

# Safety Data Sheet

## SDS acc. Hazard Communication Standard

REF: 934115	Photometer PF-3 Pool	Page: 1/13
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### Section 1: Identification

#### 1.1 Product Identifier / Product Name

REF	934115
Product Name	Photometer PF-3 Pool
-	1 x Calibration tube (5 mL) 3 x Alkaline Manganese Batteries Type AA 1 x Button cell CR2032, built-in 1 x 20 g Cya-1 3 x 50 capsules NANOFIX pH 6.5-8.2 1 x 20 mL Cl <sub>2</sub> -2 1 x 28 g Cl <sub>2</sub> -1

#### 1.2 Relevant identified Uses of the Substance or Mixture and Uses advised against

**Relevant identified uses**  
 Product for Analytical Use.  
 The Exposure scenario is integrated into sections 1-16.

**Uses advised against**  
 not described

#### 1.3 Details of the Supplier and 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(s) Identification

#### 2.0 Classification of the complete Product

-

#### 2.1 Classification of the Substance(s) or Mixture(s)

##### Calibration tube (5 mL)

Signal Word	Do not need labelling as hazardous
-	-
No Hazard Class	

##### Alkaline Manganese Batteries Type AA

Signal Word	Do not need labelling as hazardous
-	-
No Hazard Class	

##### Button cell CR2032, built-in

Signal Word	Do not need labelling as hazardous
-	-
No Hazard Class	



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### 20 g Cya-1

Signal Word Do not need labelling as hazardous  
-

No Hazard Class

### 50 capsules NANOFIX pH 6.5-8.2

Signal Word Do not need labelling as hazardous  
-

No Hazard Class

### 20 mL Cl<sub>2</sub> -2

Signal Word Do not need labelling as hazardous  
-

No Hazard Class

### 28 g Cl<sub>2</sub> -1

Signal Word Do not need labelling as hazardous  
-

No Hazard Class

## 2.2 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

### Calibration tube (5 mL)

Do not need labelling as hazardous  
Signal Word: -

### Alkaline Manganese Batteries Type AA

Do not need labelling as hazardous  
Signal Word: -

### Button cell CR2032, built-in

Do not need labelling as hazardous  
Signal Word: -

### 20 g Cya-1

Do not need labelling as hazardous  
Signal Word: -

### 50 capsules NANOFIX pH 6.5-8.2

Do not need labelling as hazardous  
Signal Word: -

### 20 mL Cl<sub>2</sub> -2

Do not need labelling as hazardous  
Signal Word: -

### 28 g Cl<sub>2</sub> -1

Do not need labelling as hazardous  
Signal Word: -

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### 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 GHS directives and EC regulations 1272/2008/EC, 1907/2006/EC 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**

This SDS contains information on shipping and transport safety. ---

## Section 3: Composition/Information on Ingredients

### 3.1 Substances or 3.2 Mixtures

**Calibration tube (5 mL)**

Chemical: *water*

CAS No.: 7732-18-5

Classification:

No criteria for classification or naming of chemical is not required.

Chemical Formula: H<sub>2</sub>O

TSCA Inventory:

listed

RTECS: ZC0110000

EC No.:

231-791-2

Weight Percent: 90 - <100 %

acc. GHS:

The criteria for classification are not fulfilled.

**Alkaline Manganese Batteries Type AA**

Chemical: *alkaline manganese battery*

CAS No.: -

Classification:

No criteria for classification or naming of chemical is not required.

Weight Percent: 99 - <100 %

acc. GHS:

The criteria for classification are not fulfilled.

**Button cell CR2032, built-in**

Chemical: *Button cell on circuit board (lithium metal battery)*

CAS No.: -

Classification:

No criteria for classification or naming of chemical is not required.

Weight Percent: 99 - <100 %

acc. GHS:

The criteria for classification are not fulfilled.

**20 g Cya-1**

Chemical: *sodium sulfite*

CAS No.: 7757-83-7

Classification:

No criteria for classification or naming of chemical is not required.

