

according to Regulation (EC) No 1907/2006

# Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 1 of 15

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

#### 1.1. Product identifier

Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

UFI: C11Q-51VR-E00J-P64M

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

#### Use of the substance/mixture

Reagents and laboratory chemicals

Only for laboratory and analysis purposes.

### Uses advised against

Do not use for private purposes (household).

### 1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH

ACD

Street: Stempelstraße 6
Place: D-47167 Duisburg

Telephone: 0203/5194-0 Telefax: 0203/5194-290

E-mail: info@analytichem.de

Contact person: Abteilung Produktsicherheit Telephone: 0203/5194-107/117

E-mail: produktsicherheit@analytichem.de

Internet: www.analytichem.de

Responsible Department: Abteilung Produktsicherheit

1.4. Emergency telephone For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire,

<u>number:</u> Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada:

1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls

accepted)

### **Further Information**

This product is a mixture. REACH Registration Number see section 3.

#### SECTION 2: Hazards identification

# 2.1. Classification of the substance or mixture

### Regulation (EC) No 1272/2008

Met. Corr. 1; H290 Carc. 1B; H350

Muta. 1B; H340

Acute Tox. 2; H310

Acute Tox. 3; H331

Acute Tox. 3; H301

Acute 10x. 5, 1150 i

Skin Corr. 1A; H314 Eye Dam. 1; H318

STOT RE 2; H373

Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

Regulation (EC) No 1272/2008



according to Regulation (EC) No 1907/2006

# Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 2 of 15

### Hazard components for labelling

sulphuric acid mercury sulphate potassium dichromate

Signal word: Danger

Pictograms:









#### **Hazard statements**

H290 May be corrosive to metals.
H301+H331 Toxic if swallowed or if inhaled.
H310 Fatal in contact with skin.

H314 Causes severe skin burns and eye damage.

H340 May cause genetic defects.

H350 May cause cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

### **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water

or shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

## Special labelling of certain mixtures

EUH208 Contains potassium dichromate. May produce an allergic reaction.

Restricted to professional users.

#### 2.3. Other hazards

No data available

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

### 3.2. Mixtures

# Chemical characterization

Mixtures in aqueous solution



according to Regulation (EC) No 1907/2006

# Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 3 of 15

### Relevant ingredients

| CAS No    | Chemical name  |                            |   |             |  |
|-----------|--|----------------------------|---|-------------|--|
|           | EC No  | Index No                   | REACH No  |             |  |
|           | Classification (Regulation (E                            | EC) No 1272/2008)          |   |             |  |
| 7664-93-9 | sulphuric acid   |                            |   | 15 - < 20 % |  |
|           | 231-639-5  | 016-020-00-8               | 01-2119458838-20  |             |  |
|           | Met. Corr. 1, Skin Corr. 1A,                             | Eye Dam. 1; H290 H314 H318 |   |             |  |
| 7783-35-9 | mercury sulphate   | 5 - < 10 %                 |   |             |  |
|           | 231-992-5  | 080-002-00-6               |   |             |  |
|           | Acute Tox. 1, Acute Tox. 2, 7<br>H330 H300 H373 H400 H41 |                            |   |             |  |
| 7778-50-9 | potassium dichromate                                     |                            |   | < 1 %       |  |
|           | 231-906-6  | 024-002-00-6               | 01-2119454792-32  |             |  |
|           | Eye Dam. 1, Resp. Sens. 1,                               |                            | e Tox. 3, Acute Tox. 4, Skin Corr. 1B,<br>tic Acute 1, Aquatic Chronic 1; H272<br>17 H372 H400 H410 |             |  |

Full text of H and EUH statements: see section 16.

### Specific Conc. Limits, M-factors and ATE

| CAS No    | EC No   | Chemical name   | Quantity    |
|-----------|---|---|-------------|
|           | Specific Conc.                                    | Limits, M-factors and ATE   |             |
| 7664-93-9 | 231-639-5   | sulphuric acid  | 15 - < 20 % |
|           | oral: LD50 = 2 <sup>-</sup><br>Irrit. 2; H319: >= | 140 mg/kg Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye<br>= 5 - < 15   |             |
| 7783-35-9 | 231-992-5   | mercury sulphate  | 5 - < 10 %  |
|           |   | E = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); dermal:<br>//kg; oral: LD50 = 57 mg/kg                              |             |
| 7778-50-9 | 231-906-6   | potassium dichromate  | < 1 %       |
|           |   | E = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); dermal: mg/kg; oral: LD50 = 129,5 mg/kg STOT SE 3; H335: >= 5 - 100 |             |

### **Further Information**

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: potassium dichromate

This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH: potassium dichromate

### **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

### **General information**

Self-protection of the first aider

#### After inhalation

Provide fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Call a physician immediately.

