

## according to Directive 1907/2006/EC (REACh) and 453/2010/EU

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### 1 Identification of the Substance/Mixture and of the Company

### 1.1 **Product identifier**

REF 91345

Product name QUANTOFIX Arsenic Sensitiv / 100

> 1 x 20 mL As-I 1 x 125 g As-II 1 x 250 g As-III

1 x 100 test sticks Arsenic sensitive

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

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.

### 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: msds@mn-net.com

### 1.4 **Emergency telephone number**

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service. 99089 Erfurt tel. +49 361 730 730 DE: Gemeinsames Giftinformationszentrum (GGIZ)

Missing subsections are not relevant for the risk assessment of the product and may be omitted programmatically.

### **Hazard Identification** 2

### 2.1 Classification of the substance(s) or mixture(s) - in the complete product

## Directive 1999/45/EC

Symbols



R 36/38-50/53

## CLP Directive 1272/2008/EC

GHS pictograms

Hazard identification





Hazard alassas/astagarias

GHS07

GHS09

WARNING Signal word

nazaru identincation	nazaru ciasses/categories
H315	Skin Irritation cat. 2
H319	Eye Irritation cat. 2
H410	Hazardous to the aquatic environment - chronic cat. 1
H411	Hazardous to the aquatic environment - chronic cat. 2
H412	Hazardous to the aquatic environment - chronic cat. 3

### 2.2 **Hazard Description**

### 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

Can accumulate within the body.

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E-mail: sales-ch@mn-net.com

and international: +49 24 21 969-0 Tel.: +49 24 21 969-199 Fax: E-mail: info@mn-net.com

**MACHEREY-NAGEL AG** Tel.: +41 62 388 55 00 +41 62 388 55 05 Fax:

**MACHEREY-NAGEL EURL** Tel.: +33 388 68 22 68 +33 388 51 76 88 Fax: E-mail: sales-fr@mn-net.com **MACHEREY-NAGEL Inc.** 

+1 484 821 0984 Tel.: +1 484 821 1272 Fax: E-mail: sales-us@mn-net.com

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### Information pertaining to particular Risks to the Environment

--- Avoid contact of substance/mixture to environment. --- Very toxic to aquatic life with long lasting effects.

Other Hazards

### Other hazards: Description of the components 2.3

20 mL As-I

Directive 1999/45/EC

Symbols do not need labelling as hazardous

CLP Directive 1272/2008/EC

GHS pictograms do not need labelling as hazardous

Signal word WARNING

Hazard identification Hazard classes/categories

H411 Hazardous to the aquatic environment - chronic cat. 2

125 g As-II

Directive 1999/45/EC

R 36/38

Symbols

CLP Directive 1272/2008/EC

GHS pictograms

Signal word WARNING

Hazard identification Hazard classes/categories

H315 Skin Irritation cat. 2 H319 Eve Irritation cat. 2 H412

Hazardous to the aquatic environment - chronic cat. 3

250 g As-III

Directive 1999/45/EC

R 50/53

Symbols

CLP Directive 1272/2008/EC

GHS pictograms

Signal word WARNING

Hazard identification Hazard classes/categories

H410 Hazardous to the aquatic environment - chronic cat. 1

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and international: +49 24 21 969-0 Tel.: +49 24 21 969-199 Fax: E-mail: info@mn-net.com

**MACHEREY-NAGEL AG** Tel.: +41 62 388 55 00 +41 62 388 55 05 Fax:

E-mail: sales-ch@mn-net.com

**MACHEREY-NAGEL EURL** +33 388 68 22 68 Tel.: +33 388 51 76 88 Fax:

+1 484 821 0984 Tel.: +1 484 821 1272

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100 test sticks Arsenic sensitive

Directive 1999/45/EC

Symbols do not need labelling as hazardous

CLP Directive 1272/2008/EC

GHS pictograms do not need labelling as hazardous Signal word do not need labelling as hazardous

No hazard class

### Composition/Information on Ingredients 3

### 3.1 Substances or 3.2 Mixtures

20 mL As-I

Chemical: CAS No.: 7722-64-7 potassium permanganate

Concentration: 2.5 - 5 %  $KMnO_4$ Formula:

01-2119480139-34-xxxx REACH Reg. No.:

EC No.: 231-760-3 Indice No.: 025-002-00-9

SD6475000 RTECS: TSCA Inventory: listed

acc. 1999/45/EC: R 51/53 acc. CLP (GHS): H411

125 g As-II

Chemical: CAS No.: 5329-14-6 aminosulphonic acid (sulphamic acid)

