

Safety Data Sheet

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

REF: 920055	VISOCOLOR HE Manganese	Page: 1/12
Printing date: 02.06.2020	Date of issue: 01.04.2020	

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

2.0 Classification of the complete product



Signal word DANGER

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

Safety Data Sheet

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

REF: 920055

VISOCOLOR HE Manganese

Page: 2/12

Printing date: 02.06.2020

Date of issue: 01.04.2020

2.1 Classification of the substance or mixture

30 mL Mn-1



GHS07 GHS08

Signal word

WARNING

Hazard identification

Hazard classes/categories

H290
H317
H351

Met. Corr. 1
Skin Sens. 1
Carc. 2

28 mL Mn-2



GHS05 GHS07 GHS09

Signal word

DANGER

Hazard identification

Hazard classes/categories

H314
H335, H336
H400

Skin Corr. 1B
STOT SE 3
Aquatic Acute 1

22 mL Mn-3



GHS02 GHS07 GHS08

Signal word

WARNING

Hazard identification

Hazard classes/categories

H226
H290
H302
H315
H317
H319
H351
H371
H373

Flam. Liq. 3
Met. Corr. 1
Acute Tox. 4 oral
Skin Irrit. 2
Skin Sens. 1
Eye Irrit. 2
Carc. 2
STOT SE 2
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).

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 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).

30 mL Mn-1

Safety Data Sheet

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

REF: 920055

VISOCOLOR HE Manganese

Page: 3/12

Printing date: 02.06.2020

Date of issue: 01.04.2020



GHS07



GHS08

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



GHS05



GHS07



GHS09

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



GHS02



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.

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.

PBT: not applicable

vPvB: not applicable

Other hazards

Safety Data Sheet

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

REF: 920055

VISOCOLOR HE Manganese

Page: 4/12

Printing date: 02.06.2020

Date of issue: 01.04.2020

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: $(\text{CH}_2\text{O})_n$
 TSCA Inventory: listed
 RTECS: RV0540000 MFCD: 00133991
 Concentration: 1 - <3 %
 acc. CLP (GHS): H317, Skin Sens. 1, H351, Carc. 2

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: $\text{NH}_2\text{OH}\cdot\text{HCl}/\text{H}_4\text{ClNO}$
 Pseudonym: hydroxylamin hydrochloride
 TSCA Inventory: listed
 REACH Reg. No.: as intermediate
 EC No.: 226-798-2 Index 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

28 mL Mn-2

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 Index No.: 007-001-01-2
 RTECS: BQ9625000 MFCD: 00011418
 KE No.: KE-01688, >10% Toxic 97-1-184
 Concentration: 16 - <25 %
 acc. CLP (GHS): H314, Skin Corr. 1B, H335, STOT SE 3, H400, Aquatic Acute 1

22 mL Mn-3

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: $\text{NH}_2\text{OH}\cdot\text{HCl}/\text{H}_4\text{ClNO}$
 Pseudonym: hydroxylamin hydrochloride
 TSCA Inventory: listed
 REACH Reg. No.: as intermediate
 EC No.: 226-798-2 Index No.: 612-123-00-2
 RTECS: NC3675000 MFCD: 00051089
 KE No.: KE-20602, >1% Toxic 97-1-411
 Concentration: 10 - <25 %
 acc. CLP (GHS): H290, Met. Corr. 1, H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H317, Skin Sens. 1, H319, Eye Irrit. 2, H351, Carc. 2, H373, STOT RE 2

Chemical: *methanol* CAS No.: 67-56-1
 Classification: H225, Flam. Liq. 2, H301, Acute Tox. 3 oral, H311, Acute Tox. 3 derm., H331, Acute Tox. 3 inh., H370, STOT SE 1
 Formula: $\text{CH}_4\text{O}, \text{CH}_3\text{OH}$
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119433307-44-xxxx
 EC No.: 200-659-6 Index No.: 603-001-00-X
 RTECS: PC1400000 MFCD: 00004595
 KE No.: KE-23193, Toxic 97-1-80
 Concentration: 2.5 - <10 %
 acc. CLP (GHS): H226, Flam. Liq. 3, H302, Acute Tox. 4 oral, H371, STOT SE 2

Safety Data Sheet

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

REF: 920055

VISOCOLOR HE Manganese

Page: 5/12

Printing date: 02.06.2020

Date of issue: 01.04.2020

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. 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 DISTRESSES 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.

