

| | n number: 14.0 lentifier: V7370SDS | Revision: 2023-11-08 |
|-----|--|--|
| SEC | TION 1: Identification | |
| 1.1 | Product identifier | |
| | SDS Identifier | V7370SDS |
| | Catalog numbers | K-7370S, K-7375 |
| 1.2 | Relevant identified uses of the substance or m | ixture and uses advised against |
| | Relevant identified uses | Components of water analysis test kits |
| 1.3 | Details of the supplier of the safety data sheet | : |
| | AquaPhoenix Scientific, Inc. 860 Gitts Run Road Hanover PA 17331 United States | |
| | Telephone: (717) 632-1291 e-mail: info@aquaphoenixsci.com Website: https://www.aquaphoenixsci.com/ | |
| | e-mail (competent person) | scraig@aquaphoenixsci.com (Stephen Craig) |
| 1.4 | Emergency telephone number | |
| | Emergency information service | ChemTel Inc.: 1-800-255-3924, +01-813-248-0585 |
| SEC | TION 2: Hazard(s) identification | |
| 2.1 | Classification of the substance or mixture | |

Classification acc. to GHS

| Hazard class | Category | Hazard class and cat- egory | Hazard state- ment |
|---|----------|--------------------------------|-----------------------|
| acute toxicity (oral) | 4 | Acute Tox. 4 | H302 |
| acute toxicity (inhal.) | 3 | Acute Tox. 3 | H331 |
| skin corrosion/irritation | 1A | Skin Corr. 1A | H314 |
| serious eye damage/eye irritation | 1 | Eye Dam. 1 | H318 |
| germ cell mutagenicity | 1B | Muta. 1B | H340 |
| carcinogenicity | 1A | Carc. 1A | H350 |
| reproductive toxicity | 1B | Repr. 1B | H360FD |
| hazardous to the aquatic environment - acute hazard | 1 | Aquatic Acute 1 | H400 |



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| Hazard class | Category | Hazard class and cat- egory | Hazard state- ment |
|---|----------|--------------------------------|-----------------------|
| hazardous to the aquatic environment - chronic hazard | 1 | Aquatic Chronic 1 | H410 |

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labeling

- Signal word danger
- Pictograms



| Harmful if swallowed. |
|---|
| Causes severe skin burns and eye damage. |
| Toxic if inhaled. |
| May cause genetic defects. |
| May cause cancer. |
| May damage fertility. May damage the unborn child. |
| Very toxic to aquatic life with long lasting effects. |
| |

- Precautionary statements

| P203 | Obtain, read and follow all safety instructions before use. |
|----------------|---|
| P260 | Do not breathe dusts or mists. |
| P264+P265 | Wash hands thoroughly after handling. Do not touch eyes. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P273 | Avoid release to the environment. |
| P280 | Wear eye protection/face protection. |
| P301+P317 | IF SWALLOWED: Get medical help. |
| P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P302+P361+P354 | IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P305+P354+P338 | IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P316 | Get emergency medical help immediately. |
| | |



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| - Precautionary statements | | | | | | | |
|----------------------------|--|---|--|--|--|--|--|
| P318 | IF exposed or concerned, get me | IF exposed or concerned, get medical advice. | | | | | |
| P321 | Specific treatment (see on this la | ibel). | | | | | |
| P363 | Wash contaminated clothing be | fore reuse. | | | | | |
| P391 | Collect spillage. | | | | | | |
| P403+P233 | P403+P233 Store in a well-ventilated place. Keep container tightly closed. | | | | | | |
| P405 | Store locked up. | | | | | | |
| P501 | Dispose of contents/container to | o industrial combustion plant. | | | | | |
| - Hazardous ingre | dients for labelling | sulfuric acid, potassium dichromate, mercury sulfate; mercury persulfate | | | | | |

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0.1\%$.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0.1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms |
|-------------------|----------------------|---------|--|------------|
| sulfuric acid | CAS No 7664-93-9 | 65 - 87 | Acute Tox. 5 / H303 Acute Tox. 3 / H331 Skin Corr. 1A / H314 Eye Dam. 1 / H318 Carc. 1A / H350 Aquatic Acute 3 / H402 Aquatic Chronic 2 / H411 | |
| deionized water | CAS No 7732-18-5 | 10 - 34 | | |
| silver sulfate | CAS No 10294-26-5 | ≤1 | Eye Dam. 1 / H318 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 | |



