

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 25.03.2019

Version 8.1

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Catalogue No.	114661
Product name	Phosphate Test in freshwater and seawater Method: colorimetric with colour card 0.25 - 0.50 - 0.75 - 1.0 - 1.5 - 2.0 - 3.0 mg/l PO <sub>4</sub> <sup>3-</sup> MQuant®
	PO <sub>4</sub> -1
REACH Registration Number	This product is a mixture. REACH Registration Number see section 3.

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

Identified uses	Reagent for analysis For additional information on uses please refer to the Merck Chemicals portal ( <a href="http://www.merckgroup.com">www.merckgroup.com</a> ).
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**1.3 Details of the supplier of the safety data sheet**

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Responsible Department	LS-QHC * e-mail: <a href="mailto:prodsafe@merckgroup.com">prodsafe@merckgroup.com</a>

**1.4 Emergency telephone number** **Please contact the regional company representation in your country.****SECTION 2. Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Corrosive to metals, Category 1, H290

Skin corrosion, Category 1A, H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

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PO<sub>4</sub><sup>3-</sup> MQuant®  
PO4-1

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## 2.2 Label elements

### Labelling.(REGULATION (EC) No 1272/2008)

#### Hazard pictograms



Signal word  
Danger

#### Hazard statements

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

#### Precautionary statements

##### Prevention

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

##### Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

### Reduced labelling (≤125 ml)

#### Hazard pictograms



Signal word  
Danger

#### Hazard statements

H314 Causes severe skin burns and eye damage.

#### Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Contains: sulphuric acid

## 2.3 Other hazards

None known.

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PO<sub>4</sub>-1

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## SECTION 3. Composition/information on ingredients

Chemical nature Aqueous sulfuric acid solution.

### 3.1 Substance

Not applicable

### 3.2 Mixture

#### Hazardous components (REGULATION (EC) No 1272/2008)

*Chemical name (Concentration)*

CAS-No.	Registration number	Classification
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sulphuric acid ( $\geq 25\%$  -  $< 50\%$ )

*Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.*

7664-93-9	01-2119458838-20-XXXX	
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Corrosive to metals, Category 1, H290  
Skin corrosion, Category 1A, H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

*General advice*

First aider needs to protect himself.

After inhalation: fresh air. Call in physician.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

### 4.2 Most important symptoms and effects, both acute and delayed

Nausea, Vomiting, Diarrhoea, pain  
Irritation and corrosion, Cough, Shortness of breath  
Risk of blindness!

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

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

*Suitable extinguishing media*

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Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

## 5.2 Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Sulphur oxides

## 5.3 Advice for firefighters

*Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

*Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6. Accidental release measures

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

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H<sup>+</sup>, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

*Advice on safe handling*

Observe label precautions.

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### *Hygiene measures*

Change contaminated clothing and immerse in water. Preventive skin protection  
Wash hands and face after working with substance.

## **7.2 Conditions for safe storage, including any incompatibilities**

### *Requirements for storage areas and containers*

No metal containers.

### *Storage conditions*

Tightly closed.

Recommended storage temperature see product label.

The data applies to the entire pack.

## **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## **SECTION 8. Exposure controls/personal protection**

### **8.1 Control parameters**

#### **Derived No Effect Level (DNEL)**

##### *sulphuric acid (7664-93-9)*

Worker DNEL, acute Local effects inhalation 0,1 mg/m<sup>3</sup>

Worker DNEL, longterm Local effects inhalation 0,05 mg/m<sup>3</sup>

#### **Predicted No Effect Concentration (PNEC)**

##### *sulphuric acid (7664-93-9)*

PNEC Fresh water 0,0025 mg/l

PNEC Fresh water sediment 0,002 mg/kg

PNEC Marine water 0,00025 mg/l

PNEC Marine sediment 0,002 mg/kg

PNEC Sewage treatment plant 8,8 mg/l

### **8.2 Exposure controls**

#### **Engineering measures**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

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PO4-1

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## Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

### Eye/face protection

Tightly fitting safety goggles

### Hand protection

full contact:

Glove material: Viton (R)  
Glove thickness: 0,7 mm  
Break through time: 480 min

splash contact:

Glove material: butyl-rubber  
Glove thickness: 0,7 mm  
Break through time: 120 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 890 Vitoject® (full contact), KCL 898 Butoject® (splash contact).

