

Safety Data Sheet

according to Regulations REACh 1907/2006/EC

REF: 935012 VISOCOLOR alpha Ammonium Page: 1/13 Date of issue: 26.01.2023 Printing date: 04.04.2023 Version: 2.2.2.3

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

1.1 **Product identifier**

> REF 935012

Product name VISOCOLOR alpha Ammonium

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 2,5 g NH₄-2

1 x 30 mL NH 4-1 UFI: QWFU-E3CP-J208-P8QW

1 x 12 mL NH 4 -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 Valencienner Str. 11, 52355 Düren, Germany

Phone: +49 2421 969 0 E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.

DE: Gemeinsames Giftinformationszentrum (GGIZ)

99089 Erfurt tel. +49 361 730 730, https://www.ggiz-erfurt.de

You find our current versions of SDS in Internet:

http://www.mn-net.com/SDS

SECTION 2: Hazard identification

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





GHS05

GHS08

Signal word **DANGER**

Hazard identification Hazard classes/categories

H314 Skin Corr. 1B H361f Repr. 2

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

30 mL NH 4 -1





GHS08

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Signal word DANGER

Hazard identification Hazard classes/categories
H314 Skin Corr. 1B
H361f Repr. 2

12 mL NH 4 -3

Do not need labelling as hazardous

Signal word

No hazard class

2,5 g NH 4 -2

Do not need labelling as hazardous

Signal word -

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 identificator(s) (EU 1272/2008 Annex I - 1.5.1.2).

30 mL NH 4 -1



GHS05

GHS08

Signal word: DANGER

H314, H361f

Causes severe skin burns and eye damage. Suspected of damaging fertility.

P201, P260sh, P280sh, P303+361+353, P305+351+338, P310

Obtain special instructions before use.Do not breathe dust/vapours.Wear protective gloves/eye protection.IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].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.

12 mL NH $_{\rm 4}$ -3

Do not need labelling as hazardous Signal word: -

2,5 g NH 4 -2

Do not need labelling as hazardous Signal word: -

Label elements of the complete product





GHS05

GHS08

Signal word: DANGER

H314, H361f

Causes severe skin burns and eye damage. Suspected of damaging fertility.

P201, P260sh, P280sh, P303+361+353, P305+351+338, P310

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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.

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.

Suspected of damaging fertility.

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

2,5 g NH 4 -2

Substance name: sodium chloride CAS No.: sodium chloride 7647-14-5

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

Formula: NaCl
Pseudonym (de): Kochsalz
REACH Reg. No.: exempt, Annex V
EC No.: 231-598-3
Concentration: 80 - <100 %

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

Substance name: dichloroisocyanuric acid, Na salt

CAS No.: 2893-78-9

Substance rating: H272, Ox. Liq. 2, H302, Acute Tox. 4 oral, H319, Eye Irrit. 2, H335, STOT SE 3, H410, Aquatic

Chronic 1, EUH031, 031 not defined Formula: C $_3$ Cl $_2$ N $_3$ NaO $_3$

Pseudonym (de): 1,3-Dichlor-5H-(1,3,5)-triazin-2,4,6-trion

REACH Reg. No.: 01-2119489371-33-xxxx

EC No.: 220-767-7 Indice No.: 613-030-01-7

Concentration: 3 - <10 %

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

30 mL NH ₄ -1

Substance name: sodium hydroxide solution

CAS No.: 1310-73-2

Substance rating: H314, Skin Corr. 1B Formula: NaOH•H 2 O Natronlauge

REACH Reg. No.: 01-2119457892-27-xxxx

EC No.: 215-185-5 Indice No.: 011-002-00-6

Concentration: 2 - <5 %

acc. CLP (GHS): H314, Skin Corr. 1B



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> Substance name: sodium salicvlate

CAS No.: 54-21-7

Substance rating: H302, Acute Tox. 4 oral, H319, Eye Irrit. 2, H361, Repr. 2, H361d, Repr. 2

Formula: C₇H₅NaO₃

REACH Reg. No.: 01-2119918289-28-xxxx

EC No.: 200-198-0

Concentration: 0.3 - < 10 %

acc. CLP (GHS): H361, Repr. 2, H361f, Repr. 2

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

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: 10 - <20 %

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

12 mL NH 4 -3

Substance name: sodium nitroprusside

CAS No : 13755-38-9

Substance rating: H301, Acute Tox. 3 oral Na 2 [Fe(CN) 5 NO] 2 • 2 H 2 O Formula: Pseudonym (de): Natriumpentacyanonitrosylferrat(II)

238-373-9 EC No.: Concentration: 1 - < 5 %

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

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

Remove contaminated clothing immediately. Rinse the affected skin or mucous membrane thoroughly for min. 15 minutes under running water. (If possible) use soap. Avoid neutralisation. Then apply a loose bandage.