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| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms |
|--|---------------------|-----|--|------------|
| mercury sulfate; mercury persulfate | CAS No 7783-35-9 | ≤1 | Acute Tox. 3 / H301 Acute Tox. 3 / H311 Skin Sens. 1 / H317 STOT SE 1 / H370 STOT RE 1 / H372 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 | |
| potassium dichromate | CAS No 7778-50-9 | ≤1 | Ox. Sol. 2 / H272 Acute Tox. 3 / H301 Acute Tox. 4 / H312 Acute Tox. 2 / H330 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Resp. Sens. 1 / H317 Muta. 1B / H340 Carc. 1A / H350 Repr. 1B / H360FD STOT SE 3 / H335 STOT RE 1 / H372 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 | |

For full text of abbreviations: see SECTION 16.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.



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4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.



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6.4 Reference to other sections

Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

Wear impact- and splash-resistant eyewear.

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

- Handling of incompatible substances or mixtures

Do not mix with alkali.

- Keep away from

Caustic solutions

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Control of the effects

Protect against external exposure, such as

heat, high temperatures, light, UV-radiation/sunlight

- Ventilation requirements

Keep any substance that emits harmful vapors or gases in a place that allows these to be permanently extracted.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters



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| Occup | Occupational exposure limit values (Workplace Exposure Limits) | | | | | | | | | | |
|--------------|--|-----------|-----------------|--------------|----------------|---------------|-----------------|--|----------------------|-------------------------|-------------------------|
| Coun- try | Name of agent | CAS No | Identi- fier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | | Ceiling-C [mg/m³] | Nota- tion | Source |
| US | sulfuric acid | 7664-93-9 | PEL (CA) | | 0.1 | | 3 | | | | Cal/ OSHA PEL |
| US | sulfuric acid | 7664-93-9 | REL | | 1 (10 h) | | | | | | NIOSH REL |
| US | sulfuric acid | 7664-93-9 | PEL | | 1 | | | | | | 29 CFR 1910.100 0 |
| US | sulfuric acid | 7664-93-9 | TLV® | | 0.2 | | | | | t | ACGIH® 2023 |
| US | chromates | 7778-50-9 | REL | | 0.0002 | | | | | аррх-А, аррх-С | NIOSH REL |
| US | chromates | 7778-50-9 | PEL | | | | | | 0.1 | CrO3, us-pel- z2c | 29 CFR 1910.100 0 |
| US | chromium(VI) com- pounds | 7778-50-9 | PEL (CA) | | 0.005 | | | | 0.1 | Cr | Cal/ OSHA PEL |

Notation

| Notation | |
|------------|---|
| appx-A | NIOSH Potential Occupational Carcinogen (Appendix A) |
| appx-C | Appendix C - Supplementary Exposure Limits |
| Ceiling-C | ceiling value is a limit value above which exposure should not occur |
| Cr | calculated as Cr (chromium) |
| CrO3 | calculated as CrO3 (chromium trioxide) |
| STEL | short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified) |
| t | thoracic fraction |
| TWA | time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time- weighted average (unless otherwise specified |
| us-pel-z2c | This standard applies to any operations or sectors for which the exposures limit in the Chromium (VI) standard, Sec. 1910.1026, is stayed or is otherwise not in effect. |
| | |

| Relevant DNELs of | fcomponent | S | | | | | |
|--------------------------|------------------------------|----------|------------------------|---------------------------------------|-------------------|-------------------------|--|
| Name of substance CAS No | | Endpoint | Threshold level | Protection goal, route of exposure | Used in | Exposure time | |
| sulfuric acid | sulfuric acid 7664-93-9 DNEL | | 0.05 mg/m ³ | human, inhalatory | worker (industry) | chronic - local effects | |
| sulfuric acid | 7664-93-9 | DNEL | 0.1 mg/m³ | human, inhalatory | worker (industry) | acute - local effects | |



