

Safety Data Sheet

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

REF: 985058

NANOCOLOR Manganese 10

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Printing date: 02.06.2020

Date of issue: 16.03.2020

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

1.1 Product identifier

REF 985058
 Product name NANOCOLOR Manganese 10

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.

20 x 0.5 mL Manganese 10 (R0)
 1 x 11 mL Manganese 10 (R2)
 1 x 1.5 g Manganese 10 (R3)

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



GHS05 GHS07 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H290	Met. Corr. 1
H314	Skin Corr. 1B
H317	Skin Sens. 1
H335	STOT SE 3
H351	Carc. 2
H373	STOT RE 2



2.1 Classification of the substance or mixture

0.5 mL Manganese 10 (R0)



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	GHS07	GHS08
Signal word	WARNING	
Hazard identification	Hazard classes/categories	
H290	Met. Corr. 1	
H317	Skin Sens. 1	
H351	Carc. 2	

11 mL Manganese 10 (R2)

		
	GHS05	GHS07
Signal word	DANGER	
Hazard identification	Hazard classes/categories	
H314	Skin Corr. 1B	
H335	STOT SE 3	

1.5 g Manganese 10 (R3)

	
	GHS08
Signal word	WARNING
Hazard identification	Hazard classes/categories
H373	STOT RE 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). Inner packages up to 10 mL need max. 2 symbols (Annex I - 1.5.2.4.1 / 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). This labelling exemption is NOT valid for sensibilizing substances.

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).

0.5 mL Manganese 10 (R0)



GHS07 GHS08

Signal word: WARNING

H317, H351

May cause an allergic skin reaction. Suspected of causing cancer.

P261sh, P280sh

Avoid breathing dust/vapours. Wear protective gloves/eye protection.

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11 mL Manganese 10 (R2)



GHS05



GHS07

Signal word: DANGER

H314

Causes severe skin burns and eye damage.

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

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.

1.5 g Manganese 10 (R3)



GHS08

Signal word: WARNING

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.

Cause after inhalation of vapours/dust, skin contact, impairments of health when ingested in small quantities. May cause sensitization by skin contact, also in repeated contact of small amounts. Suspected of causing cancer. -

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

0.5 mL Manganese 10 (R0)

Chemical: *paraformaldehyde*

CAS No.: 30525-89-4

Classification: H228, Flam. Sol. 1, H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H317, Skin Sens. 1, H318, Eye Dam. 1, H332, Acute Tox. 4 inh., H335, STOT SE 3, H351, Carc. 2

Formula: $(\text{CH}_2\text{O})_n$

TSCA Inventory: listed

RTECS: RV0540000

MFCD: 00133991

Concentration: 1 - <3 %

acc. CLP (GHS): H317, Skin Sens. 1, H351, Carc. 2

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Chemical: *hydroxylammonium chloride* CAS No.: 5470-11-1
 Classification: H290, Met. Corr. 1, H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H315, Skin Irrit. 2, H317, Skin Sens. 1, H319, Eye Irrit. 2, H351, Carc. 2, H373, STOT RE 2, H400, Aquatic Acute 1
 Formula: $\text{NH}_2\text{OH}\cdot\text{HCl}/\text{H}_4\text{CINO}$
 Pseudonym: hydroxylamin hydrochloride
 TSCA Inventory: listed
 REACH Reg. No.: as intermediate
 EC No.: 226-798-2 Indice No.: 612-123-00-2
 RTECS: NC3675000 MFCD: 00051089
 KE No.: KE-20602, >1% Toxic 97-1-411
 Concentration: 5 - <10 %
 acc. CLP (GHS): H290, Met. Corr. 1, H317, Skin Sens. 1, H351, Carc. 2

11 mL Manganese 10 (R2)

Chemical: *ammonia solution* CAS No.: 1336-21-6
 Classification: H314, Skin Corr. 1B, H335, STOT SE 3, H400, Aquatic Acute 1
 Formula: $\text{NH}_3\cdot\text{H}_2\text{O}$
 Pseudonym: ammonium hydroxide, Aqua ammonia, aqueous ammonia
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119488876-14-xxxx, 01-2119982985-14-XXXX
 EC No.: 215-647-6 Indice No.: 007-001-01-2
 RTECS: BQ9625000 MFCD: 00011418
 KE No.: KE-01688, >10% Toxic 97-1-184
 Concentration: 5 - <10 %
 acc. CLP (GHS): H314, Skin Corr. 1B, H335, STOT SE 3

1.5 g Manganese 10 (R3)

