

Safety Data Sheet

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

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

1.1 Product identifier

REF 920015
 Product name VISOCOLOR HE Chlorine

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 24 g Cl₂ -1
- 1 x 100 mL Cl₂ -2
- 1 x 30 mL Cl₂ -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

Information not necessary.

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

2.1 Classification of the substance or mixture

24 g Cl₂ -1

Signal word Do not need labelling as hazardous
 -

No hazard class

100 mL Cl₂ -2

Signal word Do not need labelling as hazardous
 -

No hazard class

30 mL Cl₂ -3

Signal word Do not need labelling as hazardous
 -

No hazard class



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2.2 Label elements

24 g Cl₂ -1

Do not need labelling as hazardous
Signal word: -

100 mL Cl₂ -2

Do not need labelling as hazardous
Signal word: -

30 mL Cl₂ -3

Do not need labelling as hazardous
Signal word: -

2.3 Other hazards

Possible hazards from physicochemical properties

According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit. An individual package has considerably less hazardous potential. ---

Information pertaining to particular risks to human and possible symptoms

Information pertaining to particular risks to the environment

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

24 g Cl₂ -1

Chemical:	<i>boric acid</i>	CAS No.:	10043-35-3
Classification:	H360FD, Repr. 1B		
Formula:	H ₃ BO ₃		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119486683-25-0024		
SVHC listed:	listed (18/06/2010)		
EC No.:	233-139-2	Indice No.:	005-007-00-2
RTECS:	ED4550000	MFCD:	00011337
KE No.:	KE-03499		
Concentration:	0,5 - <5,5 %	Correlation factor:	x 0.17 (= %B)
The classification refers to weight percent of the metal (according to CLP Regulation 2008/1272/EC Annex VI, 1.1.3.2 Note 1)			
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

Chemical:	<i>tri-sodium citrate</i>	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 •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:	40 - <60 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

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Chemical: *N,N-Diethyl-1,4-phenylene diammonium sulfate* CAS No.: 6283-63-2
 Classification: H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm.
 Formula: C₁₀ H₁₆ N₂ •H₂ O
 Pseudonym: N,N-diethylbenzene-1,4-diammonium sulfate
 TSCA Inventory: listed (CAS 6065-27-6)
 EC No.: 228-500-6 Indice No.: 612-080-00-X
 RTECS: SS9625000 MFCD: 00012993
 Concentration: 1 - <5 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *potassium dihydrogen phosphate* CAS No.: 7778-77-0
 Classification: No criteria for classification or naming of chemical not required.
 Formula: KH₂ PO₄
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119490224-41-XXXX
 EC No.: 231-913-4
 RTECS: TC6615500 MFCD: 00011401
 KE No.: KE-28622
 Concentration: 5 - <25 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

100 mL Cl₂ -2

Chemical: *phosphate buffer solution* CAS No.: -
 Classification: No criteria for classification or naming of chemical not required.
 Formula: K/Na₁₋₃ H₂₋₀ PO₄ • x H₂ O
 TSCA Inventory: all listed
 KE No.: listed
 Concentration: 5 - <20 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

30 mL Cl₂ -3

Chemical: *potassium iodide* CAS No.: 7681-11-0
 Classification: H319, Eye Irrit. 2
 Formula: KI
 TSCA Inventory: listed
 REACH Reg. No.: YES, confidential
 EC No.: 231-659-4
 RTECS: TT2975000 MFCD: 00011405
 KE No.: not listed
 Concentration: 1 - <10 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *water* CAS No.: 7732-18-5
 Classification: No criteria for classification or naming of chemical not required.
 Formula: H₂ O
 TSCA Inventory: listed
 REACH Reg. No.: exempt, Annex IV
 EC No.: 231-791-2
 RTECS: ZC0110000
 KE No.: KE-35400
 Concentration: 90 - <100 %
 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%.

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately.

4.1.1 After SKIN Contact



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Not necessary.

4.1.2 After EYE Contact
Not necessary.

4.1.3 After INHALATION of vapours
Not necessary. ---

4.1.4 After ORAL Intake
Not necessary. ---

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

No additionally recommendations. ---

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

None.

5.3 Advice for firefighters

No, for listed product. Product package burns like paper or plastic.

5.4 Additional information

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Not necessary.

6.2 Environmental precautions

not necessary

6.3 Methods and material for containment and cleaning up

Clean working area with water. Flush used water into drains.

