

Safety Data Sheet

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

REF: 934120	Photometer PF-3 Drinking Water	Page: 1/13
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

REF 934120
 Product name Photometer PF-3 Drinking Water
 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 Calibration tube (5 mL)
- 3 x Alkaline Manganese Batteries Type AA
- 1 x Button cell CR2032, built-in
- 3 x 30 mL F-1
- 3 x 50 capsules NANOFIX pH 6.5-8.2
- 1 x 25 mL Cl₂ -2
- 1 x 20 mL Cl₂ -3
- 1 x 18 mL Cl₂ -1

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

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



GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H290	Met. Corr. 1
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H335	STOT SE 3

2.1 Classification of the substance or mixture

Calibration tube (5 mL)

Do not need labelling as hazardous

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Signal word -
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

30 mL F-1



Signal word GHS07
WARNING

Hazard identification	Hazard classes/categories
H290	Met. Corr. 1
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H335	STOT SE 3

50 capsules NANOFIX pH 6.5-8.2

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

25 mL Cl₂ -2



Signal word GHS07
WARNING

Hazard identification	Hazard classes/categories
H315	Skin Irrit. 2
H319	Eye Irrit. 2

20 mL Cl₂ -3

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

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18 mL Cl₂ -1

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).

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: -

30 mL F-1



GHS07

Signal word: WARNING

50 capsules NANOFIX pH 6.5-8.2

Do not need labelling as hazardous

Signal word: -

25 mL Cl₂ -2



GHS07

Signal word: WARNING

20 mL Cl₂ -3

Do not need labelling as hazardous

Signal word: -

18 mL Cl₂ -1

Do not need labelling as hazardous

Signal word: -

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2.3 Other hazards

Possible hazards from physicochemical properties

In the case of pH values are less than 5 or higher than 9 then it is irritant. ---

Information pertaining to particular risks to human and possible symptoms

Cause after inhalation of vapours/dust, impairments of health when ingested in small quantities. ---

Information pertaining to particular risks to the environment

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

Alkaline Manganese Batteries Type AA

Chemical:	<i>alkaline manganese battery</i>	CAS No.:	-
Classification:	No criteria for classification or naming of chemical not required.		
Concentration:	99 - <100 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

Button cell CR2032, built-in

Chemical:	<i>Button cell on circuit board (lithium metal battery)</i>	CAS No.:	-
Classification:	No criteria for classification or naming of chemical not required.		
Concentration:	99 - <100 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

30 mL F-1

Chemical:	<i>zirconium(IV) dichloride oxide</i>	CAS No.:	13520-92-8
Classification:	No criteria for classification or naming of chemical not required.		
Formula:	ZrOCl ₂ · 8 H ₂ O		
TSCA Inventory:	not listed		
EC No.:	231-717-9		
RTECS:	ZH7250000	MFCD:	00149898
KE No.:	not listed		
Concentration:	< 1,00 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

Chemical:	<i>1,8-dihydroxy-2-(4-sulfophenylazo)naphthalin-3,6-disulfonic acid, trisodium salt</i>	CAS No.:	23647-14-5
Classification:	H315, Skin Irrit. 2, H319, Eye Irrit. 2		
Formula:	C ₁₆ H ₉ N ₂ Na ₃ O ₁₁ S ₃		
Pseudonym:	4,5-dihydroxy-3-[2-(4-sulfophenyl)diazonyl]-2,7-naphthalenedisulfonic acid, trisodium salt		
TSCA Inventory:	listed		
EC No.:	245-803-9	MFCD:	00003952
Concentration:	0,2 - <1 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

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Chemical: *hydrochloric acid* CAS No.: 7647-01-0
 Classification: H290, Met. Corr. 1, H314, Skin Corr. 1B, H331, Acute Tox. 3 inh.
 Formula: $\text{HCl} \cdot \text{H}_2\text{O}$
 Pseudonym: aqueous hydrogen chloride
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119484862-27-xxxx
 EC No.: 231-595-7 Index No.: 017-002-01-X
 RTECS: MW4025000
 KE No.: KE-20189, >10% Toxic 97-1-203, Acc. Precaution Chem.
 Concentration: 10 - <25 %
 acc. CLP (GHS): H290, Met. Corr. 1, H315, Skin Irrit. 2, H319, Eye Irrit. 2, H335, STOT SE 3

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
 Formula: $\text{C}_{19}\text{H}_{13}\text{NaO}_5\text{S}$
 Pseudonym: 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis-phenol, sodium salt
 TSCA Inventory: listed
 EC No.: 252-057-8 MFCD: 00066901
 Concentration: 1 - <10 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

