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

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 NH_4 -2
1 x 30 mL NH_4 -1
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
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



GHS05 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H290	Met. Corr. 1
H314	Skin Corr. 1B
H361f	Repr. 2

2.1 Classification of the substance or mixture

2,5 g NH_4 -2

Do not need labelling as hazardous

Signal word -

No hazard class

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FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
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Version: M V 4.12.0

30 mL NH_4 -1



GHS05 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H290	Met. Corr. 1
H314	Skin Corr. 1B
H361f	Repr. 2

12 mL NH_4 -3

Do not need labelling as hazardous

Signal word -

No hazard class

2.2 Label elements

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).

Metal corrosive solutions**do not have to** be labelled with GHS symbol, signal word, H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2.1.3).

2,5 g NH_4 -2

Do not need labelling as hazardous
Signal word: -

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_4 -3

Do not need labelling as hazardous
Signal word: -

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. H290 "May be corrosive to metals." has only relevance for higher concentrations and larger amounts. The labelling GHS05 would be creating an "OVERLABELLING" (see GHS Directive 1272/2008/EC Annex I, chapter 1.5.2.1.3., until 125 mL no labelling necessary). ---

Information pertaining to particular risks to human and possible symptoms

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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

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

2,5 g NH_4 -2

Chemical: *dichloroisocyanuric acid, Na salt* CAS No.: 2893-78-9
Classification: 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: troclosene sodium, sodium 3,5-dichloro-2,4,6-trioxo-1,3,5-triazinan-1-ide
TSCA Inventory: listed
REACH Reg. No.: 01-2119489371-33-xxxx
EC No.: 220-767-7 Indice No.: 613-030-01-7
RTECS: XZ1900000 MFCD: 00006036
KE No.: KE-10215, >25% Toxic 2014-1-688
Concentration: 3 - <10 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *sodium chloride* CAS No.: 7647-14-5
Classification: No criteria for classification or naming of chemical not required.
Formula: NaCl
Pseudonym: salt
TSCA Inventory: listed
REACH Reg. No.: exempt, Annex V
EC No.: 231-598-3
RTECS: VZ4725000
KE No.: KE-31387
Concentration: 80 - <100 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

30 mL NH_4 -1

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2
Classification: H290, Met. Corr. 1, H314, Skin Corr. 1B
Formula: $NaOH•H_2 O$
Pseudonym: soda lye
TSCA Inventory: listed
REACH Reg. No.: 01-2119457892-27-xxxx
EC No.: 215-185-5 Indice No.: 011-002-00-6
RTECS: WB4900000
KE No.: KE-31487
Concentration: 2 - <5 %
acc. CLP (GHS): H290, Met. Corr. 1, H314, Skin Corr. 1B

Chemical: *sodium salicylate* CAS No.: 54-21-7
Classification: H302, Acute Tox. 4 oral, H319, Eye Irrit. 2, H361, Repr. 2, H361d, Repr. 2
Formula: $C_7 H_5 NaO_3$
TSCA Inventory: listed
REACH Reg. No.: 01-2119918289-28-xxxx
EC No.: 200-198-0
RTECS: VO5075000
KE No.: KE-20384
Concentration: 0.3 - <10 %
acc. CLP (GHS): H361, Repr. 2, H361f, Repr. 2

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CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
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Chemical: *tri-sodium citrate* CAS No.: 6132-04-3
Classification: No criteria for classification or naming of chemical not required.
Formula: $C_6 H_5 Na_3 O_7 \cdot 2H_2 O$
TSCA Inventory: listed (CAS 68-04-2)
REACH Reg. No.: 01-2119457027-40-xxxx
EC No.: 200-675-3
RTECS: GE8300000
KE No.: KE-20843
Concentration: 10 - <20 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

12 mL NH_4 -3

Chemical: *sodium nitroprusside* CAS No.: 13755-38-9
Classification: H301, Acute Tox. 3 oral
Formula: $Na_2 [Fe(CN)_5 NO]_2 \cdot 2 H_2 O$
Pseudonym: disodium pentacyanonitrosylferrate
TSCA Inventory: listed (CAS 14402-89-2)
EC No.: 238-373-9
RTECS: LJ89250000
KE No.: not listed
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 16.1

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. 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 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.

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. 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

CMR Effects: Suspected of damaging fertility. ---

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. ---

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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. ---

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). 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

not necessary

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 ---

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): 8B
Water hazard class (DE): 3

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

2,5 g NH_4 -2

Chemical: *dichloroisocyanuric acid, Na salt* CAS No.: 2893-78-9
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: *sodium chloride* CAS No.: 7647-14-5

30 mL NH_4 -1

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Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2
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
NIOSH: 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] 2 mg/m³

Chemical: *sodium salicylate* CAS No.: 54-21-7
DNEL: 1,32 mg/m³
DNEL = Derived No-Effect Level (for workers)
$PNEC_{(fresh\ water)}$: 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.

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 or face protection.

8.2.4 Skin protection
Recommended to avoid clothing damage, and 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

2,5 g NH_4 -2
Appearance: powder (solid) Colour: colourless Odor: chloric
pH: 5-7

30 mL NH_4 -1
Appearance: liquid Colour: colourless Odor: odorless
pH: 12-13

12 mL NH_4 -3
Appearance: liquid Colour: rose Odor: odorless
pH: 6-8

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

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DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
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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
Not necessary. ---

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.

