

# Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue: 14.10.2004  
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## 1. Identification of the substance/preparation and of the company/undertaking

### Identification of the product

Catalogue No.: 110428  
Product name: Phosphate Test Method: Analytical test strips 10 - 25 - 50 - 100 -  
250 - 500 mg/l 100 Tests Merckoquant®  
Reagenzlösung

### Use of the substance/preparation

Reagent for analysis

### Company/undertaking identification

Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Phone: +49 6151 72-0  
Emergency telephone No.: Please contact the regional Merck representation  
in your country.

## 2. Composition/information on ingredients

Aqueous solution of inorganic compounds.

### Hazardous ingredients:

Name according to EC Directives:

CAS-No.	EC No.	EC-Index-No.	Classification	Content:
Sulphuric acid 7664-93-9	231-639-5	016-020-00-8	C; R35	≥ 10 - < 15 %

(Full text of R-Phrases in heading 16)

## 3. Hazards identification

Irritating to eyes and skin.

## 4. First aid measures

After inhalation: fresh air.  
After skin contact: wash off with plenty of water. Remove contaminated clothing.  
After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist.  
After swallowing: make victim drink plenty of water, call in physician.

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## 5. Fire-fighting measures

Suitable extinguishing media:  
In adaption to materials stored in the immediate neighbourhood.

Special risks:  
Non-combustible. Ambient fire may liberate hazardous vapours. The following may develop in event of fire: sulfur oxides.

Special protective equipment for fire fighting:  
Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Other information:  
Contain escaping vapours with water. Prevent fire-fighting water from entering surface water or groundwater.

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## 6. Accidental release measures

Person-related precautionary measures:  
Do not inhale vapours/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures:  
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:  
Take up with liquid-absorbent and neutralizing material (e.g. Chemizorb® H<sup>+</sup>, Art. No. 101595). Forward for disposal. Clean up affected area.

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## 7. Handling and storage

*Handling:*

No further requirements.

*Storage:*

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

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## 8. Exposure controls/personal protection

*Personal protective equipment:*

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

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Hand protection: In full contact:  
Glove material: nitrile rubber  
Layer thickness: 0.11 mm  
Breakthrough time: > 480 Min.

In splash contact:  
Glove material: nitrile rubber  
Layer thickness: 0.11 mm  
Breakthrough time: > 480 Min.

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

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. 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).

Industrial hygiene:  
Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

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## 9. Physical and chemical properties

Form:	liquid	
Colour:	colourless	
Odour:	odourless	
pH value	(20 °C)	< 1
Melting point		not available
Boiling point		not available
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	~ 1.2 g/cm <sup>3</sup>
Solubility in water	(20 °C)	soluble

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## 10. Stability and reactivity

### *Conditions to be avoided*

Strong heating.

### *Substances to be avoided*

alkali metals, alkaline earth metals, ammonia, alkalis.

### *Hazardous decomposition products*

in the event of fire: See chapter 5.

### *Further information*

has a corrosive effect; incompatible with metals, animal/vegetable tissues.  
Hydrogen may form upon contact with metals (danger of explosion!).

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## 11. Toxicological information

### *Acute toxicity*

Quantitative data on the toxicity of this product are not available.

### *Further toxicological information*

Property that must be anticipated on the basis from the components of the preparation:

After inhalation of vapours: irritative symptoms in the respiratory tract.

After skin contact: severe irritations.

After eye contact: corneal destruction.

After swallowing: damage of the oral, oesophageal, and gastric mucous membranes. Perforation of the oesophagus frequently occurs. Circulatory collapse may occur after 1-2 hours.

### *Other notes:*

Symptoms of an acute molybdenum(VI) intoxication: diarrhoea, anaemia (decreased haemoglobin concentration in the blood), fatigue. Toxic effect on liver and kidneys after high doses.

### *Further data*

Further hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals.

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## 12. Ecological information

### *Ecotoxic effects:*

Quantitative data on the ecological effect of this product are not available.

### *Further ecologic data:*

The following applies to sulfuric acid: biological effects: harmful effect on aquatic organisms.

Harmful effect due to pH shift. Toxic effect on fish and algae. Caustic even in diluted form.

Does not cause biological oxygen deficit. Endangers drinking-water supplies if allowed to enter soil and/or waters in large quantities. Neutralization possible in waste water treatment plants.

Daphnia toxicity: Daphnia magna EC<sub>50</sub>: 29 mg/l/24 h (calculated on the pure substance).

The following applies to molybdenum compounds in general: biological effects: fish: lethal from 25 mg/l up; algae: Sc. quadricauda toxic from 54 mg/l up; protozoa: Microregma toxic from 27 mg/l up.

Do not allow to enter waters, waste water, or soil!

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## 13. Disposal considerations

### *Product:*

Chemicals must be disposed of in compliance with the respective national regulations. Under [www.retrologistik.de](http://www.retrologistik.de) you will find country- and substance-specific information as well as contact partners.

### *Packaging:*

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under [www.retrologistik.de](http://www.retrologistik.de) you will find special information on the respective national conditions as well as contact partners.

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## 14. Transport information

Road & Rail ADR, RID

UN 2796 SCHWEFELSAEURE, 8, II

Inland waterway ADN, ADNR not tested

Sea IMDG-Code

UN 2796 SULPHURIC ACID, 8, II

Ems F-A S-B

Air CAO, PAX

SULPHURIC ACID, 8, UN 2796, II

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.  
**THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !**

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## 15. Regulatory information

### *Labelling according to EC Directives*

Symbol: Xi Irritant

R-phrases: ---

S-phrases: ---

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## 16. Other information

Text of any R phrases referred to under heading 2:

35 Causes severe burns.

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Reduced labelling on the container due to small quantity.

*Reason for alteration*

Chapter 2: change in ingredients data.

Chapter 11: toxicological information.

Chapter 12: ecological information.

General update.

*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 characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.*