

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

VISOCOLOR HE Manganese Page: 1/12

Date of issue: 20.05.2019 Printing date: 01.10.2019

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

1.1 **Product identifier**

REF 920055

Product name VISOCOLOR HE Manganese

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 30 mL Mn-1 1 x 28 mL Mn-2 1 x 22 mL Mn-3

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

Relevant identified uses

Product for analytical use.

Exposure Scenario Classification according REACh, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0

The exposure scenario is integrated into sections 1-16.

Uses advised against

not described

1.3 Details of the supplier of the safety data sheet

Manufactured by:

MACHEREY-NAGEL GmbH & Co. KG

Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY

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

1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service. DE: Gemeinsames Giftinformationszentrum (GGIZ) 99089 Erfurt tel. +49 361 730 730

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

SECTION 2: Hazard identification

Signal word

2.0 Classification of the complete product



DANGER









GHS09

US:

GHS02

GHS05 GHS07

GHS08

Hazard identification	Hazard classes/categories
H226	Flam. Lig. 3
H290	Met. Corr. 1
H302	Acute Tox. 4 oral
H312	Acute Tox. 4 derm.
H314	Skin Corr. 1B
H315	Skin Irrit. 2
H317	Skin Sens. 1
H319	Eye Irrit. 2
H332	Acute Tox. 4 inh.
H335, H336	STOT SE 3
H351	Carc. 2
H371	STOT SE 2
H373	STOT RE 2
H400	Aquatic Acute 1

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2.1 Classification of the substance or mixture

30 mL Mn-1





Signal word	WARNING
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Hazard identification	Hazard classes/categories
H290	Met. Corr. 1
H302	Acute Tox. 4 oral
H312	Acute Tox. 4 derm.
H317	Skin Sens. 1
H351	Carc. 2
H373	STOT RE 2

28 mL Mn-2







GHS07

GHS09

Signal word **DANGER**

Hazard identification	Hazard classes/categories
H314	Skin Corr. 1B
H335, H336	STOT SE 3
H400	Δαμαtic Δαμτρ 1

22 mL Mn-3







Signal word	WARNING

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
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
H332	Acute Tox. 4 inh.
H351	Carc. 2
H371	STOT SE 2
H373	STOT RE 2

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

Harmful chemicals/mixtures with signal word: WARNING and highly flammable chemicals/mixtures 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 solutionsdo 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).

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30 mL Mn-1





Signal word: WARNING

H317, H351

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

P201, P261sh, P280sh

Obtain special instructions before use. Avoid breathing dust/vapours. Wear protective gloves/eye protection.

28 mL Mn-2







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.

22 mL Mn-3







GHS07

Signal word: WARNING

H317, H351

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

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

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. Flammable properties.

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 oral intake, 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.

PRTnot applicable vPvB: not applicable

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Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

30 mL Mn-1

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: (CH₂O)_nTSCA Inventory: listed

RTECS: RV0540000 MFCD: 00133991

Concentration: 1 - <3 %

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

Chemical: hydroxylammonium chloride CAS No.: 5470-11-1

H290, Met. Corr. 1, H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H315, Skin Irrit. 2, H317, Classification:

Skin Sens. 1, H319, Eye Irrit. 2, H351, Carc. 2, H373, STOT RE 2, H400, Aquatic Acute 1

NH2 OH•HCI/ H4 CINO Formula: Pseudonym: hydroxylamin hydrochloride

TSCA Inventory: listed

REACH Reg. No.: as intermediate EC No.: 226-798-2

Indice No.: 612-123-00-2 NC3675000 RTECS: MFCD: 00051089

KE-20602, >1% Toxic 97-1-411 KE No.:

Concentration: 5 - < 10 %

acc. CLP (GHS): H290, Met. Corr. 1, H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H317, Skin Sens. 1, H351,

Carc. 2, H373, STOT RE 2

28 mL Mn-2

CAS No.: 1336-21-6 Chemical: ammonia solution

Classification: H314, Skin Corr. 1B, H335, STOT SE 3, H400, Aquatic Acute 1

NH₃ •H₂ O Formula:

Pseudonym: ammonium hydroxide, Aqua ammonia, aqueous ammonia

TSCA Inventory: listed

REACH Reg. No.: 01-2119488876-14-xxxx, 01-2119982985-14-XXXX

007-001-01-2 EC No.: 215-647-6 Indice No.: RTECS: BQ9625000 MFCD: 00011418

KE-01688, >10% Toxic 97-1-184 KF No ·

Concentration: 16 - < 25 %

acc. CLP (GHS): H314, Skin Corr. 1B, H335, STOT SE 3, H400, Aquatic Acute 1

22 mL Mn-3

Chemical: CAS No.: 5470-11-1 hydroxylammonium chloride

H290, Met. Corr. 1, H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H315, Skin Irrit. 2, H317, Classification:

Skin Sens. 1, H319, Eye Irrit. 2, H351, Carc. 2, H373, STOT RE 2, H400, Aquatic Acute 1

Formula: NH₂ OH•HCI/ H₄ CINO Pseudonym: hydroxylamin hydrochloride

TSCA Inventory: listed

REACH Reg. No.: as intermediate

EC No.: 226-798-2 Indice No.: 612-123-00-2 RTFCS: NC3675000 MFCD: 00051089

KE-20602, >1% Toxic 97-1-411 KE No.:

Concentration: 10 - <25 %

acc. CLP (GHS): 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

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Chemical: methanol CAS No.: 67-56-1

Classification: H225, Flam. Lig. 2, H301, Acute Tox. 3 oral, H311, Acute Tox. 3 derm., H331, Acute Tox. 3 inh.,

H370, STOT SE 1 Formula: CH₄ O, CH₃ OH

TSCA Inventory: listed

REACH Reg. No.: 01-2119433307-44-xxxx

EC No.: 200-659-6 Indice No.: 603-001-00-X RTECS: PC1400000 MFCD: 00004595

KE No.: KE-23193, Toxic 97-1-80 Concentration: 3 - <10 %

acc. CLP (GHS): H226, Flam. Lig. 3, H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H332, Acute Tox. 4 inh.,

H371, STÒT SÉ 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

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. Carcinogenic 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 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. 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

WARNING: Flammable (GHS regulation). May form explosive vapour-air mixtures. 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.

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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

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): 3 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

30 mL Mn-1

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

1.5 mg/m³ TRGS 900 (DE): 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

28 mL Mn-2

CAS No.: 1336-21-6 Chemical: ammonia solution

[inh] 14 mg/m³ Level (for workers) DNEL: DNEL = Derived No-Effect PNEC (fresh water): 0.0011 mg/L PNEC = Predicted No Effected Concentration

EU value: 20 ppm / 14 mg/m³ 20 ppm / 14 mg/m³ E/e respirable TRGS 900 (DE):

2 (I), Y Short-term exposure factor:

skin resorptive (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

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

Yes (TQ = 15000 lbs) - n/a; [TWA] 50 ppm / 35 mg/m³ OSHA:

22 mL Mn-3

Chemical: hydroxylammonium chloride CAS No.: 5470-11-1

TRGS 900 (DE): 1.5 mg/m³ 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: methanol CAS No.: 67-56-1

DNEL: [derm] 40 mg/kg bw/day; [inh] 260 mg/m³

DNEL = Derived No-Effect

 $\begin{array}{ccc} \text{PNEC}_{(\text{fresh water})}: & 20.8 \text{ mg/L} \\ \text{PNEC} = \text{Predicted No Effected Concentration} \end{array}$

[TWA] 200 ppm / 260 mg/m³ EU value: TRGS 900 (DE): 200 ppm / 270 mg/m³

Short-term exposure factor: 4 (II), H, Y skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 200 ppm/ 260 mg/m³ SUVA(CH) BAT value: [U/c,b] 30 mg/L TRGS 903 (DE):

U/c,b 30 mg/L B blood, U urine, a no limitation, b end of exposition or shift

NIOSH: [TWA, skin] 200 ppm / 260 mg/m³

NIOSH STEL: 250 ppm / 325 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] 200 ppm / 260 mg/m³

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

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

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

Information on basic physical and chemical properties 9.1

30 ml Mn-1

Appearance: liquid Colour: colourless Odor: penetrative

28 mL Mn-2

Appearance: liquid Colour: colourless Odor: aminic

10-11 Specific gravity: 0,89 g/cm³

22 mL Mn-3

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> Appearance: liquid Colour: colourless Odor: alcoholic

Other information 9.2

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

SECTION 10: Stability and reactivity

10.1 Reactivity

no further data available.

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

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.

30 mL Mn-1

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 PDSCL: 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.

CAS No.: 5470-11-1 Chemical: hydroxylammonium chloride

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

141 mg/kg

LD50_{orl rat}: 141 mg/kg
Acute Effects: Cause after oral intake, inhalation of vapours/dust, skin contact, impairments of health when ingested in small

quantities.

Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause damage to organs

through prolonged or repeated exposure.

Carcinogenic Effects: Suspected of causing cancer.

TRGS 907 (DE): Sh

28 mL Mn-2

Chemical: ammonia solution CAS No.: 1336-21-6

TSCA Inventory: California Proposition 65 List: not listed

inhalation, ingestion (solution), skin and/or eye contact (solution/liquid) **Exposure Routes:**

Target Organs: Eyes, skin, respiratory system

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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 CŚCL/PRTR:not listed, Japan PDSCL: Deleterious SubstanceJapan 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.