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| Relevant PNECs of components | | | | | | |
|------------------------------|------------|----------|-------------------------------------|----------------------------|---------------------------------|-----------------------------------|
| Name of substance | CAS No | Endpoint | Threshold level | Organism | Environmental compartment | Exposure time |
| sulfuric acid | 7664-93-9 | PNEC | 0.003 ^{mg} / _l | aquatic organisms | freshwater | short-term (single in- stance) |
| sulfuric acid | 7664-93-9 | PNEC | 0 ^{mg} /l | aquatic organisms | marine water | short-term (single in- stance) |
| sulfuric acid | 7664-93-9 | PNEC | 8.8 ^{mg} / _l | aquatic organisms | sewage treatment plant (STP) | short-term (single in- stance) |
| sulfuric acid | 7664-93-9 | PNEC | 0.002 ^{mg} / _{kg} | aquatic organisms | freshwater sediment | short-term (single in- stance) |
| sulfuric acid | 7664-93-9 | PNEC | 0.002 ^{mg} / _{kg} | aquatic organisms | marine sediment | short-term (single in- stance) |
| silver sulfate | 10294-26-5 | PNEC | 0.04 ^{µg} / _l | aquatic organisms | freshwater | short-term (single in- stance) |
| silver sulfate | 10294-26-5 | PNEC | 0.86 ^{µg} / _l | aquatic organisms | marine water | short-term (single in- stance) |
| silver sulfate | 10294-26-5 | PNEC | 0.025 ^{mg} / _l | aquatic organisms | sewage treatment plant (STP) | short-term (single in- stance) |
| silver sulfate | 10294-26-5 | PNEC | 438.1 ^{mg} / _{kg} | aquatic organisms | freshwater sediment | short-term (single in- stance) |
| silver sulfate | 10294-26-5 | PNEC | 438.1 ^{mg} / _{kg} | aquatic organisms | marine sediment | short-term (single in- stance) |
| silver sulfate | 10294-26-5 | PNEC | 0.794 ^{mg} / _{kg} | terrestrial organ- isms | soil | short-term (single in- stance) |
| potassium dichromate | 7778-50-9 | PNEC | 0 ^{mg} / _l | aquatic organisms | freshwater | short-term (single in- stance) |
| potassium dichromate | 7778-50-9 | PNEC | 0.21 ^{mg} / _l | aquatic organisms | sewage treatment plant (STP) | short-term (single in- stance) |
| potassium dichromate | 7778-50-9 | PNEC | 0.15 ^{mg} / _{kg} | aquatic organisms | freshwater sediment | short-term (single in- stance) |
| potassium dichromate | 7778-50-9 | PNEC | 0.15 ^{mg} / _{kg} | aquatic organisms | marine sediment | short-term (single in- stance) |
| potassium dichromate | 7778-50-9 | PNEC | 0.035 ^{mg} / _{kg} | terrestrial organ- isms | soil | short-term (single in- stance) |

8.2 Exposure controls

Appropriate engineering controls

General ventilation.



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Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Product description: COD Vials: Glass reagent vials with screw caps, 16 mm OD. Each K-7350S, K-7355, K-7360S, and K-7365 vial contains 3.3 mL of liquid reagent. Each K-7370S and K-7375 vial contains 5.1 mL of liquid reagent. K-7350S, K-7360S and K-7370S kits contain 25 vials. K7355 and K-7365 kits contain 150 vials. The K-7375 kit contains 98 vials.

| Physical state | liquid |
|--|---|
| Color | Yellow, amber, or orange with white precipitate |
| Odor | characteristic |
| Melting point/freezing point | not determined |
| Boiling point or initial boiling point and boiling range | >100 °C |
| Evaporation rate | not determined |
| Flammability | non-combustible |
| Lower and upper explosion limit | not determined |
| Flash point | not determined |



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| Auto-ignition temperature | not determined | | | |
|---------------------------|----------------------------|--|--|--|
| Decomposition temperature | not relevant | | | |
| pH (value) | <1 (acid) | | | |
| Kinematic viscosity | not determined | | | |
| Solubility(ies) | | | | |
| Water solubility | miscible in any proportion | | | |

Partition coefficient

| Partition coefficient n-octanol/water (log value) | this information is not available |
|---|-----------------------------------|
|---|-----------------------------------|

| Vapor pressure | 23.7 mmHg at 25 °C |
|----------------|--------------------|
| | |

Density and/or relative density

| Density | not determined | |
|-------------------------|---|--|
| Relative vapour density | information on this property is not available | |
| Relative density | >1 (water = 1) | |

| Particle characteristics not relevant (liquid) |
|--|
|--|

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.



