

# Safety Data Sheet

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

REF: 918131

NANOCOLOR Cadmium, without CCl4

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Printing date: 02.06.2020

Date of issue: 15.03.2019

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

### 1.1 Product identifier

REF 918131  
 Product name NANOCOLOR Cadmium, without CCl4

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 50 mL Cadmium R1
- 1 x 5 g Cadmium R2
- 2 x 100 mL Cadmium R3
- 1 x 10 g Cadmium R4
- 1 x 5 g wadding

### 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

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



GHS05 GHS07

Signal word DANGER

Hazard identification	Hazard classes/categories
H290	Met. Corr. 1
H314	Skin Corr. 1A
H319	Eye Irrit. 2

### 2.1 Classification of the substance or mixture

50 mL Cadmium R1



GHS07

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Signal word                      WARNING

Hazard identification	Hazard classes/categories
H319	Eye Irrit. 2

**5 g Cadmium R2**

Signal word                      Do not need labelling as hazardous  
-

No hazard class

**100 mL Cadmium R3**



GHS05

Signal word                      DANGER

Hazard identification	Hazard classes/categories
H290	Met. Corr. 1
H314	Skin Corr. 1A

**10 g Cadmium R4**

Signal word                      Do not need labelling as hazardous  
-

No hazard class

**5 g wadding**

Signal word                      Do not need labelling as hazardous  
-

No hazard class

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

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).

**50 mL Cadmium R1**



GHS07

Signal word: WARNING

**5 g Cadmium R2**

Do not need labelling as hazardous  
Signal word: -

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## 100 mL Cadmium R3



GHS05

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.

## 10 g Cadmium R4

Do not need labelling as hazardous

Signal word: -

## 5 g wadding

Do not need labelling as hazardous

Signal word: -

## 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. H290 "May be corrosive to metals." has only relevance for higher concentrations and larger amounts. The labelling GHS05 would be creating an "OVERLABELLING" (see GHS Directive 1272/2008/EC Annex I, chapter 1.5.2.1.3., until 125 mL no labelling necessary). ---

### 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.

-

### Information pertaining to particular risks to the environment

Avoid contact of substance/mixture to environment.

**PBT:** not applicable

**vPvB:** not applicable

### Other hazards

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances or 3.2 Mixtures

#### 50 mL Cadmium R1

Chemical:	<i>citric acid</i>	CAS No.:	77-92-9
Classification:	H303, Acute Tox. 5 oral, H316, Skin Irrit. 3, H319, Eye Irrit. 2		
Formula:	C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>		
Pseudonym:	2-hydroxy-1,2,3-propanetricarboxylic acid		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119457026-42-xxxx		
EC No.:	201-069-1		
RTECS:	GE7350000/GE7810000		
KE No.:	KE-20831		
Concentration:	10 - <20 %		
acc. CLP (GHS):	H319, Eye Irrit. 2		

#### 5 g Cadmium R2

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Chemical: *Dithizone (metal indicator)* CAS No.: 60-10-6  
 Classification: H315, Skin Irrit. 2, H319, Eye Irrit. 2  
 Formula: C<sub>13</sub>H<sub>12</sub>N<sub>4</sub>S  
 Pseudonym: 2-phenyl-diazenecarbothioic acid-2-phenylhydrazide  
 TSCA Inventory: listed  
 EC No.: 200-454-1  
 RTECS: LQ9450000 MFCD: 00003025  
 Concentration: 0.1 - <1 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *sodium chloride* CAS No.: 7647-14-5  
 Classification: No criteria for classification or naming of chemical not required.  
 Formula: NaCl  
 Pseudonym: salt  
 TSCA Inventory: listed  
 REACH Reg. No.: exempt, Annex V  
 EC No.: 231-598-3  
 RTECS: VZ4725000  
 KE No.: KE-31387  
 Concentration: 50 - <80 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

### 100 mL Cadmium R3

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2  
 Classification: H290, Met. Corr. 1, H314, Skin Corr. 1B  
 Formula: NaOH•H<sub>2</sub>O  
 Pseudonym: soda lye  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119457892-27-xxxx  
 EC No.: 215-185-5 Indice No.: 011-002-00-6  
 RTECS: WB4900000  
 KE No.: KE-31487  
 Concentration: 20 - <35 %  
 acc. CLP (GHS): H290, Met. Corr. 1, H314, Skin Corr. 1B

