elements

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

Signal word: WARNING

12 mL Zn-2

Do not need labelling as hazardous

Signal word: -

27 mL Zn-3



GHS07

Safety Data Sheet

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

REF: 931098

VISOCOLOR ECO Zinc

Page: 3/10

Printing date: 01.10.2019

Date of issue: 21.06.2018

Signal word: WARNING

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 after oral intake, inhalation of vapours/dust, impairments of health when ingested in small quantities. ---

Information pertaining to particular risks to the environment

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

16 mL Zn-1

Chemical: *sodium tetraborate* CAS No.: 12267-73-1
 Classification: H319, Eye Irrit. 2, H360FD, Repr. 1B
 Formula: $\text{Na}_2\text{B}_4\text{O}_7$
 TSCA Inventory: not listed
 REACH Reg. No.: 01-2119490790-32-xxxx
SVHC listed: listed (18/06/2010)
 EC No.: 215-540-4 Indice No.: 005-011-00-4
 RTECS: ED4588000
 KE No.: KE-33255
 Concentration: 1 - <4,5 % Correlation factor: x 0.215 (= %B)
 The classification refers to weight percent of the metal (according to CLP Regulation 2008/1272/EC Annex VI, 1.1.3.2 Note 1)
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *potassium cyanide* CAS No.: 151-50-8
 Classification: H300, Acute Tox. 2 oral, H310, Acute Tox. 2 derm., H330, Acute Tox. 2 inh., H410, Aquatic Chronic 1, EUH032, not defined
 Formula: KCN
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119486407-29-xxxx
 EC No.: 205-792-3 Indice No.: 006-007-00-5
 RTECS: TS8750000 MFCD: 00011397
 KE No.: KE-29092, >1% Toxic 97-1-90
 Concentration: 0,1 - <1 % Correlation factor: x 0.40 (= %CN⁻)
 The classification refers to weight percent of the metal (according to CLP Regulation 2008/1272/EC Annex VI, 1.1.3.2 Note 1)
 acc. CLP (GHS): H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H332, Acute Tox. 4 inh., EUH031, 031 not defined

12 mL Zn-2

Chemical: *Zincon* CAS No.: 62625-22-3
 Classification: H315, Skin Irrit. 2, H319, Eye Irrit. 2
 Formula: $\text{C}_{20}\text{H}_{15}\text{N}_4\text{NaO}_6\text{S}\cdot\text{H}_2\text{O}$
 Pseudonym: 2-[2-[[2-(2-hydroxy-5-sulfophenyl)diazenyl]phenylmethylene]hydrazinyl]-benzoic acid, sodium salt
 TSCA Inventory: listed
 EC No.: 263-651-1 MFCD: 00064385
 Concentration: 0,1 - <1 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Safety Data Sheet

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

REF: 931098

VISOCOLOR ECO Zinc

Page: 4/10

Printing date: 01.10.2019

Date of issue: 21.06.2018

Chemical:	<i>dimethyl sulfoxide</i>	CAS No.:	67-68-5
Classification:	No criteria for classification or naming of chemical not required.		
Formula:	C ₂ H ₆ OS		
Pseudonym:	DMSO, 1,1'-sulfinylbis-methane		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119431362-50-xxxx		
EC No.:	200-664-3		
RTECS:	PV6210000	MFCD:	00002089
KE No.:	KE-32367		
Concentration:	80 - <100 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

27 mL Zn-3

Chemical:	<i>chloral hydrate</i>	CAS No.:	302-17-0
Classification:	H301, Acute Tox. 3 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2		
Formula:	C ₂ H ₃ Cl ₃ O ₂ · H ₂ O		
Pseudonym:	2,2,2-trichloroethane-1,1-diol		
TSCA Inventory:	listed		
REACH Reg. No.:	-		
EC No.:	206-117-5	Indice No.:	605-014-00-6
RTECS:	FM8750000	MFCD:	00044479
KE No.:	KE-34070		
Concentration:	10 - <20 %		
acc. CLP (GHS):	H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 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 16.1

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.

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. ---

4.1.4 After ORAL Intake

After oral intake lots of water should be drunk after it has been ingested. ---

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

No additionally recommendations. ---

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Formation of hazardous and caustic vapour-air mixtures possible. ---

Safety Data Sheet

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

REF: 931098	VISOCOLOR ECO Zinc	Page: 5/10
Printing date: 01.10.2019	Date of issue: 21.06.2018	

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

5.4 Additional information

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe vapours. Regular staff training is necessary.

