

# Safety Data Sheet

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

REF: 91332

QUANTOFIX Arsenic 50

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

### 1.1 Product identifier

REF 91332  
 Product name QUANTOFIX Arsenic 50

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.

2 x 30 g As-1  
 2 x 30 g As-2  
 1 x 100 test sticks Arsenic

### 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.

If CE labelling: Product for in-vitro-diagnostic use (IVD) or Accessory for medical use

**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: 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

## SECTION 2: Hazard identification

### 2.0 Classification of the complete product

**Directive 1999/45/EC**

Symbols



Xi  
 R 36/38

R

**CLP Directive 1272/2008/EC**

GHS pictograms



GHS07

Signal word

WARNING

**Hazard identification**

**Hazard classes/categories**

H315	Skin Irritation cat. 2
H319	Eye Irritation cat. 2
H410	Hazardous to the aquatic environment - chronic cat. 1
H412	Hazardous to the aquatic environment - chronic cat. 3

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## 2.1 Classification of the substance or mixture

### 30 g As-1

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 -

#### Hazard identification

#### Hazard classes/categories

H410 Hazardous to the aquatic environment - chronic cat. 1

### 30 g As-2

Directive 1999/45/EC

Symbols R 36/38



Xi

CLP Directive 1272/2008/EC

GHS pictograms



GHS07

Signal word WARNING

#### Hazard identification

#### Hazard classes/categories

H315 Skin Irritation cat. 2  
H319 Eye Irritation cat. 2  
H412 Hazardous to the aquatic environment - chronic cat. 3

### 100 test sticks Arsenic

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 -

No hazard class

## 2.2 Label elements

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 **25-125 mL/g**.

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

### 30 g As-1

Directive 1999/45/EC

Symbols:

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-

S 60-61

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:  
do not need labelling as hazardous  
Signal word: -

## 30 g As-2

Directive 1999/45/EC

Symbols:



Xi  
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:



GHS07  
Signal word: WARNING

## 100 test sticks Arsenic

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: -

## 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

Can accumulate within the body.

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### Information pertaining to particular Risks to the Environment

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Other Hazards  
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## SECTION 3: Composition/Information on Ingredients

### 3.1 Substances or 3.2 Mixtures

#### 30 g As-1

Chemical:	<i>zinc powder (stabilized)</i>	CAS No.:	7440-66-6
Concentration:	25 - <75 %		
Formula:	Zn		
REACH Reg. No.:	01-2119467174-37-xxxx	Indice No.:	030-002-01-9
EC No.:	231-175-3		
RTECS:	ZG8600000		
TSCA Inventory:	listed		
KE No.:	KE-35518		
acc. 1999/45/EC:	R 50/53	acc. CLP (GHS):	H410

#### 30 g As-2

Chemical:	<i>aminosulfonic acid (sulfamic acid)</i>	CAS No.:	5329-14-6
Concentration:	50 - <100 %		
Formula:	H <sub>3</sub> NO <sub>3</sub> S		
REACH Reg. No.:	01-2119488633-28-xxxx	Indice No.:	016-026-00-0
EC No.:	226-218-8		MFCD: 0005994x
RTECS:	WO5950000		
TSCA Inventory:	listed		
acc. 1999/45/EC:	R 36/38-52/53	acc. CLP (GHS):	H315, H319, H412

#### 100 test sticks Arsenic

Chemical:	<i>mercury(II) bromide</i>	CAS No.:	7789-47-1
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		
KE No.:	KE-23120, Toxic 97-1-140		
acc. 1999/45/EC:	-	acc. CLP (GHS):	not necessary

Chemical:	<i>cellulose</i>	CAS No.:	9004-34-6
Concentration:	1 - <10 %		
Formula:	(C <sub>6</sub> H <sub>10</sub> O <sub>5</sub> ) <sub>n</sub>		
REACH Reg. No.:	exempt, Annex IV		
EC No.:	232-674-9		
RTECS:	FJ5691460		
TSCA Inventory:	listed		
KE No.:	KE-05339		
acc. 1999/45/EC:	-	acc. CLP (GHS):	not necessary

Chemical:	<i>PVC foil (CAS 9002-86-2)</i>	CAS No.:	-
Concentration:	95 - <100 %		
TSCA Inventory:	listed		
acc. 1999/45/EC:	-	acc. CLP (GHS):	not necessary

### 3.3 Remarks

List of R, H and P phrases: see section 16.