Chemical Formula: Na<sub>2</sub>SO<sub>3</sub>, E221

Synonyms:

sulfurous acid, disodium salt

TSCA Inventory:

listed

RTECS: WE2150000

EC No.:

231-821-4

Weight Percent: 10 - <20 %

acc. GHS:

The criteria for classification are not fulfilled.

Chemical: *triazine derivate*

CAS No.: -

Classification:

No criteria for classification or naming of chemical is not required.

TSCA Inventory:

listed

Weight Percent: 5 - <20 %

acc. GHS:

The criteria for classification are not fulfilled.

Chemical: *phosphates (buffer salts)*

CAS No.: -

Classification:

No criteria for classification or naming of chemical is not required.

Chemical Formula: K/Na<sub>1-3</sub>H<sub>2-0</sub>PO<sub>4</sub>

TSCA Inventory:

all listed

Weight Percent: 50 - <75 %

acc. GHS:

The criteria for classification are not fulfilled.

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### 50 capsules NANOFIX pH 6.5-8.2

Chemical: *phenolred, sodium salt (pH indicator)* CAS No.: 34487-61-1  
 Classification: H315, Skin Irrit. 2, H319, Eye Irrit. 2  
 Chemical Formula: C<sub>19</sub> H<sub>13</sub> NaO<sub>5</sub> S  
 Synonyms: 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis-phenol, sodium salt  
 TSCA Inventory: listed MFCD: 00066901  
 EC No.: 252-057-8  
 Weight Percent: 1 - <10 %  
 acc. GHS: The criteria for classification are not fulfilled.

### 20 mL Cl<sub>2</sub> -2

Chemical: *potassium iodide* CAS No.: 7681-11-0  
 Classification: H319, Eye Irrit. 2  
 Chemical Formula: KI  
 TSCA Inventory: listed  
 RTECS: TT29750000 MFCD: 00011405  
 EC No.: 231-659-4  
 Weight Percent: 1 - <10 %  
 acc. GHS: The criteria for classification are not fulfilled.

### 28 g Cl<sub>2</sub> -1

Chemical: *boric acid* CAS No.: 10043-35-3  
 Classification: H360FD, Repr. 1B  
 Chemical Formula: H<sub>3</sub> BO<sub>3</sub>  
 TSCA Inventory: listed  
 RTECS: ED4550000 MFCD: 00011337  
 EC No.: 233-139-2 Indice No.: 005-007-00-2  
 Weight Percent: 0,5 - <5,5 % Correlation Factor: x 0.17 (= %B)  
 acc. GHS: The criteria for classification are not fulfilled.

Chemical: *tri-sodium citrate* CAS No.: 6132-04-3  
 Classification: No criteria for classification or naming of chemical is not required.  
 Chemical Formula: C<sub>6</sub> H<sub>5</sub> Na<sub>3</sub> O<sub>7</sub> •2H<sub>2</sub> O  
 TSCA Inventory: listed (CAS 68-04-2)  
 RTECS: GE8300000  
 EC No.: 200-675-3  
 Weight Percent: 40 - <60 %  
 acc. GHS: The criteria for classification are not fulfilled.

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.  
 Chemical Formula: C<sub>10</sub> H<sub>16</sub> N<sub>2</sub> •H<sub>2</sub> O  
 Synonyms: N,N-diethylbenzene-1,4-diammonium sulfate  
 TSCA Inventory: listed (CAS 6065-27-6)  
 RTECS: SS9625000 MFCD: 00012993  
 EC No.: 228-500-6 Indice No.: 612-080-00-X  
 Weight Percent: 1 - <5 %  
 acc. 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 is not required.  
 Chemical Formula: KH<sub>2</sub> PO<sub>4</sub>  
 TSCA Inventory: listed  
 RTECS: TC6615500 MFCD: 00011401  
 EC No.: 231-913-4  
 Weight Percent: 5 - <25 %  
 acc. 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 Vapors

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: Fire-Fighting Measures

#### 5.1 Extinguishable 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 WATER FOG, WATER SPRAY, alcohol-resistant FOAM, DRY CHEMICAL, 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 Procedure

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 sewer.