## After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.



according to Regulation (EC) No 1907/2006

## Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 4 of 15

#### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

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

Protect uninjured eye.

#### After ingestion

Rinse mouth immediately and drink plenty of water.

Do not allow a neutralisation agent to be drunk.

Call a physician immediately.

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

Irritant, Vomiting, Cardiac arrhythmias

Gastrointestinal complaints, Abdominal pain

Blood pressure drop, Circulatory collapse

For Hg compounds applies: they act in a cytotoxic and protoplasmatoxic. Symptoms of poisoning: Eye contact leads to severe lesions. Ingestion and inhalation of dusts (acute): Diarrhea metallic taste, nausea, vomiting, abdominal pain, bloody diarrhea, intestinal burns, glottal edema, aspiration pneumonia, reduction in blood pressure, cardiac dysrhythmia, circulatory collapse, and renal failure (chronic): Mouth inflammation with loss of teeth and mercurial line. Speech, vision, hearing, and sensitivity, loss of memory, irritability, hallucinations, delirium

For chromium(VI), it is stated that chromium(VI) is highly toxic. It is absorbed through both the lungs and the gastrointestinal tract. Chromates/dichromates can act as strong oxidising agents, causing burns and ulcers on skin and mucous membranes as well as irritative symptoms in the upper respiratory tract. After the substance enters wounds, poorly healing ulcers appear. In sensitive individuals, the substance can easily lead to sensitisation and allergic reactions in the respiratory tract (risk of pneumonia!) and damage to the nasal mucosa (possibly septum perforation). After ingestion of the substance: severe discomfort in the gastrointestinal tract such as bloody diarrhoea, vomiting (aspiration pneumonia!), cramps, circulatory failure, loss of consciousness. Methaemoglobinaemia. After absorption, it can lead to liver and kidney damage. Chromium(VI) compounds in inhalable form have been clearly shown to be carcinogenic in animal studies. Lethal dose (human): 0.5 g. Antidotes: chelating agents such as EDTA, DMPS (Demaval).

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

No data available

### **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

#### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

# Unsuitable extinguishing media

no restriction

### 5.2. Special hazards arising from the substance or mixture

Non-combustible liquids

Hazardous combustion products

In case of fire may be liberated:

mercury and its compounds

Metal oxide smoke, toxic

Sulphur oxides

### 5.3. Advice for firefighters

Do not inhale explosion and combustion gases.

Avoid contact with skin, eyes and clothes.

In case of fire: Wear self-contained breathing apparatus.



according to Regulation (EC) No 1907/2006

## Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 5 of 15

#### Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

#### **SECTION 6: Accidental release measures**

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

#### General advice

Corrosive to metals.

### For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eves and clothes.

Remove persons to safety.

**Emergency procedures** 

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

### For emergency responders

Precautionary statements For emergency responders: Personal protection equipment: see section 8

# 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

# 6.3. Methods and material for containment and cleaning up

#### For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

# For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

### Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

## 6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

### **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

#### Advice on safe handling

Avoid exposure - obtain special instructions before use.

Read label before use.

Handle and open container with care.

Do not breathe vapour/aerosol.

When using do not eat, drink, smoke, sniff.

Keep container tightly closed.

Use personal protection equipment.

Use extractor hood (laboratory).



according to Regulation (EC) No 1907/2006

## Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 6 of 15

Provide adequate ventilation.

Avoid contact with skin, eyes and clothes.

#### Advice on protection against fire and explosion

Usual measures for fire prevention.

### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Make available sufficient washing facilities

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash

hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

#### Further information on handling

Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary.

Take off immediately all contaminated clothing and wash it before reuse.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

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

### Requirements for storage rooms and vessels

Store in a well-ventilated place. Keep container tightly closed.

Store in a place accessible by authorized persons only.