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

### Other protective equipment

Acid-resistant protective clothing

### Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

## Environmental exposure controls

Do not let product enter drains.

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## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form	liquid
Colour	colourless

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Odour	odourless
Odour Threshold	Not applicable
pH	ca. 1 at 20 °C
Melting point	No information available.
Boiling point	No information available.
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	1,21 g/cm <sup>3</sup> at 20 °C
Relative density	No information available.
Water solubility	at 20 °C soluble, (development of heat)
Partition coefficient: n- octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	Oxidizing potential

## 9.2 Other data

Corrosion May be corrosive to metals.

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

has a corrosive effect  
strong oxidising agent

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Violent reactions possible with:

Water, Alkali metals, alkali compounds, Ammonia, Aldehydes, acetonitrile, Alkaline earth metals, alkalines, Acids, alkaline earth compounds, Metals, metal alloys, Oxides of phosphorus, phosphorus, hydrides, halogen-halogen compounds, oxyhalogenic compounds, permanganates, nitrates, carbides, combustible substances, organic solvent, acetylidene, Nitriles, organic nitro compounds, anilines, Peroxides, picrates, nitrides, lithium silicide, iron(III) compounds, bromates, chlorates, Amines, perchlorates, hydrogen peroxide

### 10.4 Conditions to avoid

Strong heating.

### 10.5 Incompatible materials

animal/vegetable tissues, Metals

### 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### Mixture

#### *Acute oral toxicity*

This information is not available.

#### *Acute inhalation toxicity*

This information is not available.

#### *Acute dermal toxicity*

This information is not available.

#### *Skin irritation*

Mixture causes severe burns.

#### *Eye irritation*

Mixture causes serious eye damage. Risk of blindness!

#### *Sensitisation*

This information is not available.

#### *Germ cell mutagenicity*



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This information is not available.

#### *Carcinogenicity*

This information is not available.

#### *Reproductive toxicity*

This information is not available.

#### *Teratogenicity*

This information is not available.

#### *Specific target organ toxicity - single exposure*

This information is not available.

#### *Specific target organ toxicity - repeated exposure*

This information is not available.

#### *Aspiration hazard*

This information is not available.

## 11.2 Further information

After inhalation of aerosols: damage to the affected mucous membranes. After skin contact: severe burns with formation of scabs. After eye contact: burns, corneal lesions. After swallowing: severe pain (risk of perforation!), nausea, vomiting and diarrhoea. After a latency period of several weeks possibly pyloric stenosis. Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## Components

### *sulphuric acid*

*Germ cell mutagenicity*

*Genotoxicity in vitro*

Ames test

Salmonella typhimurium

Result: negative

(HSDB)

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## SECTION 12. Ecological information

### Mixture

#### 12.1 Toxicity

No information available.

#### 12.2 Persistence and degradability

No information available.

#### 12.3 Bioaccumulative potential

No information available.

#### 12.4 Mobility in soil

No information available.

#### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

#### 12.6 Other adverse effects

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## *Additional ecological information*

Forms corrosive mixtures with water even if diluted.  
Harmful effect due to pH shift.  
Endangers drinking-water supplies if allowed to enter soil or water.  
Discharge into the environment must be avoided.

## **Components**

### *sulphuric acid*

#### *Toxicity to fish*

static test LC50 *Lepomis macrochirus* (Bluegill sunfish): > 16 - < 28 mg/l; 96 h  
Analytical monitoring: yes(ECHA)

#### *Toxicity to daphnia and other aquatic invertebrates*

static test EC50 *Daphnia magna* (Water flea): > 100 mg/l; 48 h  
Analytical monitoring: yes  
OECD Test Guideline 202

#### *Toxicity to algae*

static test EC50 *Desmodesmus subspicatus* (green algae): > 100 mg/l; 72 h  
Analytical monitoring: yes  
OECD Test Guideline 201

#### *Toxicity to fish (Chronic toxicity)*

flow-through test NOEC *Cyprinodon* sp. (minnow): 0,025 mg/l; 65 d

Analytical monitoring: yes(ECHA)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

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PO<sub>4</sub>-1

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## SECTION 13. Disposal considerations

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14. Transport information

### Land transport (ADR/RID)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** yes  
Tunnel restriction code E

### Inland waterway transport (ADN)

Not relevant

### Air transport (IATA)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** no

### Sea transport (IMDG)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** yes

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EmS F-A S-P

## 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

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## SECTION 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### *EU regulations*

Major Accident Hazard 96/82/EC  
Legislation Directive 96/82/EC does not apply

SEVESO III  
Not applicable

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.

