

# Safety Data Sheet

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

REF: 985014	NANOCOLOR Cadmium 2	Page: 1/8
Printing date: 02.06.2020	Date of issue: 20.05.2019	

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

### 1.1 Product identifier

REF 985014  
 Product name NANOCOLOR Cadmium 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 Cadmium 2 (R2)  
 20 x Sprache noch nicht definiert!

### 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

**5 mL Cadmium 2 (R2)**

Signal word Do not need labelling as hazardous  
 -  
 No hazard class

**Sprache noch nicht definiert!**

Signal word Do not need labelling as hazardous  
 -  
 No hazard class

### 2.2 Label elements

**5 mL Cadmium 2 (R2)**

Do not need labelling as hazardous  
 Signal word: -



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## Sprache noch nicht definiert!

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 Cadmium 2 (R2)

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	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>citrate buffer solution</i>	CAS No.:	-
Classification:	No criteria for classification or naming of chemical not required.		
TSCA Inventory:	all listed		
KE No.:	listed		
Concentration:	1 - <10 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

#### Sprache noch nicht definiert!

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	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>citrate buffer solution</i>	CAS No.:	-
Classification:	No criteria for classification or naming of chemical not required.		
TSCA Inventory:	all listed		
KE No.:	listed		
Concentration:	1 - <10 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

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## 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.

### 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): 1

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**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 Cadmium 2 (R2)**  
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<sup>(fresh water)</sup>: 2.9 mg/L  
PNEC = Predicted No Effected 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: *citrate buffer solution* CAS No.: -

**Sprache noch nicht definiert!**  
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)  
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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: *citrate buffer solution* 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**  
Not necessary.

**8.2.4 Skin protection**  
Not necessary.

**8.2.5 Personal hygiene**  
Information not necessary.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**5 mL Cadmium 2 (R2)**

Appearance: liquid  
pH:

Colour: colourless  
7-9

Odor: aminic

**Sprache noch nicht definiert!**

Appearance: liquid  
pH:

Colour: colourless  
7-9

Odor: aminic

### 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 Cadmium 2 (R2)**

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 <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:	<i>citrate buffer solution</i>	CAS No.: -
TSCA Inventory:	all listed	
Korea Exist.Chem.Inventory:	listed	

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## Sprache noch nicht definiert!

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 <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:	<i>citrate buffer solution</i>	CAS No.:	-
TSCA Inventory:	all listed		
Korea Exist.Chem.Inventory:	listed		

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 5 mL Cadmium 2 (R2)

Chemical:	<i>boric acid</i>	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:	<i>citrate buffer solution</i>	CAS No.:	-
Water hazard class (DE):	0		
Storage class (VCI):	12		

#### Sprache noch nicht definiert!

Chemical:	<i>boric acid</i>	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:	<i>citrate buffer solution</i>	CAS No.:	-
Water hazard class (DE):	0		
Storage class (VCI):	12		

### 12.2 Persistence and degradability

not necessary

### 12.3 Bioaccumulative potential

not necessary

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## 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

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 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

[www.mn-net.com](http://www.mn-net.com)



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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