Unsuitable container/equipment material: Metal

#### Hints on joint storage

national regulations

### Further information on storage conditions

Store in a dry place.

### 7.3. Specific end use(s)

Laboratory chemicals

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

### 8.1. Control parameters

#### Occupational exposure limits

| CAS No    | Substance      | ppm | mg/m³ | fib/cm³ | Category  | Origin |
|-----------|----------------|-----|-------|---------|-----------|--------|
| 7664-93-9 | Sulphuric acid | -   | 0.05  |         | TWA (8 h) |        |

### DNEL/DMEL values

| CAS No                                | Substance      |            |       |            |  |  |
|---------------------------------------|----------------|------------|-------|------------|--|--|
| DNEL type Exposure route Effect Value |                |            |       | Value      |  |  |
| 7664-93-9                             | sulphuric acid |            |       |            |  |  |
| Worker DNEL,                          | long-term      | inhalation | local | 0,05 mg/m³ |  |  |
| Worker DNEL,                          | acute          | inhalation | local | 0,1 mg/m³  |  |  |



according to Regulation (EC) No 1907/2006

## Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 7 of 15

#### **PNEC values**

| CAS No   | Substance              |                |
|--|------------------------|----------------|
| Environment                                      | al compartment         | Value          |
| 7664-93-9  | sulphuric acid         |                |
| Freshwater                                       |                        | 0,003 mg/l     |
| Marine water                                     | •                      | 0 mg/l         |
| Freshwater s                                     | rediment               | 0,002 mg/kg    |
| Marine sediment                                  |                        | 0,002 mg/kg    |
| Micro-organisms in sewage treatment plants (STP) |                        | 8,8 mg/l       |
| 7778-50-9  | potassium dichromate   |                |
| Freshwater                                       |                        | 0 mg/l         |
| Freshwater (i                                    | intermittent releases) | 0 mg/l         |
| Freshwater s                                     | rediment               | 0,15 mg/kg     |
| Marine sediment                                  |                        | 0,15 mg/kg     |
| Secondary poisoning                              |                        | 17000000 mg/kg |
| Micro-organisms in sewage treatment plants (STP) |                        | 0,21 mg/l      |
| Soil   |                        | 0,035 mg/kg    |

#### 8.2. Exposure controls

### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Do not breathe vapour/aerosol.

### Individual protection measures, such as personal protective equipment

### Eye/face protection

goggles

Wear eye protection/face protection.

### **Hand protection**

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Recommended glove articles: KCL 741 Dermatril® L

Thickness of the glove material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Recommended glove articles: KCL 741 Dermatril® L

Thickness of the glove material: NBR (Nitrile rubber) 0,11 mm Wearing time with occasional contact (splashes): > 480 min

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).

### Skin protection



according to Regulation (EC) No 1907/2006

## Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 8 of 15

Wear suitable protective clothing.

Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

### Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

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 allow to enter into surface water or drains.

### **SECTION 9: Physical and chemical properties**

### 9.1. Information on basic physical and chemical properties

Physical state:

Colour:

Odour:

Odour threshold:

Liquid

yellow

odourless

No data available

Melting point/freezing point:

Boiling point or initial boiling point and

No data available

No data available

boiling range:

No data available Flammability: No data available Lower explosion limits: No data available Upper explosion limits: not applicable Flash point: No data available Auto-ignition temperature: No data available Decomposition temperature: acidic pH-Value: No data available Viscosity / kinematic: No data available Water solubility:

Solubility in other solvents

No data available

Partition coefficient n-octanol/water:

Vapour pressure:

Vapour pressure:

No data available

Partition coefficient n-octanol/water:

No data available

No data available

Relative vapour density:

No data available

# 9.2. Other information

### Information with regard to physical hazard classes

Explosive properties

No data available

Sustained combustibility:

No data available

Self-ignition temperature

Solid: No data available
Gas: No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate: No data available



according to Regulation (EC) No 1907/2006

# Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 9 of 15

Solvent separation test:

Solvent content:

No data available

Solid content:

No data available

No data available

No data available

Softening point:

No data available

Pour point:

No data available

No data available

No data available:

Viscosity / dynamic:

Flow time:

No data available

No data available

Further Information
Corrosive to metals.

# **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

Corrosive to metals.