Regulation (EC) No 1005/2009 on substances not regulated  
that deplete the ozone layer

Regulation (EC) No 850/2004 of the not regulated  
European Parliament and of the Council of 29  
April 2004 on persistent organic pollutants  
and amending Directive 79/117/EEC

Substances of very high concern (SVHC) This product does not contain  
substances of very high concern  
according to Regulation (EC) No  
1907/2006 (REACH), Article 57  
above the respective regulatory  
concentration limit of  $\geq 0.1\%$   
(w/w).

#### *National legislation*

Storage class 8B  
The data applies to the entire pack.

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

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

### Training advice

Provide adequate information, instruction and training for operators.

### Labelling

Hazard pictograms



Signal word  
Danger

### Hazard statements

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

### Precautionary statements

Prevention

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Contains: sulphuric acid

### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

### Regional representation

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*

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The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 25.03.2019

Version 8.1

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

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	PO <sub>4</sub> -2
REACH Registration Number	A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
CAS-No.	50-81-7

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

Identified uses	Reagent for analysis For additional information on uses please refer to the Merck Chemicals portal ( <a href="http://www.merckgroup.com">www.merckgroup.com</a> ).
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**1.3 Details of the supplier of the safety data sheet**

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Responsible Department	LS-QHC * e-mail: <a href="mailto:prodsafe@merckgroup.com">prodsafe@merckgroup.com</a>

**1.4 Emergency telephone number** **Please contact the regional company representation in your country.****SECTION 2. Hazards identification****2.1 Classification of the substance or mixture**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

**2.2 Label elements****Labelling.(REGULATION (EC) No 1272/2008)**

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Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

## 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

### 3.1 Substance

Formula	C <sub>6</sub> H <sub>8</sub> O <sub>6</sub> (Hill)
EC-No.	200-066-2
Molar mass	176,12 g/mol

Remarks	No disclosure requirement according to Regulation (EC) No. 1907/2006.
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### 3.2 Mixture

Not applicable

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

After eye contact: rinse out with plenty of water. Remove contact lenses.

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

### 4.2 Most important symptoms and effects, both acute and delayed

We have no description of any symptoms of toxicity.

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

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

*Suitable extinguishing media*

Water, Foam, Carbon dioxide (CO<sub>2</sub>), Dry powder

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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PO4-2

## 5.2 Special hazards arising from the substance or mixture

Combustible.  
Risk of dust explosion.  
Development of hazardous combustion gases or vapours possible in the event of fire.

## 5.3 Advice for firefighters

*Special protective equipment for firefighters*  
In the event of fire, wear self-contained breathing apparatus.

### *Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

Suppress (knock down) gases/vapours/mists with a water spray jet.

---

## SECTION 6. Accidental release measures

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

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 6.4 Reference to other sections

Indications about waste treatment see section 13.

---

## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

*Advice on safe handling*  
Observe label precautions.

### *Hygiene measures*

Change contaminated clothing. Wash hands after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

*Storage conditions*  
Tightly closed.

Recommended storage temperature see product label.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 114661  
Product name Phosphate Test in freshwater and seawater Method: colorimetric with colour card 0.25 - 0.50 - 0.75 - 1.0 - 1.5 - 2.0 - 3.0 mg/l  
PO<sub>4</sub><sup>3-</sup> MQuant®  
PO<sub>4</sub>-2

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The data applies to the entire pack.

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

##### *Eye/face protection*

Safety glasses

##### *Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

##### *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert

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substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

## Environmental exposure controls

Do not let product enter drains.

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## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form	solid
Colour	white
Odour	odourless
Odour Threshold	Not applicable
pH	2,2 - 2,5 at 50 g/l 20 °C
Melting point	No information available.
Boiling point/boiling range	Not applicable
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapour pressure	Not applicable
Relative vapour density	Not applicable
Density	1,65 g/cm <sup>3</sup> at 20 °C
Relative density	No information available.