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.

After INHALATION of vapours 4.1.3

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 lots of water with activated charcoal supplement should be drunk after it has been ingested. Do not induce vomiting under any circumstances. Do not make any efforts to neutralise it. Contact medical advice for possible consequences.

4.2 Most important symptoms and effects, both acute and delayed

Rapid penetration and destruction of the skin. Especially in the heated form.

Causes severe skin burns and eye damage.

CMR Effekte: Suspected of damaging fertility.



Software: M2 V 6.1.1.5

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4.3 Indication of any immediate medical attention and special treatment needed

CORROSIVE DAMAGE: After SKIN CONTACT rinse with water for a long time. Efforts to neutralise the substance can frequently make matters worse. Apply glucocorticosteroides following inflammatory reactions. After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive chemical. Further treatment must to be carried out by an eye specialist. After INTAKE administer aluminium oxide drug suspensions. Administer a prophylaxis to counter pulmonary oedema following the INGESTION of corrosive aerosols. In the event of RESPIRATORY DISTREES ensure that the patient inhales oxygen. ---

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

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). 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

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 . Storage class (German chemical industry): see chapter 12.1 **Storage class (VCI):** 8B

Water hazard class (DE):

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)



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CAS No.: 2893-78-9

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Product for analytical use.

SECTION 8: Exposure controls /personal protection

8.1 Control parameters

2,5 g NH 4 -2

Chemical:

Chemical: sodium chloride CAS No.: 7647-14-5

dichloroisocyanuric acid, Na salt not listed NIOSH:

[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

30 mL NH 4 -1

CAS No.: 1310-73-2 Chemical: sodium hydroxide solution

DNEL: [inh] 1 mg/m³ DNEL = Derived No-Effect Level (for workers) TRGS 900 (DE): 2 mg/m³ E/e respirable

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

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

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

OSHA: [TWA] 2 mg/m³

Chemical: CAS No.: 54-21-7 sodium salicylate

1,32 mg/m³ DNEL Derived No-Effect Level (for workers) (fresh water): 0,0413 mg/L PNEC = Predicted No Effected Concentration

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

12 mL NH 4 -3

Chemical: sodium nitroprusside CAS No.: 13755-38-9

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.

Skin protection / Hand protection 8.2.2

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.

Skin protection 8.2.4

Recommended to avoid clothing damage, and to avoid contamination with these hazards.

Personal hygiene 8.2.5

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.



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no data available

no data available

liquid

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

2,5	q	NH	4	-2
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a) State of aggregation: powder (solid) 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 5-7 k) pH value: I) 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

30 mL NH 4 -1

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: 12-13 I) 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

12 mL NH 4 -3

r) Particle size:

q) Relative vapour density (air=1):

a) State of aggregation: b) Colour: rose 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: 6-8 I) 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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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**

Substances are highly corrosive.

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

Can react violently with organic material. 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.

2,5 g NH 4 -2

Chemical: sodium chloride CAS No.: 7647-14-5

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-31387 LD50 orl rat: 3000 mg/kg

Chemical: dichloroisocyanuric acid, Na salt CAS No.: 2893-78-9

TSCA Inventory: listed California Proposition 65 List: not listed 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-10215, >25% Toxic 2014-1-688

LD50 _{orl rat} : 550-1600 mg/kg LC_Low _{orl hmn} : 3570 mg/kg

30 mL NH ₄ -1

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: irritation eyes, skin, mucous membrane; pneumonitis; eye, skin burns; temporary loss of hair

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-31487

LD50 _{orl rat}: [40%] 1250 / [<25%] >2000 mg/kg

LD50 _{orl mus}: 40 mg/kg



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> sodium salicvlate CAS No.: 54-21-7 Chemical:

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-20384 LD50 orl rat: 1000 mg/kg LC_Low orl hmn: 700 mg/kg

Carcinogenic Effects: Suspected of damaging fertility or the unborn child. Suspected of damaging fertility.

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

listed (CAS 68-04-2) TSCA Inventory:

Korea Exist.Chem.Inventory: KE-20843 LD50 orl rat > 8000 mg/kg

12 mL NH 4 -3

CAS No.: 13755-38-9 sodium nitroprusside Chemical:

TSCA Inventory: listed (CAS 14402-89-2)

Korea Exist.Chem.Inventory: not listed LD50 orl rat : 99 mg/kg LC_Low orl rat : 20 mg/kg

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.