### 10 g Cadmium R4

Chemical: *Dithizone (metal indicator)* CAS No.: 60-10-6  
 Classification: H315, Skin Irrit. 2, H319, Eye Irrit. 2  
 Formula: C<sub>13</sub>H<sub>12</sub>N<sub>4</sub>S  
 Pseudonym: 2-phenyl-diazenecarbothioic acid-2-phenylhydrazide  
 TSCA Inventory: listed  
 EC No.: 200-454-1  
 RTECS: LQ9450000 MFCD: 00003025  
 Concentration: 0.1 - <1 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *sodium chloride* CAS No.: 7647-14-5  
 Classification: No criteria for classification or naming of chemical not required.  
 Formula: NaCl  
 Pseudonym: salt  
 TSCA Inventory: listed  
 REACH Reg. No.: exempt, Annex V  
 EC No.: 231-598-3  
 RTECS: VZ4725000  
 KE No.: KE-31387  
 Concentration: 50 - <80 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

### 5 g wadding

## 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

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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. 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

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### 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. ---

## 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

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.

### 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.

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## 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): 8B

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

#### 50 mL Cadmium R1

Chemical: *citric acid*

CAS No.: 77-92-9

PNEC(fresh water): 440 mg/L

PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 2 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

#### 5 g Cadmium R2

Chemical: *Dithizone (metal indicator)*

CAS No.: 60-10-6

Chemical: *sodium chloride*

CAS No.: 7647-14-5

#### 100 mL Cadmium R3

Chemical: *sodium hydroxide solution*

CAS No.: 1310-73-2

DNEL: [inh] 1 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): 2 mg/m<sup>3</sup>  
E/e respirable

Short-term exposure factor: (=1=, Y)

skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 2 e mg/m<sup>3</sup>

NIOSH: 2 mg/m<sup>3</sup>

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

OSHA: [TWA] 2 mg/m<sup>3</sup>

#### 10 g Cadmium R4

Chemical: *Dithizone (metal indicator)*

CAS No.: 60-10-6

Chemical: *sodium chloride*

CAS No.: 7647-14-5

#### 5 g wadding

### 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

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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 Eye protection

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 Personal hygiene

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

### 9.1 Information on basic physical and chemical properties

#### 50 mL Cadmium R1

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	< 2	
Solubility in water:	0-100 %	

#### 5 g Cadmium R2

Appearance: powder (solid)	Colour: green	Odor: odorless
pH:	6-8	

#### 100 mL Cadmium R3

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	14	
Specific gravity:	1,31 g/cm <sup>3</sup>	
Solubility in water:	0-100 %	

#### 10 g Cadmium R4

Appearance: powder (solid)	Colour: green	Odor: odorless
pH:	6-8	

#### 5 g wadding

Appearance: solid	Colour: colourless	Odor: odorless
pH:	-	
Solubility in water:	-	

### 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

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. Observe labeled storage temperature. ---

### 10.5 Incompatible materials

Avoid contact with strong acids or alkalines.



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## 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.

#### 50 mL Cadmium R1

Chemical:	<i>citric acid</i>	CAS No.:	77-92-9
TSCA Inventory:	listed		
Korea Exist.Chem.Inventory:	KE-20831		
LD50 <sub>orl rat</sub> :	>3000 mg/kg		
LC50 <sub>ihl rat</sub> :	5800 mg/m <sup>3</sup>		
LD50 <sub>drm rat</sub> :	>2000 mg/kg		
LD50 <sub>orl mus</sub> :	5400 mg/kg		
LD50 <sub>scu rat</sub> :	5500 mg/kg		

#### 5 g Cadmium R2

Chemical:	<i>Dithizone (metal indicator)</i>	CAS No.:	60-10-6
TSCA Inventory:	listed		

Chemical:	<i>sodium chloride</i>	CAS No.:	7647-14-5
TSCA Inventory:	listed		
Korea Exist.Chem.Inventory:	KE-31387		
LD50 <sub>orl rat</sub> :	3000 mg/kg		
LD50 <sub>drm rbt</sub> :	10 g/kg		