6.4 Reference to other sections

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): 6.1D

Water hazard class (DE): 3

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)

Product for analytical use.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

24 g Cl₂ -1

Chemical: *boric acid* CAS No.: 10043-35-3

DNEL: [derm] 392 mg/kg bw/day; [inh] 8.3 mg/m³
DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): 2.9 mg/L
PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 0.5 E 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: [Bor][MAK] 1,8e/[STEL] 1,8e mg/m³

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

Chemical: *N,N-Diethyl-1,4-phenylene diammonium sulfate* CAS No.: 6283-63-2

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: *potassium dihydrogen phosphate* CAS No.: 7778-77-0

100 mL Cl₂ -2

Chemical: *phosphate buffer solution* CAS No.: -

30 mL Cl₂ -3

Chemical: *potassium iodide* CAS No.: 7681-11-0

Chemical: *water* CAS No.: 7732-18-5

8.2 Exposure controls

Not necessary. Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities.

8.2.1 Respiratory protection

Not necessary.

8.2.2 Hand protection

Not necessary.

8.2.3 Eye protection

Not necessary.

8.2.4 Skin protection

Not necessary.

8.2.5 Personal hygiene

Information not necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

24 g Cl₂ -1

Appearance: powder (solid) Colour: colourless Odor: odorless

pH: 6

Solubility in water: 0-5 %

100 mL Cl₂ -2

Appearance: liquid Colour: colourless Odor: odorless

pH: 6-7

Specific gravity: 1,02 g/cm³

Solubility in water: 0-100 %

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30 mL Cl₂ -3

Appearance: liquid

Colour: colourless

Odor: odorless

Flash point:

N/A

Specific gravity:

1.0 g/cm³

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

None

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Not known. ---

10.5 Incompatible materials

Not known.

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.

24 g Cl₂ -1

Chemical:	<i>boric acid</i>	CAS No.: 10043-35-3
TSCA Inventory:	listed	California Proposition 65 List: not listed
Australia NICNAS:	not listed	Canada CEPA 1999: DSL yes
Japan CSCL/PRTR:	PRTR: ≥1,0%B class I, Japan PDSCL: not listed	
Japan ISHL:	not listed	
South Korea TCCA:	not listed	
Korea Exist.Chem.Inventory:	KE-03499	
LD50 _{orl rat} :	>3765 mg/kg	
LC50 _{ihl rat} :	> 2 mg/m ³	
LD50 _{drm rat} :	>2000 mg/kg	

EU carcinogen:	R _D 1B, R _F 1B
TRGS 905 (DE):	R _E 2, R _F 2

Chemical:	<i>tri-sodium citrate</i>	CAS No.: 6132-04-3
TSCA Inventory:	listed (CAS 68-04-2)	
Korea Exist.Chem.Inventory:	KE-20843	
LD50 _{orl rat} :	>8000 mg/kg	

Chemical:	<i>N,N-Diethyl-1,4-phenylene diammonium sulfate</i>	CAS No.: 6283-63-2
TSCA Inventory:	listed (CAS 6065-27-6)	California Proposition 65 List: not listed
Australia NICNAS:	not listed	Canada CEPA 1999: not listed
Japan CSCL/PRTR:	not listed, Japan PDSCL: not listed	
Japan ISHL:	not listed	
South Korea TCCA:	not listed	
LD50 _{orl rat} :	497 mg/kg	

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30 mL Cl₂ -3

Chemical: *potassium iodide*
 LC50_{fish/96h}: 2190 mg/L
 Water hazard class (DE): 1
 Dispersion coefficient_(octanol-water): 0.04
 Storage class (VCI): 12-13

CAS No.: 7681-11-0

Chemical: *water*

CAS No.: 7732-18-5

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

Not necessary.

13.1 Waste treatment methods

GENERAL: Empty solids into municipal waste, empty liquids diluted into drains. Normally it is possible to empty small amounts (diluted!) into drains. **Not for mercury containing test solutions, please collect for disposal of hazardous waste.**

SECTION 14: Transport information

14.1 - 14.4: No dangerous goods according the transport regulations

14.5 Environmental hazards

none

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
 MN Leaflet/User manual, also see www.mn-net.com
 Look for your country-specific regulations.

15.2 Chemical safety assessment

SECTION 16: Other information

16.1 List of H and P phrases

16.1.1 List of relevant H phrases

16.1.2 List of relevant P phrases

16.2 Training advice

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Regular safety training.

16.3 Recommended restriction on use

None

16.4 Further information

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16.5 Sources of key data

- Regulation 790/2009/EU adaptation of CLP regulation 1272/2008/EU to technical and scientific progress
- 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
- KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Revisions/Updates

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

