

Safety Data Sheet

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

REF: 931033	VISOCOLOR ECO Silica	Page: 1/12
Printing date: 22.11.2022	Date of issue: 27.09.2022	Version: 2.2.2.10

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

1.1 Product identifier

REF 931033
 no data available VISOCOLOR ECO Silica
 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 25 mL SiO₂ -3 UFI: 4ART-93U9-0203-QGFX
 1 x 25 mL SiO₂ -2 UFI: 95RT-93FG-D203-DT9T
 1 x 25 mL SiO₂ -1

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
 Schoemperlenstr. 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



GHS05 GHS07

Signal word DANGER

Hazard identification	Hazard classes/categories
H315	Skin Irrit. 2
H318	Eye Dam. 1
H319	Eye Irrit. 2
EUH031	031 not defined

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

25 mL SiO₂ -1



GHS07



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Signal word WARNING

Hazard identification	Hazard classes/categories
H315	Skin Irrit. 2
H319	Eye Irrit. 2

25 mL SiO₂ -2

Signal word Do not need labelling as hazardous

No hazard class

25 mL SiO₂ -3



GHS05

Signal word DANGER

Hazard identification	Hazard classes/categories
EUH031	031 not defined
H318	Eye Dam. 1

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).

25 mL SiO₂ -1



GHS07

Signal word: WARNING

25 mL SiO₂ -2

Do not need labelling as hazardous
Signal word: -

25 mL SiO₂ -3



GHS05

Signal word: DANGER
H318

Causes serious eye damage.
P280sh, P305+351+338, P310

Wear protective gloves/eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Label elements of the complete product



GHS05



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Signal word: DANGER

H318

Causes serious eye damage.

P280sh, P305+351+338, P310

Wear protective gloves/eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

2.3 Other hazards

Possible hazards from physicochemical properties

Generally in the case of pH values are less than 2 or higher than 11.5 then it is corrosive. 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

Causes varying degrees of acid burns on the skin, to the eyes and to the mucous membranes and wounds which do not heal quickly depending on the concentration, temperature and the exposure time. Vapours especially which steam from hot liquids and mist can have a severe irritant effect upon the eyes and the respiratory organs.

Information pertaining to particular risks to the environment

PBT: not applicable

vPvB: not applicable

Possible endocrine disrupting effects

no data available

Other hazards

Contains an odor intensive reagent.

SECTION 3: Composition / information on ingredients

3.1 Substances or 3.2 Mixtures

25 mL SiO₂-1

Substance name: *ammonium heptamolybdate*

CAS No.: 12054-85-2

Substance rating: No criteria for classification or naming of chemical not required.

Formula: H₂₄Mo₇N₆O₂₄

Pseudonym (de): Ammoniummolybdat

REACH Reg. No.: 01-2119498057-28-xxxx

EC No.: 234-722-4

Concentration: 2 - <5 %

Correlation factor: x 0.58 (= %Mo)

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): The criteria for classification are not fulfilled.

Substance name: *sulfuric acid*

CAS No.: 7664-93-9

Substance rating: H290, Met. Corr. 1, H314, Skin Corr. 1B, H318, Eye Dam. 1

Formula: H₂SO₄ (*H₂O)

REACH Reg. No.: 01-2119458838-20-xxxx

EC No.: 231-639-5

Indice No.: 016-020-00-8

Specific concentration limit: Skin Corr 1A; H314 c ≥ 15%

Concentration: 5 - <15 %

acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2

25 mL SiO₂-2

Substance name: *oxalic acid*

CAS No.: 144-62-7

Substance rating: H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H318, Eye Dam. 1

Formula: C₂H₂O₄; HOOC-COOH

Pseudonym (de): Dicarbonsäure, Ethandisäure

REACH Reg. No.: 01-2119534576-33-xxxx

EC No.: 205-634-3

Indice No.: 607-006-00-8

Concentration: 1 - <5 %

acc. CLP (GHS): The criteria for classification are not fulfilled.

25 mL SiO₂-3



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Substance name:	<i>sodium disulfite</i>		
CAS No.:	7681-57-4		
Substance rating:	H302, Acute Tox. 4 oral, H318, Eye Dam. 1, EUH031, 031 not defined		
Formula:	Na ₂ O ₅ S ₂		
Pseudonym (de):	Disulfit		
REACH Reg. No.:	01-2119531326-45-xxxx		
EC No.:	231-673-0	Indice No.:	016-063-00-2
Concentration:	10 - <25 %		
acc. CLP (GHS):	H318, Eye Dam. 1, EUH031, 031 not defined		

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 for min. 10 minutes with eye washing bottle, eye douche or running water (protect intact eye). Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Further treatment to be carried out by an eye specialist.