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.

Safety Data Sheet

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

REF: 920055

VISOCOLOR HE Manganese

Page: 6/12

Printing date: 02.06.2020

Date of issue: 01.04.2020

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.: 5470-11-1TRGS 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

28 mL Mn-2

Chemical: *ammonia solution* CAS No.: 1336-21-6DNEL: [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/m³TRGS 900 (DE): 20 ppm / 14 mg/m³

E/e respirable

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

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/m³NIOSH: [TWA] 25 ppm / 18 mg/m³NIOSH 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

22 mL Mn-3

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

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Safety Data Sheet

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

REF: 920055

VISOCOLOR HE Manganese

Page: 8/12

Printing date: 02.06.2020

Date of issue: 01.04.2020

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:	<i>paraformaldehyde</i>	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.

Chemical:	<i>hydroxylammonium chloride</i>	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

28 mL Mn-2

Chemical:	<i>ammonia solution</i>	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 _{LoWhl hmn} :	5000 mg/m ³		

Safety Data Sheet

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

REF: 920055

VISOCOLOR HE Manganese

Page: 9/12

Printing date: 02.06.2020

Date of issue: 01.04.2020

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, 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: 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_{LoWi}_{ihl rat}: [4h] 64000 mg/m³
 LC_{LoWo}_{orl hm}: 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, 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): 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

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): 0.0011 mg/L
 PNEC = Predicted No Effect Concentration
 LC50_{fish/96h}: 0,89 mg/L
 EC50_{daphnia/48h}: 101 mg/L

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Safety Data Sheet

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

REF: 920055	VISOCOLOR HE Manganese	Page: 10/12
Printing date: 02.06.2020	Date of issue: 01.04.2020	

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
 LC50_{leuciscus idus/96h}: 1-10 mg/L
 Water hazard class (DE): 3
 Storage class (VCI): 4.1 A

Chemical: *methanol* CAS No.: 67-56-1
 PNEC_(fresh water): 20.8 mg/L
 PNEC = Predicted No Effect Concentration
 LC50_{daphnia magna/48h}: [24h] 23.5 g/L
 LC50_{pimephales promelas/96h}: 29.4 g/L
 LC50_{fish/96h}: 15.4 g/L
 EC50_{daphnia/48h}: >10 g/L
 IC50_{scenedesmus quadricauda/72h}: [IC5 8d] 8000 mg/L
 EC10_{pseudomonas putida/16h}: [EC5] 6.6 g/L
 Water hazard class (DE): 1 WGK No.: 0145
 Dispersion coefficient_(octanol-water): -0.77
 Storage class (VCI): 3

- 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 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 III, **Excepted Quantities** ($\leq 30 \text{ mL} / \sum \leq 1 \text{ L}$) = 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



Safety Data Sheet

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

REF: 920055

VISOCOLOR HE Manganese

Page: 11/12

Printing date: 02.06.2020

Date of issue: 01.04.2020

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: A

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

H226 Flammable liquid and vapour.
 H290 May be corrosive to metals.
 H302 Harmful if swallowed.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 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.
 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.
 P301+312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 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.
 P330 Rinse mouth.
 P390 Absorb spillage to prevent material damage.
 P403+233 Store in a well-ventilated place. Keep container tightly closed.

Safety Data Sheet

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

REF: 920055	VISOCOLOR HE Manganese	Page: 12/12
Printing date: 02.06.2020	Date of issue: 01.04.2020	

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
 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