22 mL Mn-3

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 oral intake, inhalation of vapours/dust, skin contact, impairments of health when ingested in small

quantities.

Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause damage to organs

through prolonged or repeated exposure.

Carcinogenic Effects: Suspected of causing cancer.

TRGS 907 (DE): Sh

Chemical: methanol CAS No.: 67-56-1
TSCA Inventory: listed California Proposition 65 List: listed, developmental

ACGIH: 200 ppm / 160 mg/m³

Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact

Target Organs: Eyes, skin, respiratory system, central nervous system, gastrointestinal tract

Symptoms: irritation eyes, skin, upper respiratory system; headache, drowsiness, dizziness, nausea, vomiting;

visual disturbance, optic nerve damage (blindness

Australia NICNAS: Canada CEPA 1999: DSL yes

Japan CSCL/PRTR: PAC yes, Japan PDSCL: Deleterious Substance Japan ISHL: PAC yes, Japan PDSCL: Deleterious Substance listed ≥0,3%/≥0,1%, Article 57-2 (SDS required)

South Korea TCCA: Accident Precaution Chemical yes

Korea Exist.Chem.Inventory: KE-23193, Toxic 97-1-80

 LD50_{orl} rat:
 5628 mg/kg

 LC_Lowihl rat:
 [4h] 64000 mg/m³

 LC_Low_{orl} hmn:
 143 mg/kg

 LC50_{ihl rat}:
 [4h] >80 mg/L

 LD50_{drm rbt}:
 15800 mg/kg

 LD50_{orl mus}:
 7300 mg/kg

Acute Effects: Cause after oral intake, inhalation of vapours/dust, skin contact, impairments of health when ingested in small

quantities. Chronic Effects:

TRGS 905 (DE): R_F C

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

30 mL Mn-1

Chemical: paraformaldehyde CAS No.: 30525-89-4

Water hazard class (DE): 2 Storage class (VCI): 1

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> hvdroxvlammonium chloride CAS No.: 5470-11-1 Chemical:

LC50leuciscus idus/96h 1-10 mg/L Water hazard class (DE): 3 Storage class (VCI): 4.1 A

28 mL Mn-2

Chemical: ammonia solution CAS No.: 1336-21-6

Very toxic to aquatic life. Avoid contact of substance/mixture to environment.

Environmental hazards must not be labelled with H and P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).

PNEC (fresh water):
PNEC = Predicted No Effected Concentration 0.0011 mg/L

LC50_{fish/96h}: 0,89 mg/L EC50daphnia/48h: 101 mg/L

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

Storage class (VCI): 8 B

22 mL Mn-3

Chemical: hydroxylammonium chloride CAS No.: 5470-11-1

LC50leuciscus idus/96h 1-10 mg/L Water hazard class (DE): 3 Storage class (VCI): 4 1 A

CAS No.: 67-56-1 Chemical: methanol

PNEC (fresh water):
PNEC = Predicted No Effected Concentration 20.8 mg/L

LC50daphnia magna/48h: [24h] 23.5 g/L 29.4 g/L LC50pimephales promelas/96h: 15.4 g/L $LC50_{fish/96h}$: EC50_{daphnia/48h}: >10 g/L

IC50_{scenedesmus} quadricauda/72h: [IC5 8d] 8000 mg/L EC10_{pseudomonas putita/16h}: [EC5] 6.6 g/L Water hazard class (DE): WGK No.: 0145

Dispersion coefficient(octanol-water) -0.77Storage class (VCI):

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

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

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

Classification code: Tunnel restriction code:

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

Air transport

960 PAX: max. weight PAX: 10 KG

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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 III, **Excepted Quantities** (≤30 mL/∑≤1 L) = ADR/ IATA E1

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: III

Road transport

Classification code: C5

Limited Quantity: 5 L Tunnel restriction code: E

Excepted Quantity: E 1
Air transport

PAX: 852 max. weight PAX: 5 L CAO: 856 max. weight CAO: 60 L

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

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

H317

H226 Flammable liquid and vapour.
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

H315 Causes skin irritation.

H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H371 May cause damage to organs.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

16.1.2 List of relevant P phrases

P201 Obtain special instructions before use.

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> P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P260sh Do not breathe dust/vapours. P261sh Avoid breathing dust/vapours.

P264W Wash with water thoroughly after handling. P273 Avoid release to the environment. P280sh Wear protective gloves/eye protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. P301+312

P302+352 IF ON SKIN: Wash with plenty of water.

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

P330 Rinse mouth.

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.

16.4 **Further information**

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

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16.5 Sources of key data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS

Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress Regulation 669/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress

TRGS 900, German engineering rules governing limits in air at work, updated 03/2018

SUVA .CH, Limits in air at work 2009, revised on 01.2009

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

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