#### 100 mL Cadmium R3

Chemical:	<i>sodium hydroxide solution</i>	CAS No.:	1310-73-2
TSCA Inventory:	listed	California Proposition 65 List:	not listed
Exposure Routes:	inhalation, ingestion, skin and/or eye contact		
Target Organs:	Eyes, skin, respiratory system		
Symptoms:	irritation eyes, skin, mucous membrane; pneumonitis; eye, skin burns; temporary loss of hair		
Australia NICNAS:	not listed	Canada CEPA 1999:	DSL Yes
Japan CSCL/PRTR:	not listed, Japan PDSCL: not listed		
Japan ISHL:	listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)		
South Korea TCCA:	not listed		
Korea Exist.Chem.Inventory:	KE-31487		
LD50 <sub>orl rat</sub> :	[40%] 1250 / [<25%] >2000 mg/kg		
LD50 <sub>orl mus</sub> :	40 mg/kg		

#### 10 g Cadmium R4

Chemical:	<i>Dithizone (metal indicator)</i>	CAS No.:	60-10-6
TSCA Inventory:	listed		

Chemical:	<i>sodium chloride</i>	CAS No.:	7647-14-5
TSCA Inventory:	listed		
Korea Exist.Chem.Inventory:	KE-31387		
LD50 <sub>orl rat</sub> :	3000 mg/kg		
LD50 <sub>drm rbt</sub> :	10 g/kg		

#### 5 g wadding



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## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 50 mL Cadmium R1

Chemical:	<i>citric acid</i>	CAS No.:	77-92-9
PNEC (fresh water):	440 mg/L		
PNEC = Predicted No Effect Concentration			
LC50 <sub>leuciscus idus/96h</sub> :	440-760 mg/L		
EC50 <sub>daphnia/48h</sub> :	1535 <sub>24h</sub> mg/L		
IC50 <sub>scenedesmus quadricauda/72h</sub> :	7d: 425-640 mg/L		
EC10 <sub>pseudomonas putida/16h</sub> :	EC0: >10 g/L		
Water hazard class (DE):	1	WGK No.:	0057
Dispersion coefficient (octanol-water):	-1.72		
Storage class (VCI):	12-13		

#### 5 g Cadmium R2

Chemical:	<i>Dithizone (metal indicator)</i>	CAS No.:	60-10-6
Water hazard class (DE):	3		

Chemical:	<i>sodium chloride</i>	CAS No.:	7647-14-5
Water hazard class (DE):	1		
Storage class (VCI):	12-13		

#### 100 mL Cadmium R3

Chemical:	<i>sodium hydroxide solution</i>	CAS No.:	1310-73-2
Avoid contact of substance/mixture to environment.			
LC50 <sub>leuciscus idus/96h</sub> :	35-189 mg/L		
LC50 <sub>fish/96h</sub> :	45.4 mg/L		
EC50 <sub>daphnia/48h</sub> :	>100 mg/L		
Water hazard class (DE):	1	WGK No.:	142
Storage class (VCI):	8 B		

#### 10 g Cadmium R4

Chemical:	<i>Dithizone (metal indicator)</i>	CAS No.:	60-10-6
Water hazard class (DE):	3		

Chemical:	<i>sodium chloride</i>	CAS No.:	7647-14-5
Water hazard class (DE):	1		
Storage class (VCI):	12-13		

#### 5 g wadding

### 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

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

**14.1 UN number:** 3266    **14.2 UN proper shipping name:** Corrosive liquid, basic, inorganic, n.o.s. (sodium hydroxide solution)  
**14.3 Class:** 8    **14.4 Packing group:** II  
*Road transport*  
 Classification code: C5    Tunnel restriction code: E  
 Limited Quantity: 1 L  
 Excepted Quantity: E 2  
*Air transport*  
 PAX: 851    max. weight PAX: 1 L  
 CAO: 855    max. weight CAO: 30 L  
*Maritime transport*  
 EmS: F-A, S-B    Storage category: B

### 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](http://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

H290    May be corrosive to metals.  
 H314    Causes severe skin burns and eye damage.  
 H319    Causes serious eye irritation.

#### 16.1.2 List of relevant P phrases

P260sh    Do not breathe dust/vapours.  
 P280sh    Wear protective gloves/eye protection.

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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.  
 P390 Absorb spillage to prevent material damage.

**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, 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