Concentration: 50 - 100 % Formula:

H<sub>3</sub> NO<sub>3</sub> S REACH Reg. No.: 01-2119488633-28-xxxx

EC No.: 226-218-8 Indice No.: 016-026-00-0 MECD: 0005994x

WO5950000 RTECS: TSCA Inventory: listed

acc. 1999/45/EC: R 36/38-52/53 acc. CLP (GHS): H315, H319, H412

250 g As-III

Chemical: zinc powder (stabilizied) CAS No.: 7440-66-6

Concentration: 75 - 100 % Formula: 7n

REACH Reg. No.: 01-2119467174-37-xxxx

231-175-3 030-002-01-9 EC No.: Indice No.:

RTECS: ZG8600000 TSCA Inventory: listed

acc. 1999/45/EC: R 50/53 acc. CLP (GHS): H410

100 test sticks Arsenic sensitive

CAS No.: 7789-47-1 Chemical: mercury(II) bromide

Concentration: < 0,09 % Correlation factor: x 0.56 (= %Hg) Formula: HgBr<sub>2</sub>

EC No.: 232-169-3

Indice No.: 080-004-00-7 RTECS: OV7415000

TSCA Inventory: listed

acc. 1999/45/EC: acc. CLP (GHS): not necessary

Chemical: cellulose CAS No.: 9004-34-6

Concentration: 1 - 10 % Formula: (C<sub>6</sub> H<sub>10</sub> O<sub>5</sub> )<sub>n</sub> exempt, Annex IV 232-674-9 REACH Reg. No.: EC No.: RTECS: FJ5691460 TSCA Inventory: listed

acc. 1999/45/EC: acc. CLP (GHS): not necessary

PVC foil (CAS 9002-86-2) CAS No : -Chemical:

Concentration: 95 - 100 %

acc. 1999/45/EC: acc. CLP (GHS): not necessary

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E-mail: sales-ch@mn-net.com

and international: +49 24 21 969-0 Tel.: +49 24 21 969-199 Fax: E-mail: info@mn-net.com

**MACHEREY-NAGEL AG** +41 62 388 55 00 Tel.: +41 62 388 55 05 Fax:

**MACHEREY-NAGEL EURL** +33 388 68 22 68 Tel.:

**MACHEREY-NAGEL Inc.** +1 484 821 0984 Tel.: +1 484 821 1272 Fax:

+33 388 51 76 88 Fax: E-mail: sales-fr@mn-net.com E-mail: sales-us@mn-net.com

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### 3.2 Remarks

List of R and H phrases: see chapter 16

### 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.

#### After SKIN Contact 4.1.1

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

#### 4.1.2 After EYE Contact

Rub dust with teardrops from eyes or: 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 foam or vapour fresh air should be inhaled. Keep airways free. After inhalation of dust fresh air should be inhaled.

#### 4.1.4 After ORAL Intake

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

### 4.2 Indication of any immediate medical attention and special treatment needed

### 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.

### Advice for firefighters 5.3

No, for listed product. Product package burns like paper or plastic.

#### 5.4 Additional Information

#### 6 Accidental Release Measures

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

Regular staff training is necessary.

#### 6.2 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.

### 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 (German chemical industry): see chapter 12.1

### 7.2.1 **Requirements for Stock Rooms and Containers**

Keep original product packages tightly closed during handling and storage.

### 8 **Exposure Controls/Personal Protection**

### 8.1 Control parameters

20 mL As-I

Chemical: potassium permanganate TRGS 900 (DE): 0,5<sub>Mn</sub> E mg/m<sup>3</sup>

Short-term exposure factor:

CAS No.: 7722-64-7

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and international: Tel.: +49 24 21 969-0 +49 24 21 969-199 Fax: E-mail: info@mn-net.com

**MACHEREY-NAGEL AG** Tel.: +41 62 388 55 00 +41 62 388 55 05 Fax:

E-mail: sales-ch@mn-net.com

**MACHEREY-NAGEL EURL** Tel.: +33 388 68 22 68 +33 388 51 76 88 Fax:

E-mail: sales-fr@mn-net.com

**MACHEREY-NAGEL Inc.** Tel.:

USA:

+1 484 821 0984 +1 484 821 1272 Fax: E-mail: sales-us@mn-net.com



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

TSCA Inventory:

125 q As-II

aminosulphonic acid (sulphamic acid) CAS No.: 5329-14-6 Chemical:

TSCA Inventory: listed

250 g As-III

Chemical: zinc powder (stabilizied) CAS No.: 7440-66-6

DNEL: 1<sub>inh</sub> mo DNEL = Derived No-Effect Level (for workers) 1<sub>inh</sub> mg/m<sup>3</sup> TRGS 900 (DE): 0.1A / 2E mg/m3 E/e respirable

TSCA Inventory: listed

100 test sticks Arsenic sensitive

CAS No.: 7789-47-1 Chemical: mercury(II) bromide

EU value: 0.02<sub>Hg</sub> e mg/m<sup>3</sup> 0,02<sub>Hg</sub> E mg/m<sup>3</sup> E/e respirable TRGS 900 (DE):

8 (II), H, Sh sitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded Short-term exposure factor: skin resorptive (H), respiratory ser

SUVA(CH) MAK value: 0,1 e mg/m3 SUVA(CH) BAT value: Krea U/d 35 µg/L TRGS 903 (DE): U/a 25<sub>Kreatinin</sub> µg/g B blood, U urine

TRGS 907 (DE):

TSCA Inventory: California Proposition 65 List: listed developmental

NIOSH: Hg Vapor: TWA<sub>skin</sub> 0.05; other 0.1 mg/m<sup>3</sup>

OSHA: TWA 0.1 mg/m<sup>3</sup>

Chemical: cellulose CAS No.: 9004-34-6

TRGS 900 (DE): Staub 4 E mg/m<sup>3</sup> E/e respirable

3 a ppm

SUVA(CH) MAK value: Australia NICNAS: not listed Canada CEPA 1999: DSL yes

Japan CSCL/PRTR: not listed

Japan PDSCL: not listed Japan ISHL: not listed

South Korea TCCA: not listed TSCA Inventory: California Proposition 65 List: not listed listed

NIOSH: not listed OSHA: not listed

PVC foil (CAS 9002-86-2) Chemical: CAS No.: -

### 8.2 **Exposure controls**

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

### 8.2.1 **Respiratory Protection**

Only if additional recommendations in test instruction or packing insert.

#### 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

Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection.

### 8.2.4 **Skin Protection**

Recommended

## 8.2.5

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.

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MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6-8 · 52355 Düren · Germany Switzerland: Germany France:

and international: Tel.: +49 24 21 969-0 +49 24 21 969-199 Fax:

**MACHEREY-NAGEL AG** Tel.: +41 62 388 55 00 Fax:

**MACHEREY-NAGEL EURL** Tel.: +33 388 68 22 68 +33 388 51 76 88

**MACHEREY-NAGEL Inc.** +1 484 821 0984 Tel.: +1 484 821 1272

USA:

+41 62 388 55 05 Fax: Fax: E-mail: info@mn-net.com E-mail: sales-ch@mn-net.com E-mail: sales-fr@mn-net.com E-mail: sales-us@mn-net.com

## MACHEREY-NAGEI



# **Material Safety Data Sheet**

## according to Directive 1907/2006/EC (REACh) and 453/2010/EU

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### 9 **Physical and Chemical Properties**

### 9.1 Information on basic physical and chemical properties

20 mL As-I

Color: colored Odor: odorless Appearance: liquid

125 g As-II

Color: colourless Odor: odorless Appearance: solid

250 g As-III

Color: slightly grey Odor: odorless Appearance: powder (solid)

100 test sticks Arsenic sensitive

Color: white Odor: odorless Appearance: solid

#### 9.2 Other information

#### 9.2.1 Safety relevant Basis Data

20 mL As-I

125 g As-II

pH: < 2

Specific gravity: 2.12 sol. g/cm3 Solubility in water: 0-17 % instable 205 °C Melting point: Vapour pressure (20°C): 0.0078 hPa Volatiles by volume: 0.031 mg/m<sup>3</sup>

250 g As-III

100 test sticks Arsenic sensitive

### 9.2.2 **Relevant Properties of Substance Group**

### 9.3 **Additional Information**

not necessary

## Stability and Reactivity

### 10.1 Conditions to avoid

When indicated in packing insert.

### 10.2 Incompatible materials

Avoid contact with concentrated acids and oxidizing agents.