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

Causes serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive chemical. Further treatment must be carried out by an eye specialist. ---

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.

5.4 Additional information



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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Wear eye protection, respectively face protection. 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

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

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 . Storage class (German chemical industry): see chapter 12.1

Storage class (VCI): 8B
Water hazard class (DE): 1

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage. 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

25 mL SiO₂-1

Chemical: *ammonium heptamolybdate*

CAS No.: 12054-85-2

TRGS 900 (DE): [Mo] 5 E mg/m³
E/e respirable

SUVA(CH) MAK value: [Mo] 5 e mg/m³

Chemical: *sulfuric acid*

CAS No.: 7664-93-9

DNEL: [inh] 50 µg/m³
DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 2.5 µg/L
PNEC = Predicted No Effect Concentration

EU value: 0.1 e mg/m³

TRGS 900 (DE): 0.1 E mg/m³
E/e respirable

Short-term exposure factor: 1 (I), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 0,1 e mg/m³

NIOSH: NTP Report on Carcinogens (RoC) List Yes (Known to be a human carcinogen); [TWA] 1 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: [TWA] 1 mg/m³

25 mL SiO₂-2

Chemical: *oxalic acid*

CAS No.: 144-62-7

DNEL: 4.03 inh mg/kg
DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 0,1622 mg/L
PNEC = Predicted No Effect Concentration

EU value: 1 e mg/m³

TRGS 900 (DE): 1 E mg/m³
E/e respirable

Short-term exposure factor: 1 (I), H



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

SUVA(CH) MAK value: 1 e mg/m³
 NIOSH: TWA 1 / ST 2 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: TWA 1 mg/m³

25 mL SiO₂-3

Chemical: *sodium disulfite* CAS No.: 7681-57-4

DNEL: [inh] 225 mg/m³
DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): -
 E/e respirable

SUVA(CH) MAK value: 5 e mg/m³
 NIOSH: [TWA] 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: none

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 or face 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

25 mL SiO₂-1

- a) State of aggregation:
- b) Colour: colourless
- c) Odor: red
- 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: 0-1
- l) Kinematic viscosity: no data available
- m) Solubility in water: 0-50 %
- n) Dispersion coefficient (o/w): no data available
- o) Vapour pressure (20°C): no data available
- p) Specific gravity: 1,05 g/cm³
- q) Relative vapour density (air=1): no data available
- r) Particle size: no data available



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25 mL SiO₂-2

a) State of aggregation:	
b) Colour:	colourless
c) Odor:	red
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:	3-5
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:	1,02 g/cm ³
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

25 mL SiO₂-3

a) State of aggregation:	
b) Colour:	colourless
c) Odor:	red
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:	5-7
l) Kinematic viscosity:	no data available
m) Solubility in water:	0-30 %
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

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.

25 mL SiO₂ -1

Chemical: *ammonium heptamolybdate* CAS No.: 12054-85-2
 TSCA Inventory: listed (CAS 11098-84-3)
 Japan ISHL: listed ≥1,0%/≥0,1%,
 Korea Exist.Chem.Inventory: not listed
 LD50 orl rat : 2000-5000 mg/kg
 LD50 ihl rat : 1,930-5,840 mg/L/4H

Chemical: *sulfuric acid*

CAS No.: 7664-93-9
 TSCA Inventory: listed California Proposition 65 List: not listed
 ACGIH: 1 ppm
 Exposure Routes: inhalation, ingestion, skin and/or eye contact
 Target Organs: Eyes, skin, respiratory system, teeth
 Symptoms: irritation eyes, skin, nose, throat; pulmonary edema, bronchitis; emphysema; conjunctivitis; stomatis;
 dental erosion; eye, skin burns; dermatitis
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
 Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance
 Japan ISHL: listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)
 South Korea TCCA: Accident Precaution Chemical Yes
 Korea Exist.Chem.Inventory: KE-32570, >10% Toxic 97-1-405, Acc. Precaution Chem.
 LD50 orl rat : 2140 mg/kg
 LC50 ihl mus : 0,85 mg/L/4H
 TRGS 905 (DE): Kat 4