Chemical: *L(+)-ascorbic acid* CAS No.: 50-81-7
 Classification: No criteria for classification or naming of chemical not required.
 Formula: $\text{C}_6\text{H}_8\text{O}_6$
 Pseudonym: vitamin C
 TSCA Inventory: listed
 REACH Reg. No.: exempt, Annex IV
 EC No.: 200-066-2
 RTECS: C17650000 MFCD: 00064328
 KE No.: KE-01947
 Concentration: 50 - <70 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *ethylenedinitrilo tetraacetic acid, di Na-salt (EDTA-Na)* CAS No.: 6381-92-6
 Classification: H332, Acute Tox. 4 inh., H373, STOT RE 2
 Formula: $\text{C}_{10}\text{H}_{14}\text{N}_2\text{Na}_2\text{O}_8\cdot 2\text{H}_2\text{O}$
 TSCA Inventory: listed (CAS 139-33-3)
 EC No.: 205-358-3
 RTECS: AH4410000; AH4375000 MFCD: 00150037
 Concentration: 40 - <50 %
 acc. CLP (GHS): H373, STOT RE 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. 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

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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

May cause sensitization by skin contact, also in repeated contact of small amounts. CMR Effects: Suspected of causing cancer. ---

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 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 DISTRESS ensure that the patient inhales oxygen. Inform patient respectively further measures and the possibility of long-term damages. ---

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. Use a safety bottle when shaking test tubes.

7.2 Conditions for safe storage, including any incompatibilities

The original product package of MACHEREY-NAGEL allows a safe storage.

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Storage class (VCI): 4.1A
 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

0.5 mL Manganese 10 (R0)

Chemical: *paraformaldehyde* CAS No.: 30525-89-4
 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: *hydroxylammonium chloride* CAS No.: 5470-11-1
 TRGS 900 (DE): 1.5 mg/m³
 E/e respirable
 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

11 mL Manganese 10 (R2)

Chemical: *ammonia solution* CAS No.: 1336-21-6
 DNEL: [inh] 14 mg/m³
 DNEL = Derived No-Effect Level (for workers)
 PNEC^(fresh water): 0.0011 mg/L
 PNEC = Predicted No Effect Concentration
 EU value: 20 ppm / 14 mg/m³
 TRGS 900 (DE): 20 ppm / 14 mg/m³
 E/e respirable
 Short-term exposure factor: 2 (I), Y
 skin respiratory (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded
 SUVA(CH) MAK value: 20 ppm / 14 mg/m³
 NIOSH: [TWA] 25 ppm / 18 mg/m³
 NIOSH STEL: 35 ppm / 27 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: Yes (TQ = 15000 lbs) - n/a; [TWA] 50 ppm / 35 mg/m³

1.5 g Manganese 10 (R3)

Chemical: *L(+)-ascorbic acid* CAS No.: 50-81-7
 Chemical: *ethylenedinitrilo tetraacetic acid, di Na-salt (EDTA-Na)* CAS No.: 6381-92-6
 DNEL: [inh] 1.5 mg/m³
 DNEL = Derived No-Effect Level (for workers)
 PNEC^(fresh water): 2.2 mg/L
 PNEC = Predicted No Effect Concentration

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

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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

0.5 mL Manganese 10 (R0)

Appearance: liquid

Colour: colourless

Odor: penetrative

11 mL Manganese 10 (R2)

Appearance: liquid

Colour: colourless

Odor: aminic

pH:

9-10,5

Specific gravity:

0,98 g/cm³

Solubility in water:

0-100 %

1.5 g Manganese 10 (R3)

Appearance: solid

Colour: white

Odor: odorless

pH:

5-7

Solubility in water:

0-30 %

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

Strong CORROSIVE, 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. Observe labeled storage temperature. ---

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.

0.5 mL Manganese 10 (R0)

Chemical: *paraformaldehyde*

CAS No.: 30525-89-4

TSCA Inventory: listed

California Proposition 65 List: not listed

Australia NICNAS: not listed

Canada CEPA 1999: DSL Yes

Japan CSCL/PRTR: not listed, Japan PDSC: not listed

Japan ISHL: Article 57-2 (SDS required)

South Korea TCCA: not listed

LD50_{orl rat}: 592 mg/kg

Acute Effects: Cause after skin contact, impairments of health when ingested in small quantities. May cause sensitization by skin contact, also in repeated contact of small amounts.

Carcinogenic Effects: Suspected of causing cancer.