#### 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.

#### 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 Conditions for Safe Storage, including any Incompatibilities

Keep original product packages tightly closed during handling and storage.

#### 7.3 Specific End Use(s)

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Product for analytical use.

### Section 8: Exposure Controls/Personal Protection

#### 8.1 Control Parameters

**Calibration tube (5 mL)**

Chemical: *water*

CAS No.: 7732-18-5

**Alkaline Manganese Batteries Type AA**

Chemical: *alkaline manganese battery*

CAS No.: -

**Button cell CR2032, built-in**

Chemical: *Button cell on circuit board (lithium metal battery)*

CAS No.: -

**20 g Cya-1**

Chemical: *sodium sulfite*

CAS No.: 7757-83-7

DNEL:  $298_{inh} \text{ mg/m}^3$   
 DNEL = Derived No-Effect Level (for workers)

Chemical: *triazine derivat*

CAS No.: -

Chemical: *phosphates (buffer salts)*

CAS No.: -

**50 capsules NANOFIX pH 6.5-8.2**

Chemical: *phenolred, sodium salt (pH indicator)*

CAS No.: 34487-61-1

**20 mL Cl<sub>2</sub> -2**

Chemical: *potassium iodide*

CAS No.: 7681-11-0

**28 g Cl<sub>2</sub> -1**

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

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

#### 8.2 Exposure Controls

Not necessary.

##### 8.2.1 Respiratory Protection

Not necessary.

##### 8.2.2 Hand Protection

Not necessary.

##### 8.2.3 Eye/Face Protection

Not necessary.

##### 8.2.4 Skin Protection

Not necessary.

##### 8.2.5 Hygiene Measures

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Information not necessary.

## Section 9: Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

#### Calibration tube (5 mL)

a) Appearance:	liquid	Color: colorless	b) Odor:	odorless
c) Odor Threshold:		data not available		
d) pH:		6-8		
e) Melting Point:		data not available		
f) Boiling Point:		data not available		
g) Flash Point:		data not available		
h) Evaporation Rate <sub>(ether=1)</sub> :		data not available		
i) Flammability (solid, gas):		data not available		
j) Explosive Limits:		data not available		
k) Vapor Pressure (68°F):		data not available		
l) Vapor Density <sub>(air=1)</sub> :		data not available		
m) Specific Gravity:		1,00 g/cm <sup>3</sup>		
n) Soluble in Water:		data not available		
o) Partition Coefficient (o-w):		data not available		
p) Autoignition Temperature:		data not available		
q) Decomposition temperature:		data not available		
r) Viscosity:		data not available		
s) Explosive properties:		data not available		
t) Oxidizing properties:		---		

#### Alkaline Manganese Batteries Type AA

a) Appearance:	solid	Color: black	b) Odor:	odorless
c) Odor Threshold:		data not available		
d) pH:		data not available		
e) Melting Point:		data not available		
f) Boiling Point:		data not available		
g) Flash Point:		data not available		
h) Evaporation Rate <sub>(ether=1)</sub> :		data not available		
i) Flammability (solid, gas):		data not available		
j) Explosive Limits:		data not available		
k) Vapor Pressure (68°F):		data not available		
l) Vapor Density <sub>(air=1)</sub> :		data not available		
m) Specific Gravity:		data not available		
n) Soluble in Water:		data not available		
o) Partition Coefficient (o-w):		data not available		
p) Autoignition Temperature:		data not available		
q) Decomposition temperature:		data not available		
r) Viscosity:		data not available		
s) Explosive properties:		data not available		
t) Oxidizing properties:		---		

#### Button cell CR2032, built-in

a) Appearance:	solid	Color: colored	b) Odor:	odorless
c) Odor Threshold:		data not available		
d) pH:		data not available		
e) Melting Point:		data not available		
f) Boiling Point:		data not available		
g) Flash Point:		data not available		
h) Evaporation Rate <sub>(ether=1)</sub> :		data not available		
i) Flammability (solid, gas):		Do not transport damaged batteries. Special instruction necessary		
j) Explosive Limits:		data not available		
k) Vapor Pressure (68°F):		data not available		
l) Vapor Density <sub>(air=1)</sub> :		data not available		
m) Specific Gravity:		data not available		
n) Soluble in Water:		data not available		
o) Partition Coefficient (o-w):		data not available		
p) Autoignition Temperature:		data not available		
q) Decomposition temperature:		data not available		
r) Viscosity:		data not available		
s) Explosive properties:		data not available		