## 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.

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- 4.1.1 After SKIN Contact**  
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 Vapours**  
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 Most important symptoms and effects, both acute and delayed**  
Avoid inhalation of dust. Can accumulate within the body. ---
- 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**  
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## 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, contains only small amounts of these substances
- 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**  
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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): 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.  
If CE labelling: Product for in-vitro-diagnostic use (IVD) or Accessory for medical use

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### 30 g As-1

Chemical: *zinc powder (stabilized)*

CAS No.: 7440-66-6

DNEL:  $1_{inh} \text{ mg/m}^3$

DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): 0.1A / 2E  $\text{mg/m}^3$   
E/e respirable

#### 30 g As-2

Chemical: *aminosulfonic acid (sulfamic acid)*

CAS No.: 5329-14-6

DNEL:  $[inh] 70,5 \text{ mg/m}^3$

DNEL = Derived No-Effect Level (for workers)

#### 100 test sticks Arsenic

Chemical: *mercury(II) bromide*

CAS No.: 7789-47-1

EU value:  $0,02 \text{ Hg e mg/m}^3$

TRGS 900 (DE):  $0,02 \text{ Hg E mg/m}^3$   
E/e respirable

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

SUVA(CH) MAK value:  $0,1 \text{ e mg/m}^3$

SUVA(CH) BAT value: Krea U/d  $35 \mu\text{g/L}$

TRGS 903 (DE): U/a  $25 \text{ Kreatinin } \mu\text{g/g}$   
B blood, U urine

NIOSH: Hg Vapor: TWA<sub>skin</sub> 0.05; other  $0.1 \text{ mg/m}^3$

OSHA: TWA  $0.1 \text{ mg/m}^3$

Chemical: *cellulose*

CAS No.: 9004-34-6

TRGS 900 (DE): Staub  $1.25 \text{ A} / 4 \text{ E mg/m}^3$   
E/e respirable

SUVA(CH) MAK value: 3 a ppm

NIOSH: TWA 10 (total) / 5 (resp)  $\text{mg/m}^3$

OSHA: TWA 15 (total) / 5 (resp)  $\text{mg/m}^3$

Chemical: *PVC foil (CAS 9002-86-2)*

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

#### 30 g As-1

Appearance: powder (solid)

Color: slightly grey

Odor: odorless

pH:

6-8



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### 30 g As-2

Appearance: solid	Color: colourless	Odor: odorless
pH: < 2		
Melting point: instable 205 °C		
Vapour pressure (20°C): 0.0078 hPa		
Specific gravity: 2.12 sol. g/cm <sup>3</sup>		
Solubility in water: 0-17 %		
Volatiles by volume: 0.031 mg/m <sup>3</sup>		

### 100 test sticks Arsenic

Appearance: solid	Color: colourless	Odor: odorless
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## 9.2 Other information

Relevant Properties of Substance Group

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No known instability.

### 10.3 Possibility of hazardous reactions

No data available.

### 10.4 Conditions to avoid

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### 10.5 Incompatible materials

Not necessary. Avoid contact with concentrated acids and oxidizing agents.

### 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.

#### 30 g As-1

Chemical:	<i>zinc powder (stabilized)</i>	CAS No.: 7440-66-6
TSCA Inventory:	listed	
Korea Exist.Chem.Inventory:	KE-35518	
LD50 <sub>orl rat</sub> :	>2000 mg/kg	
LC <sub>Lowinh hmn</sub> :	124 <sub>50min</sub> mg/m <sup>3</sup>	
LC50 <sub>ihl rat</sub> :	>5.4 <sub>4h</sub> mg/m <sup>3</sup>	