25 mL SiO₂ -2

Chemical: *oxalic acid* CAS No.: 144-62-7
 TSCA Inventory: listed California Proposition 65 List: not listed
 Exposure Routes: inhalation, ingestion, skin and/or eye contact
 Target Organs: Eyes, skin, respiratory system, kidneys
 Symptoms: irritation eyes, skin, mucous membrane; eye burns; localized pain, cyanosis; shock, collapse,
 convulsions; kidney damage
 Australia NICNAS: listed >1,0%/>1,0%, Canada CEPA 1999: DSL Yes
 Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance
 Japan ISHL: listed ≥1,0%/≥0,1%, Article 57-2 (SDS required)
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-13152
 LD50 orl rat : 75000 mg/kg

25 mL SiO₂ -3

Chemical: *sodium disulfite* CAS No.: 7681-57-4
 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: irritation eyes, skin, mucous membrane
 Australia NICNAS: not listed Canada CEPA 1999: DSL yes
 Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
 Japan ISHL: listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-12701
 LD50 orl rat : 1540 mg/kg



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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.

25 mL SiO₂ -1
 Chemical: *ammonium heptamolybdate* CAS No.: 12054-85-2
 Water hazard class (DE): 1 WGK No.: 0637
 Storage class (VCI): 12-13

Chemical: *sulfuric acid* CAS No.: 7664-93-9
 PNEC (fresh water): 2.5 µg/L
 PNEC = Predicted No Effect Concentration
 LC50 fish/96h: [NOEC, 65d] 25 µg/L
 EC50 daphnia/48h: 100 mg/L
 EC10 pseudomonas putida/16h: [72h] 100 mg/L
 Water hazard class (DE): 1 WGK No.: 0182
 Storage class (VCI): 8 B

25 mL SiO₂ -2
 Chemical: *oxalic acid* CAS No.: 144-62-7
 PNEC (fresh water): 0,1622 mg/L
 PNEC = Predicted No Effect Concentration
 LC50 leuciscus idus/96h: 160 mg/L
 EC50 daphnia/48h: 61_{24h} / 162.2 mg/L
 EC10 pseudomonas putida/16h: 1550_{16d} mg/L
 Water hazard class (DE): 1 WGK No.: 0166
 Dispersion coefficient (o/w): -1,7
 Storage class (VCI): 12

25 mL SiO₂ -3
 Chemical: *sodium disulfite* CAS No.: 7681-57-4
 LC50 fish/96h: 150-220 mg/L
 EC50 daphnia/48h: 89 mg/L
 IC50 scenedesmus quadricauda/72h: 48 mg/L
 Water hazard class (DE): 1 WGK No.: 1169
 Storage class (VCI): 8 B

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



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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).

13.1 Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains. Empty containers of corrosive reagents prior to disposal, rinse with water.

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

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.

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 2.2.2.10 and 2.2.2.2 following changes were applied: - 8 substance data corrected

16.2 List of H and P phrases

16.2.1 List of relevant H phrases

H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
EUH031	Contact with acids liberates toxic gas.

16.2.2 List of relevant P phrases

P260D	Do not breathe vapours.
P280sh	Wear protective gloves/eye protection.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.

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.



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Safety Data Sheet

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

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16.4 Sources of key data

KÜHN, BIRETT leaflets on dangerous working materials
 Directive 1999/92/EG Minimum requirements to improve the safety and health protection of workers at risk from potentially explosive atmospheres
 SUVA .CH, limit values in the air at work 2009, revised on 01/2009
 Regulation 790/2009/EU Adaptation of the CLP Regulation 1272/2008/EU to technical and scientific progress
 Regulation 453/2010/EU REACH – REQUIREMENTS FOR THE PREPARATION OF SAFETY DATA SHEET
 Regulation 487/2013/EU, 4. Adaptation of the CLP regulation to technical and scientific progress
 Regulation 669/2018/EU, 4. Adaptation of the CLP regulation to technical and scientific progress
 Regulation 1480/2018/EU, 4. Adaptation of the CLP regulation to technical and scientific progress
 TRGS 900, German engineering rules on limit values in the air at work, as of 03/2019
 Regulation 878/2020/EU
 Regulation 849/2021/EU, 4. Adaptation of the CLP regulation to technical and scientific progress

Revisions/Updates

Reason for revision: 2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary
 2014-04 Adjustment of Regulation 487/2013/EU
 2016-03 Adjustment of Regulation 1221/2015/EU

 2017-11 adaptation of the ECHA registration dossier
 2022-11 Adjustment of 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



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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
 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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