

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 23.07.2013

Version 4.0

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

Catalogue No. 100860
Product name Molybdenum Cell Test Method: photometric 0.02 - 1.00 mg/l Mo . 0.03
- 1.67 mg/l MoO₄²⁻ 0.04 - 2.15 mg/l Na₂MoO₄ Spectroquant®

Mo

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 (www.merck-chemicals.com).

1.3 Details of the supplier of the safety data sheet

Responsible Department LS-QHC * e-mail: prodsafe@merckgroup.com
Regional representation Merck Chemicals Ltd * Boulevard Industrial Park * Padge Road *
Beeston * Nottingham * NG9 2JR * Tel. 01159 430840 *
information@merckchem.co.uk.

1.4 Emergency telephone number +49 (0) 6151 722440

SECTION 2. Hazards identification**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Acute aquatic toxicity, Category 1, H400

Chronic aquatic toxicity, Category 1, H410

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

Classification (67/548/EEC or 1999/45/EC)

Xn	Harmful	R20
	Dangerous for the environment	R52/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

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

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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MoO₄²⁻ 0.04 - 2.15 mg/l Na₂MoO₄ Spectroquant®
Mo

Signal word
Warning

Hazard statements
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements
Prevention
P273 Avoid release to the environment.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word
Warning

Contains: N-Cetylpyridinium chloride

2.3 Other hazards
None known.

SECTION 3. Composition/information on ingredients

Chemical nature Lyophilisate.
Mixture of organic compounds

3.1 Substance
not applicable

3.2 Mixture

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

Chemical Name (Concentration)

CAS-No.	Registration number	Classification
N-Cetylpyridinium chloride (>= 0.25 % - < 1 %)		
123-03-5	*)	

Acute toxicity, Category 3, H301
Acute toxicity, Category 2, H330
Skin irritation, Category 2, H315
Eye irritation, Category 2, H319
Specific target organ toxicity - single exposure, Category 3, H335
Acute aquatic toxicity, Category 1, H400
Chronic aquatic toxicity, Category 1, H410

*) 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.

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

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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Mo

Hazardous components (1999/45/EC)

Chemical Name (Concentration)

CAS-No.	Classification
N-Cetylpyridinium chloride (>= 0.25 % - < 1 %)	
123-03-5	T+, Very toxic; R26 T, Toxic; R25 Xi, Irritant; R36/37/38 N, Dangerous for the environment; R50/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of 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 if necessary.

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

irritant effects

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, Carbon dioxide (CO₂), Foam, Dry powder

Unsuitable extinguishing media

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

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.

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.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	100860
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Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions

Do not empty into 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. Dry.

Store at +15°C to +25°C.

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.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

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:

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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splash 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).

Respiratory protection

required when dusts are generated.

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

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	Lyophilisate
Colour	reddish-violet
Odour	odourless
Odour Threshold	not applicable
pH	No information available.
Melting point	No information available.
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Relative density	ca. 1.00 g/cm ³ at 20 °C
Water solubility	at 20 °C soluble
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	none

9.2 Other data

none

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

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

no information available

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

Acute toxicity estimate: > 2,000 mg/kg

Calculation method

Acute inhalation toxicity

Acute toxicity estimate: > 5 mg/l; 4 h ; dust/mist

Calculation method

Acute dermal toxicity

This information is not available.

Skin irritation

This information is not available.

Eye irritation

slight irritation

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

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Handle in accordance with good industrial hygiene and safety practice.

Components

N-Cetylpyridinium chloride

Acute oral toxicity

LD50 rat: 200 mg/kg (anhydrous substance) (Lit.)

Acute inhalation toxicity

LC50 rat: 0.09 mg/l; 4 h (anhydrous substance) (RTECS)

SAFETY DATA SHEET
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Skin irritation

rabbit
Result: Severe irritations
(External MSDS)

Eye irritation

rabbit
Result: Severe irritations
(External MSDS)

Sensitisation

Sensitisation test: guinea pig
Result: negative
(Lit.)

Germ cell mutagenicity

Genotoxicity in vitro

Ames test
Result: negative
(Lit.)

Reproductive toxicity

No impairment of reproductive performance in animal experiments. (Lit.)

Teratogenicity

Did not show teratogenic effects in animal experiments. (Lit.)

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

Additional ecological information

Discharge into the environment must be avoided.

Components

N-Cetylpyridinium chloride

Toxicity to fish

LC50 Cyprinus carpio (Carp): 0.01 mg/l; 96 h (anhydrous substance) (Lit.)

Biodegradability

25 %; 28 d
OECD Test Guideline 301D
(Lit.)
Not readily biodegradable.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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Mo

SECTION 13. Disposal considerations

Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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
EmS F-A S-P

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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Mo

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

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

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

Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals not regulated

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

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.