Oxidising agent

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Alkali (lye)

Ammonia (NH3)

Metal

# 10.4. Conditions to avoid

No data available

### 10.5. Incompatible materials

Metal

The product develops hydrogen in an aqueous solution in contact with metals.

### 10.6. Hazardous decomposition products

In case of fire may be liberated:

**SECTION 5: Firefighting measures** 

#### **Further information**

No data available

# **SECTION 11: Toxicological information**

# 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

### Toxicocinetics, metabolism and distribution

Avoid exposure - obtain special instructions before use.

### **Acute toxicity**

Fatal in contact with skin.

Toxic if inhaled.

Toxic if swallowed.

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

Pulmonary oedema

Resorption (oral)

Resorption (by inhalation)

Resorption (dermal)

The substance has delayed effects.



according to Regulation (EC) No 1907/2006

# Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 10 of 15

# **ATEmix** calculated

ATE (oral) 73,10 mg/kg; ATE (dermal) 73,10 mg/kg; ATE (inhalation vapour) 7,150 mg/l; ATE (inhalation dust/mist) 0,7150 mg/l

| CAS No    | Chemical name        |               |           |         |  |  |  |
|-----------|----------------------|---------------|-----------|---------|--|--|--|
|           | Exposure route       | Dose          |           | Species | Source   | Method                                   |  |
| 7664-93-9 | sulphuric acid       |               |           |         |  |  |  |
|           | oral                 | LD50<br>mg/kg | 2140      | Rat     | Am Ind Hyg Assoc J.<br>1969 Sep-Oct; 30(5):    | The study was performed as part of a ser |  |
| 7783-35-9 | mercury sulphate     |               |           |         |  |  |  |
|           | oral                 | LD50          | 57 mg/kg  | Rat     | Dictionary of<br>Environmentally<br>Important  | other: as mentioned below                |  |
|           | dermal               | LD50<br>mg/kg | 625       | Rat     | HSDB (Hazardous<br>Substances Data<br>Bank); U | other: as mentioned below                |  |
|           | inhalation vapour    | ATE           | 0,5 mg/l  |         |  |  |  |
|           | inhalation dust/mist | ATE           | 0,05 mg/l |         |  |  |  |
| 7778-50-9 | potassium dichromate |               |           |         |  |  |  |
|           | oral                 | LD50<br>mg/kg | 129,5     | Rat     | Study report (1983)                            | OECD Guideline 401                       |  |
|           | dermal               | LD50<br>mg/kg | > 2000    | Rabbit  | Study report (1983)                            | OECD Guideline 402                       |  |
|           | inhalation vapour    | ATE           | 0,5 mg/l  |         |  |  |  |
|           | inhalation dust/mist | ATE           | 0,05 mg/l |         |  |  |  |

### Irritation and corrosivity

Skin corrosion/irritation: Causes severe skin burns and eye damage.

Serious eye damage/eye irritation: Causes serious eye damage.

### Sensitising effects

Based on available data, the classification criteria are not met.

Contains potassium dichromate. May produce an allergic reaction.

May cause sensitisation especially in sensitive humans.

### Carcinogenic/mutagenic/toxic effects for reproduction

May cause cancer. (potassium dichromate)

May cause genetic defects. (potassium dichromate)

Reproductive toxicity: Based on available data, the classification criteria are not met.

### STOT-single exposure

Based on available data, the classification criteria are not met.

### STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (mercury sulphate)

### **Aspiration hazard**

Based on available data, the classification criteria are not met.

# Specific effects in experiment on an animal

There are no data available on the mixture itself.

## Additional information on tests

There are no data available on the mixture itself.



according to Regulation (EC) No 1907/2006

## Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 11 of 15

### **Practical experience**

There are no data available on the mixture itself.

#### 11.2. Information on other hazards

#### Other information

There are no data available on the mixture itself.