### 10.3 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.

## **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.

### 20 mL As-I

Chemical: potassium permanganate CAS No.: 7722-64-7

LD50<sub>orl rat</sub>: 750 mg/kg LC\_Loworl hmn: 100 mg/kg

### 125 g As-II

Chemical: aminosulphonic acid (sulphamic acid) CAS No.: 5329-14-6

LD50<sub>orl rat</sub>: 3160 mg/kg LD50<sub>orl gpg</sub>: 1050 mg/kg LD50<sub>orl mus</sub>: 1312 mg/kg

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E-mail: sales-ch@mn-net.com

and international: +49 24 21 969-0 Tel.: +49 24 21 969-199 Fax: E-mail: info@mn-net.com

**MACHEREY-NAGEL AG** Tel.: +41 62 388 55 00 +41 62 388 55 05 Fax:

**MACHEREY-NAGEL EURL** Tel.: +33 388 68 22 68 +33 388 51 76 88 Fax:

E-mail: sales-fr@mn-net.com

**MACHEREY-NAGEL Inc.** +1 484 821 0984 +1 484 821 1272 E-mail: sales-us@mn-net.com

USA:

Tel.: Fax:

## **MACHEREY-NAGEI**



# **Material Safety Data Sheet**

## according to Directive 1907/2006/EC (REACh) and 453/2010/EU

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250 g As-III

Chemical: zinc powder (stabilizied) CAS No.: 7440-66-6

LD50<sub>orl rat</sub>: >2000 mg/kg LC\_Lowinh hmn: 124<sub>50min</sub> mg/m<sup>3</sup> LC50<sub>ihl rat</sub>: >5.4<sub>4h</sub> mg/m<sup>3</sup>

100 test sticks Arsenic sensitive

Chemical: mercury(II) bromide CAS No.: 7789-47-1

LD50<sub>orl rat</sub>: 40 mg/kg LC\_Lowskn rbt: 41 mg/kg LD50<sub>drm rat</sub>: 100 mg/kg

CAS No.: 9004-34-6 Chemical: cellulose

LD50<sub>orl rat</sub>: >5000 mg/kg LC50<sub>ihl rat</sub>: >5800<sub>4h</sub> mg/m<sup>3</sup> LD50<sub>drm rbt</sub>: >2000 mg/kg

PVC foil (CAS 9002-86-2) CAS No.: -Chemical:

## **Ecological information**

### 12.1 **Toxicity**

Following information is valid for pure substances.

20 mL As-I

Chemical: CAS No.: 7722-64-7 potassium permanganate

LC50<sub>fish/96h</sub>: 3.6 mg/L WGK (DE): Storage class (VCI): 5.1 B

125 g As-II

Chemical: aminosulphonic acid (sulphamic acid) CAS No.: 5329-14-6

WGK (DE): WGK No.: 1266

Storage class (VCI): 8 B

250 g As-III

Chemical: zinc powder (stabilizied) CAS No.: 7440-66-6

LC50fish/96h: 2.01 mg/L EC50<sub>daphnia/48h</sub>: 0.131 mg/L

EC50<sub>pseudokirchneriella</sub> subcapitata/72h: IC50: 0.713 mg/L WGK (DE): WGK No.: 7325

Storage class (VCI): 13

100 test sticks Arsenic sensitive

mercury(II) bromide CAS No.: 7789-47-1 Chemical:

LC<sub>50</sub>: 0.5<sub>HgCl2/48h</sub> mg/m<sup>3</sup> 3 WGK No.: 0398 Bio Toxicity: WGK (DE):

Storage class (VCI): 6.1 B

Chemical: cellulose CAS No.: 9004-34-6

WGK (DE): nwg Storage class (VCI):

PVC foil (CAS 9002-86-2) Chemical: CAS No .: -

## **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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E-mail: sales-ch@mn-net.com

and international: +49 24 21 969-0 Tel.: +49 24 21 969-199 Fax: E-mail: info@mn-net.com

**MACHEREY-NAGEL AG** Tel.: +41 62 388 55 00 +41 62 388 55 05 Fax:

**MACHEREY-NAGEL EURL** +33 388 68 22 68 Tel.: +33 388 51 76 88 Fax:

**MACHEREY-NAGEL Inc.** Tel.: +1 484 821 0984 +1 484 821 1272

USA:

Fax: E-mail: sales-fr@mn-net.com E-mail: sales-us@mn-net.com



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## 14 Transport Information

14.1 UN No.: 3316 14.2 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: LQ 0 (acc. ADR 3.3.1/251: see LQ in Alternative Transport Labelling)

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

### Alternative Transport Labelling follows:

14.1 UN No.: **3260** 14.2 Proper shipping name:

Corrosive solid, acidic, inorganic, n.o.s. (aminosulphonic acid (sulphamic acid) mixture)

14.3 Class: 8 14.4 Packing group: III

Road transport

Classification code: C2

Limited Quantity: LQ 24 Tunnel restriction code: E

Excepted Quantity: E

Air transport

PAX: 860 max. weight PAX: 25 Kg CAO: 864 max. weight CAO: 100 Kg

Maritime transport

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

## 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

Announcement BekGS 220 (DE), Safety Data Sheet, June 2013

According 1999/45/EC small amounts of harmful and highly flammable preparations/mixtures have partly/completely exemption from labelling (no symbols F, O, Xn, Xi, N and no R and S phrases are necessary) until  $\bf 25-125~mL|g$ .