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t) Oxidizing properties: ---

**20 g Cya-1**

- |  |                        |                   |
|--|------------------------|-------------------|
| a) Appearance: powder (solid)              | Color: slightly yellow | b) Odor: odorless |
| c) Odor Threshold:                         | data not available     |                   |
| d) pH:                                     | 6-8                    |                   |
| e) Melting Point:                          | data not available     |                   |
| f) Boiling Point:                          | data not available     |                   |
| g) Flash Point:                            | data not available     |                   |
| h) Evaporation Rate <sub>(ether=1)</sub> : | data not available     |                   |
| i) Flammability (solid, gas):              | data not available     |                   |
| j) Explosive Limits:                       | data not available     |                   |
| k) Vapor Pressure (68°F):                  | data not available     |                   |
| l) Vapor Density <sub>(air=1)</sub> :      | data not available     |                   |
| m) Specific Gravity:                       | data not available     |                   |
| n) Soluble in Water:                       | data not available     |                   |
| o) Partition Coefficient (o-w):            | data not available     |                   |
| p) Autoignition Temperature:               | data not available     |                   |
| q) Decomposition temperature:              | data not available     |                   |
| r) Viscosity:                              | data not available     |                   |
| s) Explosive properties:                   | data not available     |                   |
| t) Oxidizing properties:                   | ---                    |                   |

**50 capsules NANOFIX pH 6.5-8.2**

- |  |                    |                   |
|--|--------------------|-------------------|
| a) Appearance: solid (lyoph.)              | Color: red         | b) Odor: odorless |
| c) Odor Threshold:                         | data not available |                   |
| d) pH:                                     | 7,0                |                   |
| e) Melting Point:                          | data not available |                   |
| f) Boiling Point:                          | data not available |                   |
| g) Flash Point:                            | data not available |                   |
| h) Evaporation Rate <sub>(ether=1)</sub> : | data not available |                   |
| i) Flammability (solid, gas):              | data not available |                   |
| j) Explosive Limits:                       | data not available |                   |
| k) Vapor Pressure (68°F):                  | data not available |                   |
| l) Vapor Density <sub>(air=1)</sub> :      | data not available |                   |
| m) Specific Gravity:                       | data not available |                   |
| n) Soluble in Water:                       | 0-100 %            |                   |
| o) Partition Coefficient (o-w):            | data not available |                   |
| p) Autoignition Temperature:               | data not available |                   |
| q) Decomposition temperature:              | data not available |                   |
| r) Viscosity:                              | data not available |                   |
| s) Explosive properties:                   | data not available |                   |
| t) Oxidizing properties:                   | ---                |                   |

**20 mL Cl<sub>2</sub> -2**

- |  |                        |                    |
|--|------------------------|--------------------|
| a) Appearance: liquid                      | Color: colorless       | b) Odor: alcoholic |
| c) Odor Threshold:                         | data not available     |                    |
| d) pH:                                     | 9                      |                    |
| e) Melting Point:                          | data not available     |                    |
| f) Boiling Point:                          | data not available     |                    |
| g) Flash Point:                            | 24 °C                  |                    |
| h) Evaporation Rate <sub>(ether=1)</sub> : | data not available     |                    |
| i) Flammability (solid, gas):              | data not available     |                    |
| j) Explosive Limits:                       | data not available     |                    |
| k) Vapor Pressure (68°F):                  | data not available     |                    |
| l) Vapor Density <sub>(air=1)</sub> :      | data not available     |                    |
| m) Specific Gravity:                       | 0,93 g/cm <sup>3</sup> |                    |
| n) Soluble in Water:                       | 0-100 %                |                    |
| o) Partition Coefficient (o-w):            | data not available     |                    |
| p) Autoignition Temperature:               | data not available     |                    |
| q) Decomposition temperature:              | data not available     |                    |
| r) Viscosity:                              | data not available     |                    |
| s) Explosive properties:                   | data not available     |                    |
| t) Oxidizing properties:                   | ---                    |                    |