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10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

Release of flammable materials with:

Light metals (due to the release of hydrogen in an acid/alkaline medium)

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Harmful if swallowed. Toxic if inhaled.

| - Acute toxicity estim | ate (ATE) |
|------------------------|--|
| Oral | 1,523 ^{mg} / _{kg} |
| Inhalation: vapor | 3.448 ^{mg} / _l /4h |

Acute toxicity estimate (ATE) of components

| , , , | | | |
|-------------------------------------|-----------|-----------------------|---------------------------------------|
| Name of substance | CAS No | Exposure route | ATE |
| sulfuric acid | 7664-93-9 | oral | 2,140 ^{mg} / _{kg} |
| sulfuric acid | 7664-93-9 | inhalation: vapor | 3 ^{mg} / _l /4h |
| sulfuric acid | 7664-93-9 | inhalation: dust/mist | 0.85 ^{mg} / _l /4h |
| mercury sulfate; mercury persulfate | 7783-35-9 | oral | 57 ^{mg} / _{kg} |
| mercury sulfate; mercury persulfate | 7783-35-9 | dermal | 625 ^{mg} / _{kg} |
| potassium dichromate | 7778-50-9 | oral | 129.5 ^{mg} / _{kg} |
| potassium dichromate | 7778-50-9 | dermal | 1,100 ^{mg} / _{kg} |
| potassium dichromate | 7778-50-9 | inhalation: dust/mist | 0.099 ^{mg} /ı/4h |

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Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

May cause genetic defects.

Carcinogenicity

May cause cancer.

| IARC Monographs on the Evaluation of Carcinogenic Risks to Humans | | | | |
|---|------------|----------------|--------|--|
| Name of substance | CAS No | Classification | Number | |
| sulfuric acid | 7664-93-9 | 1 | | |
| mercury sulfate; mercury persulfate | | 3 | | |
| potassium dichromate | 18540-29-9 | 1 | | |

Legend

1 Carcinogenic to humans

3 Not classifiable as to carcinogenicity in humans

| National Toxicology Program (United States): Report on Carcinogens | | | | |
|--|------------|-----------------------------------|---------------------------|--|
| Name of substance | CAS No | Classification | Number | |
| sulfuric acid | 7664-93-9 | Known to be a human carcinogen | 9th Report on Carcinogens | |
| potassium dichromate | 18540-29-9 | Known to be human carcinogens | 1st Report on Carcinogens | |

29 CFR 1910/1915/1926 Occupational Safety and Health Standards: Toxic and Hazardous Substances (carcinogens)

| Name of substance | | CAS No | Type of registration |
|--|------------|------------------|---|
| potassium | dichromate | 18540-29-9 | GI §1910.1026, SE §1915.1026, CI §1926.1126 |
| Legend Construction Industry (29 CFR 1926.11 GI §1926.1126 Construction Industry (29 CFR 1926.11 GI §1910.1026 General Industry (29 CFR 1910.1026) SE §1915.1026 Shipyard Employment (29 CFR 1915.10 | | 9 CFR 1910.1026) | |



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Reproductive toxicity

May damage the unborn child. May damage fertility.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

| Aquatic toxicity (acute) of components | | | | | |
|--|------------|----------|-----------------------------------|-----------------------|------------------|
| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
| sulfuric acid | 7664-93-9 | LC50 | <28 ^{mg} / _l | fish | 96 h |
| sulfuric acid | 7664-93-9 | EC50 | >100 ^{mg} / _l | aquatic invertebrates | 48 h |
| sulfuric acid | 7664-93-9 | ErC50 | >100 ^{mg} / _l | algae | 72 h |
| silver sulfate | 10294-26-5 | LC50 | 1.2 ^{µg} / _l | fish | 96 h |
| silver sulfate | 10294-26-5 | ErC50 | 2.52 ^{µg} / _l | algae | 72 h |
| silver sulfate | 10294-26-5 | EC50 | 0.82 ^{µg} / _l | algae | 72 h |

Aquatic toxicity (chronic) of components

| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
|--|------------|----------|------------------------------------|-----------------------|------------------|
| silver sulfate | 10294-26-5 | EbC50 | 2.56 ^{µg} / _l | aquatic invertebrates | 14 d |
| silver sulfate | 10294-26-5 | EC50 | 12.01 ^{µg} / _l | aquatic invertebrates | 21 d |
| mercury sulfate; mercury persulfate | 7783-35-9 | LC50 | 0.14 ^{mg} / _l | fish | 7 d |



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| Aquatic toxicity (chronic) of components | | | | | |
|--|-----------|----------|------------------------------------|---------|------------------|
| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
| mercury sulfate; mercury persulfate | 7783-35-9 | ErC50 | 0.078 ^{mg} / _l | algae | 14 d |

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

| Bioaccumulative potential of components | | | | | |
|---|------------|----|---------------|--|--|
| Name of substance CAS No BCF Log KOW BOD5/COD | | | | | |
| silver sulfate | 10294-26-5 | 70 | | | |
| mercury sulfate; mercury persulfate | 7783-35-9 | | -0.07 (25 °C) | | |

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of \geq 0.1%.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of \ge 0.1%.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Please consider the relevant national or regional provisions.



