

according to Regulation (EC) No. 1907/2006

Revision Date 29.01.2018

Version 10.8

## aSECTION 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup>

Spectroquant®

SO<sub>4</sub>2-

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.merckgroup.com).

# 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: prodsafe@merckgroup.com

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

This mixture is not classified as dangerous according to European Union legislation.

## 2.2 Label elements

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

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

#### 2.3 Other hazards

None known.

## **SECTION 3. Composition/information on ingredients**

Chemical nature Aqueous solution of inorganic and organic compounds.

3.1 Substance

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>2-

Not applicable

#### 3.2 Mixture

Remarks No disclosure requirement according to Regulation (EC) No.

1907/2006.

## **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.

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 toxic symptoms.

## 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.

## 5.3 Advice for firefighters

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

Further information

none

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>2-

#### SECTION 6. Accidental release measures

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

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

#### 6.2 Environmental precautions

No special precautionary measures necessary.

## 6.3 Methods and materials for containment and cleaning up

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.

## 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 in a well-ventilated place. Accesible only for authorised persons.

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.

## 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.

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub><sup>2-</sup>

## 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).

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

Not required; except in case of aerosol formation.

### 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 1,0

at 25 °C

Melting point No information available.

Boiling point No information available.

Flash point No information available.

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub><sup>2-</sup>

Evaporation 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.

Density ca.1,01 g/cm3

at 25 °C

Relative density No information available.

Water solubility at 25 °C

soluble

Partition coefficient: n-

Decomposition temperature

octanol/water

No information available.

No information available.

Auto-ignition 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

See section 10.3

#### 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:

The generally known reaction partners of water.

#### 10.4 Conditions to avoid

no information available

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>2-

#### 10.5 Incompatible materials

no information available

## 10.6 Hazardous decomposition products

no information available

## **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

This information is not available.

Eye irritation

This information is not available.

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 relatively improbable due to the low concentration of the dissolved substance(s).

Handle in accordance with good industrial hygiene and safety practice.

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>2-

## **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

No ecological problems are to be expected when the product is handled and used with due care and attention.

## **SECTION 13. Disposal considerations**

Waste treatment methods

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

## **SECTION 14. Transport information**

Land transport (ADR/RID)

**14.1 UN number** UN 3316

14.2 Proper shipping name CHEMICAL KIT

14.3 Class914.4 Packing groupIII14.5 Environmentally hazardous--14.6 Special precautions foryes

user

Tunnel restriction code E

#### Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>2-

**14.1 UN number** UN 3316

14.2 Proper shipping name CHEMICAL KIT

14.3 Class914.4 Packing groupIII14.5 Environmentally hazardous--14.6 Special precautions forno

user

Sea transport (IMDG)

**14.1 UN number** UN 3316

**14.2 Proper shipping name** CHEMICAL KIT

14.3 Class914.4 Packing groupIII14.5 Environmentally hazardous--14.6 Special precautions foryes

user

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

SEVESO III Not applicable

Regulation (EC) No 1005/2009 on substances that not regulated

deplete the ozone layer

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 ≥ 0.1 % (w/w).

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub><sup>2-</sup>

National legislation

Storage class 6.1 D 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**

## 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.

## Regional representation

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

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

### 1.1 Product identifier

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup>

Spectroquant®

SO<sub>4</sub>-1K

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. 10326-27-9

## 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.merckgroup.com).

#### 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: prodsafe@merckgroup.com

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)

Acute toxicity, Category 3, Oral, H301

Acute toxicity, Category 4, Inhalation, H332

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

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO₄-1K

#### 2.2 Label elements

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

Hazard pictograms



Signal word

Danger

Hazard statements

H301 Toxic if swallowed.

H332 Harmful if inhaled.

Precautionary statements

Response

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

H301 Toxic if swallowed.

Precautionary statements

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

Contains: barium chloride dihydrate

*Index-No.* 056-004-00-8

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>-1K

#### 2.3 Other hazards

None known.

## **SECTION 3. Composition/information on ingredients**

#### 3.1 Substance

Formula BaCl<sub>2</sub> \* 2 H<sub>2</sub>O (Hill)

Index-No. 056-004-00-8

EC-No. 233-788-1

Molar mass 244,28 g/mol

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

Chemical name (Concentration)

CAS-No. Registration number Classification

barium chloride dihydrate (<= 100 % )

10326-27-9 \*)

Acute toxicity, Category 3, H301 Acute toxicity, Category 4, H332

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

#### 3.2 Mixture

Not applicable

## **SECTION 4. First aid measures**

#### 4.1 Description of first aid measures

General advice

First aider needs to protect himself.

After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician.

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

<sup>\*)</sup> 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.

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>-1K

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

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

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

The following applies to soluble barium compounds in general: after swallowing: mucosal irritation, nausea, salivation, vomiting, dizziness, pain, colics, and diarrhoea. Systemic effects include: cardiac dysrhythmias, bradycardia (subdued cardiac activity), rise in blood pressure, shock and circulatory collapse as well as muscular rigidity.

irritant effects, conjunctivitis, Cough, respiratory paralysis, Shortness of breath, Dermatitis, cardiac arrest, death

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

Subsequently administer: Sodium sulfate (1 tablespoon/1/4 I water).