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### 28 g Cl<sub>2</sub> -1

a)	Appearance: powder (solid)	Color: colorless	b) Odor: odorless
c)	Odor Threshold:	data not available	
d)	pH:	6	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate <sub>(ether=1)</sub> :	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density <sub>(air=1)</sub> :	data not available	
m)	Specific Gravity:	data not available	
n)	Soluble in Water:	0-100 %	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

## 9.2 Other Information

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. ---

### 10.5 Incompatible Materials

Not necessary. ---

### 10.6 Hazardous Decomposition Products

In the original package all parts/all reagents are safety and separated stored - protected against short circuits. 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 chemicals. Quantitative data on the toxicity of this product are not available.

#### Calibration tube (5 mL)

Chemical: *water*

CAS No.: 7732-18-5

TSCA Inventory: listed

#### Alkaline Manganese Batteries Type AA

Chemical: *alkaline manganese battery*

CAS No.: -

#### Button cell CR2032, built-in

Chemical: *Button cell on circuit board (lithium metal battery)*

CAS No.: -

### 20 g Cya-1

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Chemical:	sodium sulfite	CAS No.: 7757-83-7
TSCA Inventory:	listed	
LD50 <sub>orl rat</sub> :	2610 mg/kg	
LC50 <sub>ihl rat</sub> :	>5.5 <sub>4h</sub> mg/L	

Chemical:	triazine derivate	CAS No.: -
TSCA Inventory:	listed	

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

### 50 capsules NANOFIX pH 6.5-8.2

Chemical:	phenolred, sodium salt (pH indicator)	CAS No.: 34487-61-1
TSCA Inventory:	listed	

### 20 mL Cl<sub>2</sub> -2

Chemical:	potassium iodide	CAS No.: 7681-11-0
TSCA Inventory:	listed	
LD50 <sub>orl rat</sub> :	2779 mg/kg	

### 28 g Cl<sub>2</sub> -1

Chemical:	boric acid	CAS No.: 10043-35-3
TSCA Inventory:	listed	California Prop. 65 List: not listed
Canada CEPA 1999:	DSL yes	
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

Chemical:	tri-sodium citrate	CAS No.: 6132-04-3
TSCA Inventory:	listed (CAS 68-04-2)	
LD50 <sub>orl rat</sub> :	>8000 mg/kg	

Chemical:	N,N-Diethyl-1,4-phenylene diammonium sulfate	CAS No.: 6283-63-2
TSCA Inventory:	listed (CAS 6065-27-6)	California Prop. 65 List: not listed
Canada CEPA 1999:	not listed	
LD50 <sub>orl rat</sub> :	497 mg/kg	

Chemical:	potassium dihydrogen phosphate	CAS No.: 7778-77-0
TSCA Inventory:	listed	
LD50 <sub>orl rat</sub> :	4640 mg/kg	
LD50 <sub>drm rbt</sub> :	>4640 mg/kg	

## Section 12: Ecological Information

### 12.1 Toxicity

Following information is valid for pure chemicals.

**Calibration tube (5 mL)**  
 Chemical: water CAS No.: 7732-18-5

**Alkaline Manganese Batteries Type AA**  
 Chemical: alkaline manganese battery CAS No.: -

**Button cell CR2032, built-in**  
 Chemical: Button cell on circuit board (lithium metal battery) CAS No.: -

**20 g Cya-1**  
 Chemical: sodium sulfite CAS No.: 7757-83-7  
 LC50<sub>fish/96h</sub>: 315<sub>96h</sub> mg/L  
 EC10<sub>pseudomonas putita/16h</sub>: 260<sub>17h</sub> mg/L  
 Partition Coefficient (o-w): -4



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Chemical: *triazine derivat* CAS No.: -  
 Chemical: *phosphates (buffer salts)* CAS No.: -