6.2 Environmental precautions
not necessary

6.3 Methods and material for containment and cleaning up
Bind any escaping liquid with inert absorbent.
Collect small amounts of leaked liquid and flush with water into drains.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handling in accordance with the test instruction, that comes with the product.

7.2 Conditions for safe storage, including any incompatibilities
The original product package of MACHEREY-NAGEL allows a safe storage.
Storage class (VCI): 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.

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: *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

[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

Safety Data Sheet

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

REF: 931098	VISOCOLOR ECO Zinc	Page: 6/10
Printing date: 01.10.2019	Date of issue: 21.06.2018	

12 mL Zn-2
 Chemical: *Zincon* CAS No.: 62625-22-3
 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

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 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 protection

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

8.2.4 Skin protection

Not necessary.

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

16 mL Zn-1
 Appearance: liquid Colour: colourless Odor: bitter almond
 pH: 10,5-11,5

12 mL Zn-2
 Appearance: liquid Colour: slightly yellow Odor: fusty, mouldy
 pH: 7
 Melting point: 18 °C
 Boiling point: 189 °C
 Flash point: 87 (95) °C
 Explosion limits: 1.8 ...63 g/m³
 Vapour pressure (20°C): 0.6
 Vapour density_(air=1): 2,7
 Specific gravity: 1,10 g/cm³
 Solubility in water: 0-100 %
 Flashing temperature: 270...300 °C
 Volatiles by volume: 2600

27 mL Zn-3
 Appearance: liquid Colour: colourless Odor: chloric

Safety Data Sheet

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

REF: 931098

VISOCOLOR ECO Zinc

Page: 7/10

Printing date: 01.10.2019

Date of issue: 21.06.2018

pH: 5-6

9.2 Other information

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

Relevant Properties of Substance Group

SECTION 10: Stability and reactivity

10.1 Reactivity

no further data available.

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

Possible: Contact with acids liberates toxic gas. No further data available.

10.4 Conditions to avoid

10.5 Incompatible materials

Avoid contact with strong acids or alkalines.

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

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: $\geq 1,0\%$ 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		
LD50 _{drm rbt} :	>2000 mg/kg		
EU carcinogen:	R _D 1B, R _F 1B		

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: $\geq 1,0\%$ CN class I, Japan PDSCL: Poisonous Substance		
Japan ISHL:	listed $\geq 1,0\%$ / $\geq 1,0\%$, 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 _{drm rbt} :	14.3-33.3 mg/kg		
LD50 _{ipr rat} :	4 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		

Safety Data Sheet

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

REF: 931098

VISOCOLOR ECO Zinc

Page: 9/10

Printing date: 01.10.2019

Date of issue: 21.06.2018

27 mL Zn-3

Chemical: *chloral hydrate*

Water hazard class (DE): 2 WGK No.: 0051

Storage class (VCI): 6.1 D

CAS No.: 302-17-0

12.2 Persistence and degradability

not necessary

12.3 Bioaccumulative potential

not necessary

12.4 Mobility in soil

not necessary

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no additional data available

SECTION 13: Disposal considerations

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).

13.1 Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains.

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

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013

German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC

TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011

MN Leaflet/User manual, also see www.mn-net.com

Look for your country-specific regulations.

15.2 Chemical safety assessment

not necessary for these small amounts ---

SECTION 16: Other information

16.1 List of H and P phrases

16.1.1 List of relevant H phrases

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Safety Data Sheet

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

REF: 931098

VISOCOLOR ECO Zinc

Page: 10/10

Printing date: 01.10.2019

Date of issue: 21.06.2018

EUH031 Contact with acids liberates toxic gas.

16.1.2 List of relevant P phrases

P260D Do not breathe vapours.
 P261sh Avoid breathing dust/vapours.
 P264W Wash with water thoroughly after handling.
 P280sh Wear protective gloves/eye protection.
 P301+312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P302+352 IF ON SKIN: Wash with plenty of water.
 P330 Rinse mouth.

16.2 Training advice

Regular safety training.

16.3 Recommended restriction on use

Only for professional user.
 An individual package of this product or test kit has a moderate hazardous potential.

16.4 Further information

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

Regulation 790/2009/EU adaptation of CLP regulation 1272/2008/EU to technical and scientific progress
 Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
 Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress
 Regulation 669/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress
 TRGS 900, German engineering rules governing limits in air at work, updated 03/2018
 SUVA .CH, Limits in air at work 2009, revised on 01.2009
 KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Revisions/Updates

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