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Chemical: *hydroxylammonium chloride* CAS No.: 5470-11-1
 TSCA Inventory: listed California Proposition 65 List: not listed
 Exposure Routes: -
 Symptoms: -
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
 Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance
 Japan ISHL: not listed
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-20602, >1% Toxic 97-1-411
 LD50_{orl rat}: 141 mg/kg
 Acute Effects: Cause after skin contact, impairments of health when ingested in small quantities. May cause sensitization by skin contact, also in repeated contact of small amounts.
 Carcinogenic Effects: Suspected of causing cancer.
 TRGS 907 (DE): Sh

11 mL Manganese 10 (R2)

Chemical: *ammonia solution* CAS No.: 1336-21-6
 TSCA Inventory: listed California Proposition 65 List: not listed
 Exposure Routes: inhalation, ingestion (solution), skin and/or eye contact (solution/liquid)
 Target Organs: Eyes, skin, respiratory system
 Symptoms: irritation eyes, nose, throat; dyspnea (breathing difficulty), wheezing, chest pain; pulmonary edema; pink frothy sputum; skin burns, vesiculation; I
 Australia NICNAS: not listed Canada CEPA 1999: DSL yes, Toxic Substances (Schedule 1) Yes (Item 53.)
 Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance
 Japan ISHL: listed ≥0,2%/≥0,1%, Article 57-2 (SDS required)
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-01688, >10% Toxic 97-1-184
 LD50_{orl rat}: 350 mg/kg
 LC_{LoWihl hmn}: 5000 mg/m³
 LC50_{ihl rat}: [4h] 2000 ppm
 LD50_{drm rbt}: [5min] 5000 ppm
 Acute Effects: Cause after inhalation of vapours/dust, impairments of health when ingested in small quantities.

1.5 g Manganese 10 (R3)

Chemical: *L(+)-ascorbic acid* CAS No.: 50-81-7
 TSCA Inventory: listed
 Korea Exist.Chem.Inventory: KE-01947
 LD50_{orl rat}: 11900 mg/kg
 LD50_{ivn mus}: 518 mg/kg

Chemical: *ethylenedinitrilo tetraacetic acid, di Na-salt (EDTA-Na)* CAS No.: 6381-92-6
 TSCA Inventory: listed (CAS 139-33-3)
 LD50_{orl rat}: 2800 mg/kg

Chronic Effects: May cause damage to organs through prolonged or repeated exposure.

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

0.5 mL Manganese 10 (R0)

Chemical: *paraformaldehyde* CAS No.: 30525-89-4
 Water hazard class (DE): 2
 Storage class (VCI): 11

Chemical: *hydroxylammonium chloride* CAS No.: 5470-11-1
 LC50_{leuciscus idus/96h}: 1-10 mg/L
 Water hazard class (DE): 3
 Storage class (VCI): 4.1 A

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11 mL Manganese 10 (R2)

Chemical: *ammonia solution*

CAS No.: 1336-21-6

Avoid contact of substance/mixture to environment.

PNEC(fresh water) : 0.0011 mg/L

PNEC = Predicted No Effect Concentration

LC50_{fish/96h} : 0,89 mg/LEC50_{daphnia/48h} : 101 mg/L

Water hazard class (DE): 2 WGK No.: 0211

Storage class (VCI): 8 B

1.5 g Manganese 10 (R3)

Chemical: *L(+)-ascorbic acid*

CAS No.: 50-81-7

Water hazard class (DE): 1 WGK No.: 0737

Storage class (VCI): 13

Chemical: *ethylendinitrilo tetraacetic acid, di Na-salt (EDTA-Na)*

CAS No.: 6381-92-6

PNEC(fresh water) : 2.2 mg/L

PNEC = Predicted No Effect Concentration

LC50_{fish/96h} : [4d] 41-1592 mg/LEC50_{daphnia/48h} : 140 mg/LIC50_{scenedesmus quadricauda/72h} : [72h] 2.77-1000 mg/LEC10_{pseudomonas putita/16h} : [EC10, 30h] 500 mg/L

Water hazard class (DE): 2

Dispersion coefficient_(octanol-water) : -4.3

Storage class (VCI): 12-13

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

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

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/ $\Sigma \leq 500$ mL) = ADR/ IATA E2

or

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

14.3 Class: 8 14.4 Packing group: II

Road transport

Classification code: C5

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Limited Quantity:	1 L	Tunnel restriction code:	E
Excepted Quantity:	E 2		
<i>Air transport</i>			
PAX:	851	max. weight PAX:	1 L
CAO:	855	max. weight CAO:	30 L
<i>Maritime transport</i>			
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.

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.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

16.1.2 List of relevant P phrases

P201	Obtain special instructions before use.
P260sh	Do not breathe dust/vapours.
P261sh	Avoid breathing 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.
P403+233	Store in a well-ventilated place. Keep container tightly closed.

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.

Safety Data Sheet

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

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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

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

TRGS 907, German engineering rules governing listing of substances and causes of sensitizations, updated November 2011

KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Revisions/Updates

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