According GHS inner packages must be only labelled with symbol(s) and product identificator.

Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL** or **125 g**.

### 20 mL As-I

Directive 1999/45/EC

Symbols:

\_

CLP Directive 1272/2008/EC

GHS pictograms:

do not need labelling as hazardous

Signal word: WARNING

## 125 g As-II

Directive 1999/45/EC Symbols:



Χi

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MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany Germany Switzerland: France:

and international:
Tel.: +49 24 21 969-0
Fax: +49 24 21 969-199
E-mail: info@mn-net.com

MACHEREY-NAGEL AG
Tel.: +41 62 388 55 00
Fax: +41 62 388 55 05

E-mail: sales-ch@mn-net.com

MACHEREY-NAGEL EURL
Tel.: +33 388 68 22 68
Fax: +33 388 51 76 88

E-mail: sales-fr@mn-net.com

USA: MACHEREY-NAGEL Inc. Tel.: +1 484 821 0984

Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com



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R 36/38

Irritating to eyes and skin.

S 26-28-61

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Avoid release to the environment. Refer to special instructions/Safety data sheets.

CLP Directive 1272/2008/EC GHS pictograms:



Signal word: WARNING

### 250 g As-III

Directive 1999/45/EC Symbols:



Ν

R 50/53

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/Safety data sheets

CLP Directive 1272/2008/EC GHS pictograms:



GHS09

Signal word: WARNING

Very toxic to aquatic life with long lasting effects.

P273, P391

Avoid release to the environment. Collect spillage.

### 100 test sticks Arsenic sensitive

Directive 1999/45/EC

Symbols:

S 22

Do not breathe dust.

CLP Directive 1272/2008/EC GHS pictograms: do not need labelling as hazardous Signal word: -

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and international: +49 24 21 969-0 Tel.: +49 24 21 969-199 Fax: E-mail: info@mn-net.com

MACHEREY-NAGEL AG Tel.: +41 62 388 55 00 +41 62 388 55 05 Fax:

**MACHEREY-NAGEL EURL** Tel.:

Fax:

+33 388 68 22 68 +33 388 51 76 88 E-mail: sales-fr@mn-net.com

USA: **MACHEREY-NAGEL Inc.** 

Tel.: +1 484 821 0984 +1 484 821 1272 Fax: E-mail: sales-us@mn-net.com



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### 15.2 Chemical safety assessment

not necessary for these small amounts

### 16 Other Information

### 16.1 List of R and H phrases

### List of relevant R phrases 16.1.1

R36/38 Irritating to eyes and skin.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### 16.1.2 List of relevant H phrases

Causes skin irritation. H315 H319 Causes serious eye irritation.

Very toxic to aquatic life with long lasting effects. H410 H411 Toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects. H412

### 16.2 **Training Advice**

Multiple safety training of staffs about danger and protection by using hazards in working area.

### 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

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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, 4th adaptation of CLP regulation to technical and scientific progress

TRGS 900, German engineering rules governing limits in air at work, updated July 2012

SUVA .CH, Limits in air at work 2009, revised on 01.2009

KÜHN. BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances

### 16.6. Revisions/Updates

Reason for Revision: 2014-02 Corrected structure of sections acc. regulation 453/2010/EU, if necessary

2014-04 Adaptation of regulation 487/2013/EU

You find our current versions of MSDS in Internet:

http://www.mn-net.com/MSDS

www.mn-net.com



MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6-8 · 52355 Düren · Germany Switzerland: France: Germany

E-mail: sales-ch@mn-net.com

and international: Tel.: +49 24 21 969-0 +49 24 21 969-199 Fax: E-mail: info@mn-net.com

**MACHEREY-NAGEL AG** Tel.: +41 62 388 55 00 +41 62 388 55 05 Fax:

**MACHEREY-NAGEL EURL** Tel.: +33 388 68 22 68 +33 388 51 76 88 Fax: E-mail: sales-fr@mn-net.com USA: **MACHEREY-NAGEL Inc.** Tel.:

+1 484 821 0984 +1 484 821 1272 Fax: E-mail: sales-us@mn-net.com