## **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:

Hydrogen chloride gas

## 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.

#### SECTION 6. Accidental release measures

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

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

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>-1K

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 carefully. 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.

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

## 7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed in a well-ventilated place. Accesible only for authorised persons.

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.

## 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.

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>-1K

#### 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).

Other protective equipment protective clothing

Respiratory protection

required when dusts are generated.

Recommended Filter type: Filter P 3 (acc. to DIN 3181) for solid and liquid particles of toxic and very toxic substances

The entrepeneur 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.

#### SECTION 9. Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

Form solid

Colour white

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO₄-1K

Odour odourless

Odour Threshold Not applicable

pH 5,2 - 8,0

at 50 g/l 25 °C

Melting point No information available.

Boiling point No information available.

Flash point does not flash

Evaporation rate No information available.

Flammability (solid, gas)

The product is not flammable.

Lower explosion limit Not applicable

Upper explosion limit Not applicable

Vapour pressure No information available.

Relative vapour density No information available.

Density 3,86 g/cm3

at 20 °C

Relative density No information available.

Water solubility No information available.

Partition coefficient: n-

octanol/water

No information available.

Auto-ignition temperature No information available.

Decomposition temperature > 100 °C

Elimination of water of crystallisation

Viscosity, dynamic No information available.

Explosive properties Not classified as explosive.

Oxidizing properties none

9.2 Other data

Ignition temperature not combustible

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>-1K

Bulk density ca.1.200 - 1.400 kg/m3

## SECTION 10. Stability and reactivity

#### 10.1 Reactivity

See section 10.3

#### 10.2 Chemical stability

releases water of crystallisation when heated.

## 10.3 Possibility of hazardous reactions

Risk of explosion with:

furan-2-percarbonic acid

Violent reactions possible with:

halogen-halogen compounds, Strong oxidizing agents, strong reducing agents, acids

## 10.4 Conditions to avoid

Strong heating (decomposition).

## 10.5 Incompatible materials

no information available

## 10.6 Hazardous decomposition products

in the event of fire: See section 5.

## **SECTION 11. Toxicological information**

## 11.1 Information on toxicological effects

Acute oral toxicity

LD50 Rat: 118 mg/kg (anhydrous substance) (IUCLID)

Acute inhalation toxicity

Acute toxicity estimate: 1,6 mg/l; dust/mist

Expert judgement

Symptoms: mucosal irritations, Cough, Shortness of breath

Acute dermal toxicity

This information is not available.

Skin irritation

This information is not available.

Eve irritation

This information is not available.

Sensitisation

This information is not available.

Germ cell mutagenicity

This information is not available.

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>-1K

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 uptake:

Possible damages:

respiratory paralysis, cardiac arrest, death

Chronic intoxication:

damage of respiratory tract, conjunctivitis, Dermatitis, Cardio-vascular system

The following applies to soluble barium compounds in general: after swallowing: mucosal irritation, nausea, salivation, vomiting, dizziness, pain, colics, and diarrhoea. Systemic effects include: cardiac dysrhythmias, bradycardia (subdued cardiac activity), rise in blood pressure, shock and circulatory collapse as well as muscular rigidity.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

## **SECTION 12. Ecological information**

### 12.1 Toxicity

No information available.

#### 12.2 Persistence and degradability

Biodegradability

The methods for determining the biological degradability are not applicable to inorganic substances.

#### 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

Formation of health-hazardous mixtures possible with water. Endangers drinking-water supplies if allowed to enter soil or water.

Discharge into the environment must be avoided.

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant® Product name

SO<sub>4</sub>-1K

## **SECTION 13. Disposal considerations**

Waste treatment methods

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

## **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 Ш 14.4 Packing group 14.5 Environmentally hazardous --

14.6 Special precautions for yes

user

Ε Tunnel restriction code

# Inland waterway transport (ADN)

Not relevant

# Air transport (IATA)

UN 3316 14.1 UN number

14.2 Proper shipping name **CHEMICAL KIT** 

**14.3 Class** 9 14.4 Packing group Ш 14.5 Environmentally hazardous 14.6 Special precautions for no

user

## Sea transport (IMDG)

14.1 UN number UN 3316

CHEMICAL KIT 14.2 Proper shipping name

**14.3 Class** 14.4 Packing group Ш 14.5 Environmentally hazardous 14.6 Special precautions for yes

user

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!

according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO<sub>4</sub>-1K

## **SECTION 15. Regulatory information**

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

EU regulations

Major Accident Hazard

Legislation

96/82/EC Toxic

2

Quantity 1: 50 t Quantity 2: 200 t

SEVESO III Not applicable

Occupational restrictions

Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where

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 6.1 D 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. H332 Harmful if inhaled.

# according to Regulation (EC) No. 1907/2006

Catalogue No. 114564

Product name Sulfate Cell Test Method: photometric 100 - 1000 mg/l SO<sub>4</sub><sup>2-</sup> Spectroquant®

SO₄-1K

## Training advice

Provide adequate information, instruction and training for operators.

## Labelling

Hazard pictograms



Signal word

Danger

Hazard statements

H301 Toxic if swallowed.

H332 Harmful if inhaled.

Precautionary statements

Response

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

Contains: barium chloride dihydrate

# 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.

## Regional representation

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

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.