#### **Further information**

Irritant, Vomiting, Cardiac arrhythmias

Gastrointestinal complaints, Abdominal pain

Blood pressure drop, Circulatory collapse, Methaemoglobinaemia

For Hg compounds applies: they act in a cytotoxic and protoplasmatoxic. Symptoms of poisoning: Eye contact leads to severe lesions. Ingestion and inhalation of dusts (acute): Diarrhea metallic taste, nausea, vomiting, abdominal pain, bloody diarrhea, intestinal burns, glottal edema, aspiration pneumonia, reduction in blood pressure, cardiac dysrhythmia, circulatory collapse, and renal failure (chronic): Mouth inflammation with loss of teeth and mercurial line. Speech, vision, hearing, and sensitivity, loss of memory, irritability, hallucinations, delirium

For chromium(VI), it is stated that chromium(VI) is highly toxic. It is absorbed through both the lungs and the gastrointestinal tract. Chromates/dichromates can act as strong oxidising agents, causing burns and ulcers on skin and mucous membranes as well as irritative symptoms in the upper respiratory tract. After the substance enters wounds, poorly healing ulcers appear. In sensitive individuals, the substance can easily lead to sensitisation and allergic reactions in the respiratory tract (risk of pneumonia!) and damage to the nasal mucosa (possibly septum perforation). After ingestion of the substance: severe discomfort in the gastrointestinal tract such as bloody diarrhoea, vomiting (aspiration pneumonia!), cramps, circulatory failure, loss of consciousness. Methaemoglobinaemia. After absorption, it can lead to liver and kidney damage. Chromium(VI) compounds in inhalable form have been clearly shown to be carcinogenic in animal studies. Lethal dose (human): 0.5 g. Antidotes: chelating agents such as EDTA, DMPS (Demaval).

### **SECTION 12: Ecological information**

### 12.1. Toxicity

There are no data available on the mixture itself.

| CAS No    | Chemical name            |               |       |           |                         |                        |                                    |
|-----------|--------------------------|---------------|-------|-----------|-------------------------|------------------------|------------------------------------|
|           | Aquatic toxicity         | Dose          |       | [h]   [d] | Species                 | Source                 | Method                             |
| 7664-93-9 | sulphuric acid           |               |       |           |                         |                        |                                    |
|           | Acute algae toxicity     | ErC50<br>mg/l | > 100 | 1         | Desmodesmus subspicatus | Study report<br>(2009) | OECD Guideline<br>201              |
|           | Acute crustacea toxicity | EC50<br>mg/l  | > 100 | 48 h      | Daphnia magna           | ,                      | OECD Guideline<br>202              |
|           | Fish toxicity            | NOEC<br>mg/l  | 0,025 | 65 d      | Jordanella floridae     | Vol. 11, 612 - 626,    | Groups of sexually mature flagfish |

### 12.2. Persistence and degradability

There are no data available on the mixture itself.

### 12.3. Bioaccumulative potential

There are no data available on the mixture itself.

#### Partition coefficient n-octanol/water

| CAS No    | Chemical name    | Log Pow |
|-----------|------------------|---------|
| 7783-35-9 | mercury sulphate | -0,07   |



according to Regulation (EC) No 1907/2006

## Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 12 of 15

#### BCF

| CAS No    | Chemical name    | BCF          | Species            | Source               |
|-----------|------------------|--------------|--------------------|----------------------|
| 7783-35-9 | mercury sulphate | > 0 - < 5000 | Ceriodaphnia dubia | Environmental Pollut |

### 12.4. Mobility in soil

There are no data available on the mixture itself.

#### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

There are no data available on the mixture itself.

### 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

#### 12.7. Other adverse effects

Discharge into the environment must be avoided.

Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

#### **Further information**

Do not allow to enter into surface water or drains.

### **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

#### **Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations .

Do not allow to enter into surface water or drains.

Do not mix with other wastes.

### Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Handle contaminated packages in the same way as the substance itself.

## **SECTION 14: Transport information**

### Land transport (ADR/RID)

14.1. UN number or ID number: UN 2922

14.2. UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (sulphuric acid, mercury sulphate)

14.3. Transport hazard class(es): 14.4. Packing group: Ш 8+6.1 Hazard label: Classification code: CT1 274 Special Provisions: 1 L Limited quantity: F2 Excepted quantity: 2 Transport category: 86 Hazard No: Tunnel restriction code: Ε

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 2922

**14.2. UN proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (sulphuric acid, mercury sulphate)

14.3. Transport hazard class(es): 8
14.4. Packing group:



according to Regulation (EC) No 1907/2006

# Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 13 of 15

Hazard label: 8+6.1
Classification code: CT1
Special Provisions: 274 802
Limited quantity: 1 L
Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 2922