25 mL Cl₂ -2

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: $\text{C}_{10}\text{H}_{16}\text{N}_2 \cdot \text{H}_2\text{O}$
 Pseudonym: N,N-diethylbenzene-1,4-diammonium sulfate
 TSCA Inventory: listed (CAS 6065-27-6)
 EC No.: 228-500-6 Index No.: 612-080-00-X
 RTECS: SS9625000 MFCD: 00012993
 Concentration: 0,1 - <1 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *sulfuric acid* CAS No.: 7664-93-9
 Classification: H314, Skin Corr. 1B
 Formula: $\text{H}_2\text{SO}_4 (\cdot \text{H}_2\text{O})$
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119458838-20-xxxx
 EC No.: 231-639-5 Index No.: 016-020-00-8
 RTECS: WS5600000
 KE No.: KE-32570, >10% Toxic 97-1-405, Acc. Precaution Chem.
 Concentration: 5 - <15 %
 acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2

20 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: TT29750000 MFCD: 00011405
 KE No.: not listed
 Concentration: 1 - <10 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

18 mL Cl₂ -1

Chemical: *phosphate buffer solution* CAS No.: -
 Classification: No criteria for classification or naming of chemical not required.
 Formula: $\text{K/Na}_{1-3}\text{H}_{2-0}\text{PO}_4 \cdot x\text{H}_2\text{O}$
 TSCA Inventory: all listed
 KE No.: listed
 Concentration: 50 - <75 %
 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%.

List of H and P phrases: see section 16.1

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.

4.1.1 After SKIN Contact

Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

4.1.2 After EYE Contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

4.1.3 After INHALATION of vapours

After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. ---

4.1.4 After ORAL Intake

After oral intake lots of water should be drunk after it has been ingested. ---

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

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.

5.4 Additional information

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Regular staff training is necessary.

6.2 Environmental precautions

not necessary

6.3 Methods and material for containment and cleaning up

Bind any escaping liquid with inert absorbent.
Collect small amounts of leaked liquid and flush with 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.

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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.

7.3 Specific end use(s)

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.: -

30 mL F-1

Chemical: *zirconium(IV) dichloride oxide* CAS No.: 13520-92-8

TRGS 900 (DE): 1_{Zr} E mg/m³
 E/e respirable

Short-term exposure factor: 1 (I), Sah
 skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 5 e mg/m³

NIOSH: TWA 5 / ST 10_{Zr} mg/m³
 [TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: TWA 5_{Zr} mg/m³

Chemical: *1,8-dihydroxy-2-(4-sulfophenylazo)naphthalin-3,6-disulfonic acid, tri Na salt* CAS No.: 23647-14-5

Chemical: *hydrochloric acid* CAS No.: 7647-01-0

DNEL: [inh] 8 mg/m³
 DNEL = Derived No-Effect Level (for workers)

PNEC_(fresh water): 36 µg/L
 PNEC = Predicted No Effect Concentration

EU value: [TWA] 5 ppm / 8 mg/m³; [STEL] 10 ppm / 15 mg/m³

TRGS 900 (DE): 2 mL/m³ / 3 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: 2 ppm / 3* mg/m³

NIOSH: [C] 5 ppm / 7 mg/m³
 [TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: List of highly hazardous chemicals, toxics and reactives Yes (TQ = 5000 lbs) n/a; TWA 5 ppm / 7 mg/m³

50 capsules NANOFIX pH 6.5-8.2

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

25 mL Cl₂ -2

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: *sulfuric acid* CAS No.: 7664-93-9

DNEL: [inh] 50 µg/m³
 DNEL = Derived No-Effect Level (for workers)

PNEC_(fresh water): 2.5 µg/L
 PNEC = Predicted No Effect Concentration



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EU value: 0.1 e mg/m³
 TRGS 900 (DE): 0.1 E mg/m³
 E/e respirable
 Short-term exposure factor: 1 (I), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded
 SUVA(CH) MAK value: 0,1 e mg/m³
 NIOSH: NTP Report on Carcinogens (RoC) List Yes (Known to be a human carcinogen); [TWA] 1 mg/m³
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period
 OSHA: [TWA] 1 mg/m³

20 mL Cl₂ -3

Chemical: *potassium iodide*

CAS No.: 7681-11-0

18 mL Cl₂ -1

Chemical: *phosphate buffer solution*

CAS No.: -

8.2 Exposure controls

The highest level of cleanliness must be maintained at the workplace.