2,5 g NH 4 -2

Chemical: CAS No.: 7647-14-5 sodium chloride

Water hazard class (DE): Storage class (VCI): 12-13

Chemical: dichloroisocyanuric acid, Na salt CAS No.: 2893-78-9

Water hazard class (DE): Storage class (VCI): 13

30 mL NH ₄ -1

CAS No.: 1310-73-2 Chemical: sodium hydroxide solution

Avoid contact of substance/mixture to environment. LC50 leuciscus idus/96h: 35-189 mg/L 45.4 mg/L LC50 fish/96h: EC50 daphnia/48h: >100 mg/L

Water hazard class (DE): WGK No.: 142

8 B Storage class (VCI):

CAS No.: 54-21-7 Chemical: sodium salicylate

PNEC (fresh water):
PNEC = Predicted No Effected Concentration 0,0413 mg/L

Water hazard class (DE): Storage class (VCI): 12-13

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

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 putita/16h: EC50 ps. fluorescens/8h: >1.8-3.2 g/L

Water hazard class (DE): Storage class (VCI): 12-13



Software: M2 V 6.1.1.5

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12 mL NH 4 -3

CAS No : 13755-38-9 sodium nitroprusside Chemical:

Water hazard class (DE): Storage class (VCI): 6.1 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

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. UN number: 3316

14.2. UN proper shipping name: Chemical Kit 14.3. Class: 14.4. Packing group:

Road transport ADR Tunnel restriction code: Classification code:

Limited Quantity: acc. ADR 3.3.1/251: see LQ in Alternative declaration for transportation

Air transport ICAO

PAX: 10 KG 960 max. weight PAX: CAO: 960 max. weight CAO: 10 KG Maritime transport IMDG EmS: F-A, S-P Storage category:

Or use Alternative declaration for transportation:

UN No.: (see below) class 8 II, Excepted Quantities (≤30 mL/∑≤500 mL) = ADR/ IATA E2

14.1 UN number: 3266 14.2 UN proper shipping name: Corrosive liquid, basic, inorganic, n.o.s. (sodium hydroxide solution)

14.3 Class: 8 14.4 Packing group:

Road transport ADR Classification code: C5

Limited Quantity: 1 L Tunnel restriction code: Ε

Excepted Quantity: Air transport ICAO

1022 Limited Quantity: Excepted Quantity: E 2 851

PAX: max. weight PAX: CAO: max. weight CAO: 855 30 L

Maritime transport IMDG

F-A, S-B В Storage category: EmS:



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14.5 **Environmental hazards**

none, contains only small quantities of hazardous substances

14.6 Special precautions for user

not necessary

14.7 Carriage in bulk by sea in accordance with IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

Chemicals Prohibition Ordinance - (DE: ChemVerbotsV), aktualisiert Jan 2017

Dangerous Substances Protection Act (DE: Chemikaliengesetz - ChemG), Aug 2013, Stand: Okt 2020
Ordinance on protection against dangerous substances (E: Gefahrstoffverordnung - GefStoffV), Nov 2010, Stand: Mrz 2017

TRGS 201, Classification and labeling of activities involving hazardous substances, Feb 2017

TRGS 220, National aspects when preparing safety data sheets, Jan 2017

TRGS 400, Risk assessment for activities involving hazardous substances, Jul 2017

TRGS 401, Skin contact hazard - identification, assessment, action, Jun 2008, status: Feb 2011

BekGS 408, Application of the GefStoffV and the TRGS with the entry into force of the CLP regulation, December 2009, status: Jan

TRGS 500, Protective measures, Mai 2008

TRGS 510, Storage of hazardous substances in portable containers from March 2013, status: Oct 2015

Chapter 4, Measures when storing hazardous substances up to 50 kg (small quantity regulation)

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 2.2.2.3 and 2.2.2.2 following changes were applied: - 1 substance data corrected

16.2 List of H and P phrases

16.2.1 List of relevant H phrases

H314 Causes severe skin burns and eye damage. H361 Suspected of damaging fertility or the unborn child.

H361f Suspected of damaging fertility.

16.2.2 List of relevant P phrases

Obtain special instructions before use. P201

P260sh Do not breathe dust/vapours.

P280sh Wear protective gloves/eye protection.

P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+351+338 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. P310

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

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)



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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)

2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary Reason for revision:

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

corrosive Corr:

COD: chemical oxigen demand

CSCL: Chemical Substance Control Law (Jp)

Dam: damage

Derived No-Effect Level (for workers) DNEL:

derm: dermal 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

FU: **Furopean Union** fish: fish (not spezified)

GHS: Global Harmonized System of Classification and Labeling of Chemicals

guinea pig gpg: ĬĊĂO:

International Civil Aviation Organization

ihl: inhaled

IMDG: International Maritime Dangerous Goods Code

intrav: intravenous ipt: intraperitonaeal

iSHL: Industrial Safety and Health Law (Jp)

LC50: letale concentration 50%

I D50: letale dosis 50%

leuciscus idus: fisch, ide, orfe MAK: maximum workplace concentration

Met: Metall mus: mouse



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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 Effected 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 rabit

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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