**14.2. UN proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (sulphuric acid, mercury sulphate)

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8+6.1Special Provisions:274Limited quantity:1 LExcepted quantity:E2EmS:F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 2922

14.2. UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (sulphuric acid, mercury sulphate)

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8+6.1Special Provisions:A3 A803Limited quantity Passenger:0.5 LPassenger LQ:Y840Excepted quantity:E2

IATA-packing instructions - Passenger:851IATA-max. quantity - Passenger:1 LIATA-packing instructions - Cargo:855IATA-max. quantity - Cargo:30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes

Danger releasing substance: mercury sulphate

### **SECTION 15: Regulatory information**

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

### **EU regulatory information**

Authorisations (REACH, annex XIV):

potassium dichromate

Restrictions on use (REACH, annex XVII): Entry 3, Entry 18, Entry 29, Entry 75

Information according to Directive H1 ACUTE TOXIC

2012/18/EU (SEVESO III):

Additional information: E2

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

### Additional information

SVHC substance.



according to Regulation (EC) No 1907/2006

# Potassium dichromate solution 0.008 mol/l contains 80 g Mercury(II) sulphate/l in sulfuric acid

Revision: 02.01.2024 Product code: 19149 Page 14 of 15

### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile

work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of

child-bearing age.

Water hazard class (D): 3 - highly hazardous to water

### **SECTION 16: Other information**

### Abbreviations and acronyms

Ox. Sol. 2: Oxidising solids, hazard category 2

Met. Corr. 1: Corrosive to metals, hazard category 1

Acute Tox. 1: Acute toxicity, hazard category 1

Skin Corr. 1A: Skin corrosion, sub-category 1A

Eye Dam. 1: Serious eye damage, hazard category 1

Resp. Sens. 1: Respiratory sensitisation, hazard category 1

Skin Sens. 1: Skin sensitisation, hazard category 1

Muta. 1B: Germ cell mutagenicity, hazard category 1B

Carc. 1B: Carcinogenicity, hazard category 1B

Repr. 1B: Reproductive toxicity, hazard category 1B

STOT RE 1: Specific target organ toxicity - repeated exposure, hazard category 1 Aquatic Acute 1: Hazardous to the aquatic environment, hazard category: Acute 1

Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard category: Chronic 1

### Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 ICLP1

| Classification          | Classification procedure |
|-------------------------|--------------------------|
| Met. Corr. 1; H290      | On basis of test data    |
| Carc. 1B; H350          | Calculation method       |
| Muta. 1B; H340          | Calculation method       |
| Acute Tox. 2; H310      | Calculation method       |
| Acute Tox. 3; H331      | Calculation method       |
| Acute Tox. 3; H301      | Calculation method       |
| Skin Corr. 1A; H314     | Calculation method       |
| Eye Dam. 1; H318        | Calculation method       |
| STOT RE 2; H373         | Calculation method       |
| Aquatic Chronic 2; H411 | Calculation method       |

# Relevant H and EUH statements (number and full text)

| H272 | May intensify fire; oxidiser. |
|------|-------------------------------|
| H290 | May be corrosive to metals.   |

H300 Fatal if swallowed. H301 Toxic if swallowed.

H301+H331 Toxic if swallowed or if inhaled.
H310 Fatal in contact with skin.
H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H330 Fatal if inhaled. H331 Toxic if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



H340

# **Safety Data Sheet**

according to Regulation (EC) No 1907/2006

| Potassium dichromate | solution 0.008 mol/l contains 80 g Mercury(II) sulpha | ate/l in sulfuric acid |
|----------------------|---|------------------------|
| Revision: 02.01.2024 | Product code: 19149                                   | Page 15 of 15          |

| H350   | May cause cancer.  |
|--------|--|
| H360FD | May damage fertility. May damage the unborn child.                 |
| H372   | Causes damage to organs through prolonged or repeated exposure.    |
| H373   | May cause damage to organs through prolonged or repeated exposure. |
| H400   | Very toxic to aquatic life.  |
| H410   | Very toxic to aquatic life with long lasting effects.              |
| H411   | Toxic to aquatic life with long lasting effects                    |

Toxic to aquatic life with long lasting effects.

May cause genetic defects.

**EUH208** Contains potassium dichromate. May produce an allergic reaction.

### **Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

Provide appropriate information, instructions and training to users

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)