8.2.1 Respiratory protection

No additional recommendations.

8.2.2 Hand protection

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.

8.2.4 Skin protection

Not necessary.

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

Calibration tube (5 mL)

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	6-8	
Specific gravity:	1,00 g/cm ³	

Alkaline Manganese Batteries Type AA

Appearance: solid	Colour: black	Odor: odorless
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Button cell CR2032, built-in

Appearance: solid	Colour: colored	Odor: odorless
Flammability (solid, gas):	Do not transport damaged batteries. Special instruction necessary	

30 mL F-1

Appearance: liquid	Colour: red	Odor: penetrative
pH:	0-1	
Specific gravity:	1,07 g/cm ³	
Solubility in water:	0-100 %	

50 capsules NANOFIX pH 6.5-8.2

Appearance: solid (lyoph.)	Colour: red	Odor: odorless
pH:	7,0	
Solubility in water:	0-100 %	

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25 mL Cl₂ -2

Appearance: liquid

Colour: rose

Odor: odorless

pH:

0-1

Specific gravity:

1,1 g/cm³

20 mL Cl₂ -3

Appearance: liquid

Colour: colourless

Odor: alcoholic

pH:

9

Flash point:

24 °C

Specific gravity:

0,93 g/cm³

Solubility in water:

0-100 %

18 mL Cl₂ -1

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

9

Specific gravity:

1,2 g/cm³

Solubility in water:

0-100 %

9.2 Other information

Relevant Properties of Substance Group

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

No further data available.

10.4 Conditions to avoid

10.5 Incompatible materials

Avoid contact with strong acids or alkalines.

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 substances. 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

Korea Exist.Chem.Inventory: KE-35400

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.: -

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30 mL F-1

Chemical: *zirconium(IV) dichloride oxide* CAS No.: 13520-92-8
 TSCA Inventory: not listed
 Exposure Routes: inhalation, skin and/or eye contact
 Target Organs: Skin, respiratory system
 Symptoms: Skin, lung granulomas; in animals: irritation skin, mucous membrane; X-ray evidence of retention in lungs
 Korea Exist.Chem.Inventory: not listed
 LD50_{orl rat}: 2950 mg/kg
 TRGS 907 (DE): Sah

Chemical: *1,8-dihydroxy-2-(4-sulfophenylazo)naphthalin-3,6-disulfonic acid, triCAS No.: 23647-14-5*
 TSCA Inventory: listed

Chemical: *hydrochloric acid* CAS No.: 7647-01-0
 TSCA Inventory: listed California Proposition 65 List: not listed
 Exposure Routes: inhalation, ingestion (solution), skin and/or eye contact
 Target Organs: Eyes, skin, respiratory system
 Symptoms: irritation nose, throat, larynx; cough, choking; dermatitis; solution: eye, skin burns; liquid: frostbite; in animals: laryngeal spasm; pulmonary edema
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
 Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance
 Japan ISHL: listed ≥0,2%/≥0,1%, Article 57-2 (SDS required)
 South Korea TCCA: Accident Precaution Chemical Yes
 Korea Exist.Chem.Inventory: KE-20189, >10% Toxic 97-1-203, Acc. Precaution Chem.
 LD50_{orl rat}: 900 mg/kg
 LC50_{drm rbt}: >5010 mg/kg
 Acute Effects: Cause after inhalation of vapours/dust, impairments of health when ingested in small quantities.

50 capsules NANOFIX pH 6.5-8.2

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

25 mL Cl₂ -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_{orl rat}: 497 mg/kg

Chemical: *sulfuric acid* CAS No.: 7664-93-9
 TSCA Inventory: listed California Proposition 65 List: not listed
 ACGIH: 1 ppm
 Exposure Routes: inhalation, ingestion, skin and/or eye contact
 Target Organs: Eyes, skin, respiratory system, teeth
 Symptoms: irritation eyes, skin, nose, throat; pulmonary edema, bronchitis; emphysema; conjunctivitis; stomatis; dental erosion; eye, skin burns; dermatitis
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
 Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance
 Japan ISHL: listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)
 South Korea TCCA: Accident Precaution Chemical Yes
 Korea Exist.Chem.Inventory: KE-32570, >10% Toxic 97-1-405, Acc. Precaution Chem.
 LD50_{orl rat}: 2140 mg/kg
 LC50_{ihl rat}: [8h] 600/ [4h] 850 mg/m³
 TRGS 905 (DE): Kat 4