#### 30 g As-2

Chemical:	<i>aminosulfonic acid (sulfamic acid)</i>	CAS No.: 5329-14-6
TSCA Inventory:	listed	
Target Organs:	affect the eye or visual capacity	
Symptoms:	conjunctivitis; corneal damage	
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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Chemical: *mercury(II) bromide* CAS No.: 7789-47-1  
 TSCA Inventory: listed California Proposition 65 List: listed developmental  
 Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system, central nervous system, kidneys  
 Symptoms: irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headac  
 Japan CSCL/PRTR: PRTR:  $\geq 1,0\%$ Hg class I  
 Japan PDSCL: Poisonous substance Japan ISHL: listed  $\geq 0,3\%$ / $\geq 0,1\%$   
 Korea Exist.Chem.Inventory: KE-23120, Toxic 97-1-140  
 LD50<sub>orl rat</sub>: 40 mg/kg  
 LC<sub>LoWskn rbt</sub>: 41 mg/kg  
 LD50<sub>drm rat</sub>: 100 mg/kg

TRGS 907 (DE): Sh

Chemical: *cellulose* CAS No.: 9004-34-6  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 Exposure Routes: inhalation, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system  
 Symptoms: irritation eyes, skin, mucous membrane  
 Australia NICNAS: not listed Canada CEPA 1999: DSL yes  
 Japan CSCL/PRTR: not listed Japan ISHL: not listed  
 Japan PDSCL: not listed  
 South Korea TCCA: not listed  
 Korea Exist.Chem.Inventory: KE-05339  
 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

Chemical: *PVC foil (CAS 9002-86-2)* CAS No.: -  
 TSCA Inventory: listed

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 30 g As-1

Chemical: *zinc powder (stabilized)* CAS No.: 7440-66-6  
 Very toxic to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.  
 Environmental hazards must not be labelled with H and P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).  
 LC50<sub>fish/96h</sub>: 2.01 mg/L  
 EC50<sub>daphnia/48h</sub>: 0.131 mg/L  
 EC50<sub>pseudokirchneriella subcapitata/72h</sub>: IC50: 0.713 mg/L  
 Water hazard class (DE): 2 WGK No.: 7325  
 Storage class (VCI): 13

#### 30 g As-2

Chemical: *aminosulfonic acid (sulfamic acid)* CAS No.: 5329-14-6  
 Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.  
 Environmental hazards must not be labelled with P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).  
 Water hazard class (DE): 1 WGK No.: 1266  
 Storage class (VCI): 8 B

#### 100 test sticks Arsenic

Chemical: *mercury(II) bromide* CAS No.: 7789-47-1  
 Bio Toxicity: LC50: 0.5<sub>HgCl2/48h</sub> mg/m<sup>3</sup>  
 Water hazard class (DE): 3 WGK No.: 0398  
 Storage class (VCI): 6.1 B

Chemical: *cellulose* CAS No.: 9004-34-6  
 Water hazard class (DE): nwg  
 Storage class (VCI): 11





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Chemical: *PVC foil (CAS 9002-86-2)*

CAS No.: -

- 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**

## SECTION 14: Transport information

14.1 - 14.4: No dangerous goods according the transport regulations

- 14.5 Environmental hazards**  
not necessary, contains only small amounts of these 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
- 15.2 Chemical safety assessment**  
not necessary for these small amounts

## SECTION 16: Other Information

- 16.1 List of R, H and P phrases**
  - 16.1.1 List of relevant R phrases**
    - R36/38 Irritating to eyes and skin.
    - R50/53 Very 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**
    - H315 Causes skin irritation.
    - H319 Causes serious eye irritation.
    - H410 Very toxic to aquatic life with long lasting effects.
    - H412 Harmful to aquatic life with long lasting effects.
  - 16.1.3 List of relevant P phrases**
    - P273 Avoid release to the environment.

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P280sh                      Wear protective gloves/eye protection.  
P391                            Collect spillage.

**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**

MACHEREY-NAGEL GmbH & Co. KG provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.  
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**16.5 Sources of Key Data**

Regulation 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  
TRGS 900, German engineering rules governing limits in air at work, updated September 2016  
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*

You find our current versions of MSDS in Internet:  
<http://www.mn-net.com/MSDS>