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Water solubility 330 g/l  
at 24 °C

Partition coefficient: n-  
octanol/water log Pow: -2,15  
(Lit.) Bioaccumulation is not expected.

Auto-ignition temperature No information available.

Decomposition temperature > 192 °C

Viscosity, dynamic at 20 °C  
Not applicable

Explosive properties Not classified as explosive.

Oxidizing properties none

## 9.2 Other data

Ignition temperature 380 °C

Bulk density ca.500 - 900 kg/m<sup>3</sup>

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

Reducing agents  
Risk of dust explosion.

### 10.2 Chemical stability

sensitive to moisture  
Sensitivity to light  
Sensitive to air.

### 10.3 Possibility of hazardous reactions

Violent reactions possible with:  
Aluminium, Copper alloys, Zinc, metal ions, Oxidizing agents, Copper, Acids, bases

### 10.4 Conditions to avoid

Strong heating (decomposition).

### 10.5 Incompatible materials

no information available

### 10.6 Hazardous decomposition products

no information available

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### *Acute oral toxicity*

LD50 Rat: 11.900 mg/kg (RTECS)

#### *Acute inhalation toxicity*

This information is not available.

#### *Acute dermal toxicity*

This information is not available.

#### *Skin irritation*

Rabbit

Result: No irritation

OECD Test Guideline 404

#### *Eye irritation*

Rabbit

Result: slight irritation

OECD Test Guideline 405

#### *Sensitisation*

This information is not available.

#### *Germ cell mutagenicity*

This information is not available.

#### *Carcinogenicity*

This information is not available.

#### *Reproductive toxicity*

This information is not available.

#### *Teratogenicity*

This information is not available.

#### *Specific target organ toxicity - single exposure*

This information is not available.

#### *Specific target organ toxicity - repeated exposure*

This information is not available.

#### *Aspiration hazard*

This information is not available.

### 11.2 Further information

Substances which occur in nature

Chronic uptake results in damage of:

Kidney

However, when the product is handled appropriately, hazardous effects are unlikely to occur.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### 12.1 Toxicity

#### *Toxicity to fish*

LC50 *Oncorhynchus mykiss* (rainbow trout): 1.020 mg/l; 96 h

OECD Test Guideline 203 acidic

#### *Toxicity to daphnia and other aquatic invertebrates*

EC50 *Daphnia magna* (Water flea): 360 mg/l; 48 h (External MSDS)

#### *Toxicity to algae*

IC50 *Desmodesmus subspicatus* (green algae): 1.750 mg/l; 72 h (External MSDS)

#### *Toxicity to bacteria*

EC50 *Pseudomonas putida*: 140 mg/l; 16 h (External MSDS)

### 12.2 Persistence and degradability

#### *Biodegradability*

97 %; 5 d

OECD Test Guideline 302B

Readily eliminated from water

#### *Ratio BOD/ThBOD*

BOD<sub>28</sub> 65 %

Closed Bottle test

BOD<sub>5</sub> 48 %

Closed Bottle test

### 12.3 Bioaccumulative potential

#### *Partition coefficient: n-octanol/water*

log Pow: -2,15

(Lit.) Bioaccumulation is not expected.

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### 12.6 Other adverse effects

#### *Additional ecological information*

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14. Transport information

### Land transport (ADR/RID)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** yes  
Tunnel restriction code E

### Inland waterway transport (ADN)

Not relevant

### Air transport (IATA)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** no

### Sea transport (IMDG)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** yes

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EmS F-A S-P

## 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

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## SECTION 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU regulations

Major Accident Hazard 96/82/EC  
Legislation Directive 96/82/EC does not apply

SEVESO III  
Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Substances of very high concern (SVHC) This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq 0.1\%$  (w/w).

#### National legislation

Storage class 8B  
The data applies to the entire pack.

Dust explosion class St1

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Merck (company-internal/in-house) Occupational Exposure Limit (Merck OEL)

Internal company value 2 mg/m<sup>3</sup>

Short Term Exposure (15 4



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min) Factor

Pregnancy risk groups C

There is no reason to fear damage to the embryo, or foetus when the Merck OEL value is observed.

## Full text of H-Statements referred to under sections 2 and 3.

### Training advice

Provide adequate information, instruction and training for operators.

### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

### Regional representation

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*

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