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20 mL Cl₂ -3

Chemical: *potassium iodide*
 TSCA Inventory: listed
 Korea Exist.Chem.Inventory: not listed
 LD50_{orl rat}: 2779 mg/kg

CAS No.: 7681-11-0

18 mL Cl₂ -1

Chemical: *phosphate buffer solution*
 TSCA Inventory: all listed
 Korea Exist.Chem.Inventory: listed

CAS No.: -

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

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.: -

30 mL F-1

Chemical: *zirconium(IV) dichloride oxide*
 Water hazard class (DE): 2
 Storage class (VCI): 8 B

CAS No.: 13520-92-8

Chemical: *1,8-dihydroxy-2-(4-sulfofenylazo)naphthalin-3,6-disulfonic acid, tri-sodium salt*
 Water hazard class (DE): 2

CAS No.: 23647-14-5

Chemical: *hydrochloric acid*

CAS No.: 7647-01-0

PNEC_(fresh water): 36 µg/L
 PNEC = Predicted No Effect Concentration

LC50_{fish/96h}: 24.6 mg/L
 EC50_{daphnia/48h}: 0.492 mg/L
 EC50_{pseudokirchneriella subcapitata/72h}: 0.78 mg/L
 Water hazard class (DE): 1 WGK No.: 0238
 Storage class (VCI): 8 B

50 capsules NANOFIX pH 6.5-8.2

Chemical: *phenolred, sodium salt (pH indicator)*
 Water hazard class (DE): 2
 Storage class (VCI): 12-13

CAS No.: 34487-61-1

25 mL Cl₂ -2

Chemical: *N,N-Diethyl-1,4-phenylene diammonium sulfate*
 Water hazard class (DE): 3
 Storage class (VCI): 12-13

CAS No.: 6283-63-2

Chemical: *sulfuric acid*

CAS No.: 7664-93-9

PNEC_(fresh water): 2.5 µg/L
 PNEC = Predicted No Effect Concentration

LC50_{fish/96h}: [NOEC, 65d] 25 µg/L
 EC50_{daphnia/48h}: 100 mg/L
 EC10_{pseudomonas putita/16h}: [72h] 100 mg/L
 Water hazard class (DE): 1 WGK No.: 0182
 Storage class (VCI): 8 B

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20 mL Cl₂ -3		
Chemical:	<i>potassium iodide</i>	CAS No.: 7681-11-0
LC50 _{fish/96h} :	2190 mg/L	
Water hazard class (DE):	1	
Dispersion coefficient _(octanol-water) :	0.04	
Storage class (VCI):	12-13	
18 mL Cl₂ -1		
Chemical:	<i>phosphate buffer solution</i>	CAS No.: -
Water hazard class (DE):	1	
Storage class (VCI):	12	

- 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, WEEE). Further: 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**
Normally it is possible to empty small amounts (diluted!) into drains.

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
<i>Road transport</i>	
Classification code:	M11 Tunnel restriction code: E
Limited Quantity:	acc. ADR 3.3.1/251: see LQ in Alternative declaration for transportation
<i>Air transport</i>	
PAX:	960 max. weight PAX: 10 KG
CAO:	960 max. weight CAO: 10 KG
<i>Maritime transport</i>	
EmS:	F-A, S-P Storage category: A

Or use **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 No.: (see below) UN 1993 class 3 III, class 8 III, **Excepted Quantities** (≤30 mL/Σ≤1 L) = ADR/ IATA E1
 or

14.1 UN number: 3264	14.2 UN proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (sulfuric acid, zirconium(IV) dichloride oxide, hydrochloric acid
14.3 Class: 8	14.4 Packing group: III
<i>Road transport</i>	
Classification code:	C1 Tunnel restriction code: E
Limited Quantity:	5 L
Excepted Quantity:	E 1
<i>Air transport</i>	
PAX:	852 max. weight PAX: 5 L
CAO:	856 max. weight CAO: 60 L
<i>Maritime transport</i>	
EmS:	F-A, S-B Storage category: A



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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
 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
 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.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

16.1.2 List of relevant P phrases

P261sh	Avoid breathing dust/vapours.
P280sh	Wear protective gloves/eye protection.
P390	Absorb spillage to prevent material damage.
P403+233	Store in a well-ventilated place. Keep container tightly closed.

16.2 Training advice

Regular safety training.

16.3 Recommended restriction on use

Only for professional user.
 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 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