SECTION 16. Other information

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

H301 Toxic if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Full text of R-phrases referred to under sections 2 and 3

R20 Harmful by inhalation.
R25 Toxic if swallowed.
R26 Very toxic by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006


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Mo

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Training advice

Provide adequate information, instruction and training for operators.

Labelling (67/548/EEC or 1999/45/EC)

Symbol(s)  Xn Harmful

R-phrase(s) 20-52/53 Harmful by inhalation. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s) 61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Reduced labelling (≤125 ml)

Symbol(s)  Xn Harmful

R-phrase(s) 20-52/53 Harmful by inhalation. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Contains: N-Cetylpyridinium chloride

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.

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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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- 1.67 mg/l MoO₄²⁻ 0.04 - 2.15 mg/l Na₂MoO₄ Spectroquant®

Mo-1K

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 (www.merck-chemicals.com).

1.3 Details of the supplier of the safety data sheet

Responsible Department LS-QHC * e-mail: prodsafe@merckgroup.com
Regional representation Merck Chemicals Ltd * Boulevard Industrial Park * Padge Road *
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1.4 Emergency telephone number +49 (0) 6151 722440

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.

Classification (67/548/EEC or 1999/45/EC)

C Corrosive R35

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)***Hazard pictograms**Signal word*

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No. 100860
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Mo-1K

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.
P309 + P310 IF exposed or if you feel unwell: 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.
P309 + P310 IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature Aqueous solution

3.1 Substance

not applicable

3.2 Mixture

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

Chemical Name (Concentration)

CAS-No.	Registration number	Classification
7664-93-9	01-2119458838-20-XXXX	Corrosive to metals, Category 1, H290 Skin corrosion, Category 1A, H314

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

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No.	100860
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For the full text of the H-Statements mentioned in this Section, see Section 16.

Hazardous components (1999/45/EC)

Chemical Name (Concentration)
CAS-No. Classification
sulphuric acid (>= 25 % - < 50 %)
7664-93-9 C, Corrosive; R35

For the full text of the R-phrases mentioned in this Section, see Section 16.

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.

After skin contact: wash off with plenty of water. Immediately remove contaminated clothing. If available swab with polyethylene glycol 400. Call a physician immediately.

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

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

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

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 100860
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Mo-1K

Further information

Cool closed containers exposed to fire with water spray. 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: 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 empty into 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⁺, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

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

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Store at +15°C to +25°C.

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.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL)

sulphuric acid (7664-93-9)

Worker DNEL, acute	Local effects	inhalation	0.1 mg/m ³
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SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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Mo-1K

Worker DNEL, Local effects inhalation 0.05 mg/m³
longterm

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.

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).

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).

Other protective equipment

Acid-resistant protective clothing

Respiratory protection

required when vapours/aerosols are generated.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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Mo-1K

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 empty into drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Colour	colourless
Odour	odourless
Odour Threshold	not applicable
pH	at 20 °C strongly acid
Melting point	No information available.
Boiling point/boiling range	ca. 103 °C at 1,013 hPa
Flash point	No information available.
Evapouration rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Relative density	1.18 g/cm ³ at 20 °C
Water solubility	at 20 °C soluble, (development of heat)
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Catalogue No. 100860
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Decomposition temperature ca.338 °C
Distillable in an undecomposed state at normal pressure.

Viscosity, dynamic No information available.

Explosive properties Not classified as explosive.

Oxidizing properties Oxidising potential

9.2 Other data

Corrosion May be corrosive to metals.

SECTION 10. Stability and reactivity

10.1 Reactivity

strong oxidising agent

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

A risk of explosion and/or of toxic gas formation exists with the following substances:

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
Contact with metals liberates hydrogen gas.

10.6 Hazardous decomposition products

in the event of fire: See section 5.

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.

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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

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.

Handle in accordance with good industrial hygiene and safety practice.

Components

sulphuric acid

Acute inhalation toxicity

LC50 rat: 0.25 mg/l; 4 h (IUCLID)

Germ cell mutagenicity

Genotoxicity in vitro

Ames test

Salmonella typhimurium

Result: negative

(HSDB)

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.

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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

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 daphnia and other aquatic invertebrates
EC50 Daphnia magna (Water flea): 29 mg/l; 24 h (IUCLID)

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

SECTION 13. Disposal considerations

Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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)

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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
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!

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

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

Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals not regulated

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

National legislation

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

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15.2 Chemical Safety Assessment

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

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.


Full text of R-phrases referred to under sections 2 and 3

R35 Causes severe burns.

Training advice


Provide adequate information, instruction and training for operators.

Labelling (67/548/EEC or 1999/45/EC)

Symbol(s)  C Corrosive

R-phrase(s) 35 Causes severe burns.
S-phrase(s) 26-30-45 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Never add water to this product. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Reduced labelling (≤125 ml)

Symbol(s)  C Corrosive

R-phrase(s) 35 Causes severe burns.
S-phrase(s) 26-36/37/39-45 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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.

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.