

# Safety Data Sheet

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

REF: 985017

NANOCOLOR Chlorine/Ozone 2

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Printing date: 02.06.2020

Date of issue: 15.10.2018

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

### 1.1 Product identifier

REF 985017  
Product name NANOCOLOR Chlorine/Ozone 2

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 5 mL Chlorine/Ozone 2 R2  
20 x 95 mg Chlorine/Ozone 2, lyophilized (R0)

### 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](mailto:sds@mn-net.com) ([msds@mn-net.com](mailto: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

#### 5 mL Chlorine/Ozone 2 R2

Signal word Do not need labelling as hazardous  
-

No hazard class

#### 95 mg Chlorine/Ozone 2, lyophilized (R0)

Signal word Do not need labelling as hazardous  
-

No hazard class

### 2.2 Label elements

#### 5 mL Chlorine/Ozone 2 R2

Do not need labelling as hazardous  
Signal word: -

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## 95 mg Chlorine/Ozone 2, lyophilized (R0)

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

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#### Information pertaining to particular risks to the environment

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#### Other hazards

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances or 3.2 Mixtures

#### 5 mL Chlorine/Ozone 2 R2

Chemical:	<i>potassium iodide</i>	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:	TT29750000	MFCID:	00011405
KE No.:	not listed		
Concentration:	1 - <10 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

Chemical:	<i>water</i>	CAS No.:	7732-18-5
Classification:	No criteria for classification or naming of chemical not required.		
Formula:	H <sub>2</sub> 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.		

#### 95 mg Chlorine/Ozone 2, lyophilized (R0)

Chemical:	<i>boric acid</i>	CAS No.:	10043-35-3
Classification:	H360FD, Repr. 1B		
Formula:	H <sub>3</sub> BO <sub>3</sub>		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119486683-25-0024		
<b>SVHC listed:</b>	<b>listed (18/06/2010)</b>		
EC No.:	233-139-2	Indice No.:	005-007-00-2
RTECS:	ED4550000	MFCID:	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.		

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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: C<sub>10</sub> H<sub>16</sub> N<sub>2</sub> •H<sub>2</sub> 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: *phosphates (buffer salts)* CAS No.: -  
 Classification: No criteria for classification or naming of chemical not required.  
 Formula: K/Na<sub>1-3</sub> H<sub>2-0</sub> PO<sub>4</sub>  
 TSCA Inventory: all listed  
 KE No.: listed  
 Concentration: 5 - <15 %  
 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%.

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## 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

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

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### 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

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Not necessary.

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## 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

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## 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.

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.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### 5 mL Chlorine/Ozone 2 R2

Chemical: *potassium iodide*

CAS No.: 7681-11-0

Chemical: *water*

CAS No.: 7732-18-5

#### 95 mg Chlorine/Ozone 2, lyophilized (R0)

Chemical: *boric acid*

CAS No.: 10043-35-3

DNEL: [derm] 392 mg/kg bw/day; [inh] 8.3 mg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)

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

TRGS 900 (DE): 0.5 E mg/m<sup>3</sup>  
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/m<sup>3</sup>

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: *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: *phosphates (buffer salts)*

CAS No.: -

### 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

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- 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

#### 5 mL Chlorine/Ozone 2 R2

Appearance: liquid	Colour: colourless	Odor: odorless
Flash point:	N/A	
Specific gravity:	1.0 g/cm <sup>3</sup>	

#### 95 mg Chlorine/Ozone 2, lyophilized (R0)

Appearance: solid	Colour: colourless	Odor: odorless
pH:	6,4	
Solubility in water:	0-100 %	

### 9.2 Other information

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

#### Relevant Properties of Substance Group

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## 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. Observe labeled storage temperature. ---

### 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.

#### 5 mL Chlorine/Ozone 2 R2

Chemical:	<i>potassium iodide</i>	CAS No.: 7681-11-0
TSCA Inventory:	listed	
Korea Exist.Chem.Inventory:	not listed	
LD50 <sub>orl rat</sub> :	2779 mg/kg	

Chemical:	<i>water</i>	CAS No.: 7732-18-5
TSCA Inventory:	listed	
Korea Exist.Chem.Inventory:	KE-35400	

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## 95 mg Chlorine/Ozone 2, lyophilized (R0)

Chemical: *boric acid* 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<sub>orl rat</sub>: >3765 mg/kg  
 LC50<sub>ihl rat</sub>: > 2 mg/m<sup>3</sup>  
 LD50<sub>drm rat</sub>: >2000 mg/kg

EU carcinogen: R<sub>D</sub> 1B, R<sub>F</sub> 1B  
 TRGS 905 (DE): R<sub>E</sub> 2, R<sub>F</sub> 2

Chemical: *N,N-Diethyl-1,4-phenylene diammonium sulfate* 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<sub>orl rat</sub>: 497 mg/kg

Chemical: *phosphates (buffer salts)* CAS No.: -  
 TSCA Inventory: all listed  
 Korea Exist.Chem.Inventory: listed  
 LD50<sub>orl rat</sub>: > 2000 mg/kg

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 5 mL Chlorine/Ozone 2 R2

Chemical: *potassium iodide* CAS No.: 7681-11-0  
 LC50<sub>fish/96h</sub>: 2190 mg/L  
 Water hazard class (DE): 1  
 Dispersion coefficient<sub>(octanol-water)</sub>: 0.04  
 Storage class (VCI): 12-13

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

#### 95 mg Chlorine/Ozone 2, lyophilized (R0)

Chemical: *boric acid* CAS No.: 10043-35-3  
 PNEC<sub>(fresh water)</sub>: 2.9 mg/L  
 PNEC = Predicted No Effect Concentration  
 LC50<sub>fish/96h</sub>: [4d] 79.7 mg/L  
 EC50<sub>daphnia/48h</sub>: 91-165 mg/L  
 IC50<sub>scenedesmus quadricauda/72h</sub>: [72h] 52.4 mg/L  
 EC10<sub>pseudomonas putita/16h</sub>: [EC10] 10 mg/L  
 Water hazard class (DE): 1 WGK No.: 0315  
 Dispersion coefficient<sub>(octanol-water)</sub>: -1.09  
 Storage class (VCI): 6.1 D

Chemical: *N,N-Diethyl-1,4-phenylene diammonium sulfate* CAS No.: 6283-63-2  
 Water hazard class (DE): 3  
 Storage class (VCI): 12-13

Chemical: *phosphates (buffer salts)* CAS No.: -  
 Water hazard class (DE): 1  
 Storage class (VCI): 13

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- 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.

## SECTION 14: Transport information

14.1 - 14.4 Not necessary

- 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](http://www.mn-net.com)  
Look for your country-specific regulations.
- 15.2 Chemical safety assessment**  
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## 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**  
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, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress  
Regulation 669/2018/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress  
Regulation 1480/2018/EU, 4<sup>th</sup> 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  
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

### Revisions/Updates

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