**50 capsules NANOFIX pH 6.5-8.2**

Chemical: *phenolred, sodium salt (pH indicator)* CAS No.: 34487-61-1

**20 mL Cl<sub>2</sub> -2**

Chemical: *potassium iodide* CAS No.: 7681-11-0  
 LC50<sub>fish/96h</sub>: 2190 mg/L  
 Partition Coefficient (o-w): 0.04

**28 g Cl<sub>2</sub> -1**

Chemical: *boric acid* CAS No.: 10043-35-3  
 PNEC (fresh water): 2.9 mg/L  
 PNEC = Predicted No Effected 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  
 Partition Coefficient (o-w): -1.09

Chemical: *tri-sodium citrate* CAS No.: 6132-04-3  
 LC50<sub>fish/96h</sub>: 18-32 g/L  
 EC50<sub>daphnia/48h</sub>: 5.6-10 g/L  
 EC50<sub>chlorella vulgaris/5d</sub>: >18-32 g/L  
 EC10<sub>pseudomonas putita/16h</sub>: EC50<sub>ps. fluorescens/8h</sub>: >1.8-3.2 g/L

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

Chemical: *potassium dihydrogen phosphate* CAS No.: 7778-77-0  
 LC50<sub>leuciscus idus/96h</sub>: 900<sub>48h</sub> mg/L

**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

Batteries must be collected separately and disposed acc. law regulations (electronic waste, f. ex. in EU WEEE). Further:  
 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.

### Section 14: Transport Information

**14.1. UN/NA:** 3316 **14.2. Proper Shipping Name:** Chemical Kit

**14.3. Hazard Class:** 9 **14.4. Packing Group:** II

*Transportation by Road*

Classification code: M11 Tunnel Restriction Code: E

Limited Quantity: acc. ADR 3.3.1/251: see LQ in "Alternative Declaration for Transportation"

*Air Transportation*

PAX: 960 max. weight PAX: 10 KG



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CAO: 960 max. weight CAO: 10 KG  
*Maritime Transport*  
 EmS: F-A, S-P Storage Category: A

Or use **the alternative Declaration for Transportation:**

**14.1 - 14.4:** No dangerous goods according the Transport regulations

Lithium metal batteries in equipment, not restricted, PI 970: Section II (button cell), No entry in AWB necessary UN/NA: (see below) UN/NA 1993 Class 3 III, Class 8 III, **Excepted Quantities** ( $\leq 30 \text{ mL} / \sum \leq 1 \text{ L}$ ) = ADR/ IATA E1

or

**14.1. UN/NA: 3260 14.2. Proper Shipping Name: Corrosive solid, acidic, inorganic, n.o.s. (sodium sulfite mixture)**

**14.3. Hazard Class: 8 14.4. Packing Group: III**

*Transportation by Road*

Classification code: C2

Limited Quantity: 5 Kg

Tunnel restriction code: E

Excepted Quantity: E 1

*Air Transportation*

PAX: 860

max. weight PAX: 25 Kg

CAO: 864

max. weight CAO: 100 Kg

*Maritime Transport*

EmS: F-A, S-B Storage Category: A

### 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

**U.S. Federal Regulations**

OSHA "A Guide to The Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"

<https://www.osha.gov/dsg/hazcom/ghs.html>

29 CFR 1910.1200 Hazard communication.

MN Leaflet/User manual, also see [www.mn-net.com](http://www.mn-net.com)

### 15.2 Chemical Safety Assessment

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## Section 16: Other Information

### 16.1 List of Hazard and Precaution 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

GHS: EU Regulation 1272/2008/EC on Classification, Labelling and Packaging of Substances and Mixtures, amending and repealing EU Directives 67/548/EEC and 1999/45/EC, and amending EU Regulation 1907/2006/EC

SDS: EU Regulation 453/2010/EU REACH - Requirements for the Compilation of Safety Data Sheets  
KÜHN, BIRETT (German), Data Sheets of Hazardous Substances

#### Revisions/Updates

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

You find our current Versions of SDS in Internet:

<http://www.mn-net.com/SDS> [U.S. English]