2,5 g NH_4 -2

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
$LD50_{drm\ rbt}$: >5000 mg/kg

Chemical: *sodium chloride* CAS No.: 7647-14-5
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-31387
$LD50_{orl\ rat}$: 3000 mg/kg
$LD50_{drm\ rbt}$: 10 g/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
$LD50_{drm\ rbt}$: not applicable
$LD50_{orl\ mus}$: 40 mg/kg

Chemical: *sodium salicylate* CAS No.: 54-21-7
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-20384
$LD50_{orl\ rat}$: 1000 mg/kg
$LC_Low_{orl\ hmn}$: 700 mg/kg
$LD50_{drm\ rat}$: 2000 mg/kg

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Carcinogenic Effects: Suspected of damaging fertility.

Chemical: *tri-sodium citrate* CAS No.: 6132-04-3
TSCA Inventory: listed (CAS 68-04-2)
Korea Exist.Chem.Inventory: KE-20843
$LD50_{orl\ rat}$: >8000 mg/kg

12 mL NH_4 -3

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

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

2,5 g NH_4 -2

Chemical: *dichloroisocyanuric acid, Na salt* CAS No.: 2893-78-9
Water hazard class (DE): 3
Storage class (VCI): 13

Chemical: *sodium chloride* CAS No.: 7647-14-5
Water hazard class (DE): 1
Storage class (VCI): 12-13

30 mL NH_4 -1

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2
Avoid contact of substance/mixture to environment.
$LC50_{leuciscus\ idus/96h}$: 35-189 mg/L
$LC50_{fish/96h}$: 45.4 mg/L
$EC50_{daphnia/48h}$: >100 mg/L
Water hazard class (DE): 1 WGK No.: 142
Storage class (VCI): 8 B

Chemical: *sodium salicylate* CAS No.: 54-21-7
$PNEC_{(fresh\ water)}$: 0,0413 mg/L
PNEC = Predicted No Effected Concentration
Water hazard class (DE): 1
Storage class (VCI): 12-13

Chemical: *tri-sodium citrate* CAS No.: 6132-04-3
$LC50_{fish/96h}$: 18-32 g/L
$EC50_{daphnia/48h}$: 5.6-10 g/L
$EC50_{chlorella\ vulgaris/5d}$: >18-32 g/L
$EC10_{pseudomonas\ putita/16h}$: $EC50_{ps.\ fluorescens/8h}$: >1.8-3.2 g/L
Water hazard class (DE): 1
Storage class (VCI): 12-13

12 mL NH_4 -3

Chemical: *sodium nitroprusside* CAS No.: 13755-38-9
Water hazard class (DE): 3
Storage class (VCI): 6.1 B

12.2 Persistence and degradability

not necessary

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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
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: 9 14.4. Packing group: II

Road transport

Classification code:	M11	Tunnel restriction code:	E
Limited Quantity:	acc. ADR 3.3.1/251: see LQ in Alternative declaration for transportation		

Air transport

PAX:	960	max. weight PAX:	10 KG
CAO:	960	max. weight CAO:	10 KG

Maritime transport

EmS:	F-A, S-P	Storage category:	A

Or use **Alternative declaration for transportation:**
UN No.: (see below) class 8 II, **Excepted Quantities** (≤30 mL/∑≤500 mL) = ADR/ IATA E2
or
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: II

Road transport

Classification code:	C5		
Limited Quantity:	1 L	Tunnel restriction code:	E
Excepted Quantity:	E 2		

Air transport

PAX:	851	max. weight PAX:	1 L
CAO:	855	max. weight CAO:	30 L

Maritime transport

EmS:	F-A, S-B	Storage category:	B

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.

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DE / international:	CH:	FR:	US:
Tel.: +49 24 21 969-0	Tel.: +41 62 388 55 00	Tel.: +33 388 68 22 68	Tel.: +1 484 821 0984
Fax: +49 24 21 969-199	Fax: +41 62 388 55 05	Fax: +33 388 51 76 88	Fax: +1 484 821 1272
E-mail: info@mn-net.com	E-mail: sales-ch@mn-net.com	E-mail: sales-fr@mn-net.com	E-mail: sales-us@mn-net.com

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

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H361	Suspected of damaging fertility or the unborn child.
H361f	Suspected of damaging fertility.

16.1.2 List of relevant P phrases

P201	Obtain special instructions before use.
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.
P310	Immediately call a POISON CENTER/doctor.
P390	Absorb spillage to prevent material damage.

16.2 Training advice

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.

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 Further information

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16.5 Sources of key data

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
Regulation 1480/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress
Regulation 849/2021/EU, 4th adaptation of CLP regulation to technical and scientific progress
TRGS 900, German engineering rules governing limits in air at work, updated 03/2019
SUVA .CH, Limits in air at work 2009, revised on 01.2009
Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
TRGS 905, German engineering rules governing carcinogens and mutagens, updated 03/18
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

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MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany

DE / international:	CH:	FR:	US:
Tel.: +49 24 21 969-0	Tel.: +41 62 388 55 00	Tel.: +33 388 68 22 68	Tel.: +1 484 821 0984
Fax: +49 24 21 969-199	Fax: +41 62 388 55 05	Fax: +33 388 51 76 88	Fax: +1 484 821 1272
E-mail: info@mn-net.com	E-mail: sales-ch@mn-net.com	E-mail: sales-fr@mn-net.com	E-mail: sales-us@mn-net.com

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