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SECTION 14: Transport information

| 14.1 | UN number | |
|------|--|--------------------------------------|
| | DOT | UN 1830 |
| | IMDG-Code | UN 2922 |
| | ICAO-TI | UN 2922 |
| 14.2 | UN proper shipping name | |
| | DOT | Sulphuric acid |
| | IMDG-Code | CORROSIVE LIQUID, TOXIC, N.O.S. |
| | ICAO-TI | Corrosive liquid, toxic, n.o.s. |
| 14.3 | Transport hazard class(es) | |
| | DOT | 8 |
| | IMDG-Code | 8 (6.1) |
| | ICAO-TI | 8 (6.1) |
| 14.4 | Packing group | |
| | DOT | II |
| | IMDG-Code | II |
| | ICAO-TI | II |
| 14.5 | Environmental hazards | hazardous to the aquatic environment |
| | Environmentally hazardous substance (aquatic environment) | sulfuric acid |

14.6 Other relevant information

Shipping container markings and labels, received from CHEMetrics, may vary from the above information. Products that are regulated for transport will be packaged by CHEMetrics as Dangerous Goods in Excepted Quantities according to IATA, US DOT, and IMDG regulations. CHEMetrics may also elect to ship certain products as UN 3316 Chemical Kit, Hazard Class 9, Packing Group II or III. In case of reshipment, it is the responsibility of the shipper to determine appropriate labels and markings in accordance with applicable transportation regulations.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

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Information for each of the UN Model Regulations

| Transport of dangerous goods by road or ra | ail (49 CFR US DOT) - Additional information |
|--|---|
| Particulars in the shipper's declaration | UN1830, Sulphuric acid, 8, II, environmentally haz- ardous |
| Reportable quantity (RQ) | 1,010 lbs (458.6 kg) (sulfuric acid) (mercury sulfate; mercury per- sulfate) |
| Danger label(s) | 8, fish and tree |
| | |
| Environmental hazards | Yes (hazardous to the aquatic environment) |
| Special provisions (SP) | A3, A7, B3, B83, B84, IB2, N34, T8, TP2 |
| ERG No | 137 |
| International Maritime Dangerous Goods C | ode (IMDG) - Additional information |
| Marine pollutant | YES (hazardous to the aquatic environment) (sulfuric acid) |
| Danger label(s) | 8+6.1, fish and tree |
| | |
| Special provisions (SP) | 274 |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 1 L |
| EmS | F-A, S-B |
| Stowage category | В |
| International Civil Aviation Organization (I | CAO-IATA/DGR) - Additional information |
| Environmental hazards | YES (hazardous to the aquatic environment) |
| Danger label(s) | 8+6.1 |
| | |
| Special provisions (SP) | A3, A4 |
| | |



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|--|-------|----------------------|
| Excepted quantities (EQ) | E2 | |
| Limited quantities (LQ) | 0,5 L | |

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA)

all ingredients are listed (ACTIVE) or exempt from listing

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

| The List of Extremely Hazardous Substances and Their Threshold Planning Quantities | | | | |
|--|--|--|--|--|
| Name of substance Notes Reportable quantity Threshold planning (pounds) Threshold planning | | | | |
| sulfuric acid 1,000 1000 | | | | |

- Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings

| Name of substance | Remarks | Effective date |
|-------------------------------------|--|----------------|
| sulfuric acid | acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size | 1986-12-31 |
| silver sulfate | | 1986-12-31 |
| mercury sulfate; mercury persulfate | | 1986-12-31 |
| potassium dichromate | except for chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the chromite ore processing residue (COPR). COPR is the solid waste remaining after aqueous ex- traction of oxidized chromite ore that has been combined with soda ash and kiln roasted at approximately 2,000 °F. | 1986-12-31 |



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Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

| Name of substance | Remarks | Statutory code | Final RQ pounds (Kg) |
|-------------------------------------|---------|----------------|----------------------|
| sulfuric acid | | 1 | 1000 (454) |
| mercury sulfate; mercury persulfate | | 1 | 10 (4,54) |
| potassium dichromate | | 1 | 10 (4,54) |

Legend

1

"1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

- Hazardous Substance List (NJ-RTK)

| Name of substance | Remarks | Classifications |
|-------------------------------------|---------|-----------------|
| sulfuric acid | | CA CO R2 |
| silver sulfate | | |
| mercury sulfate; mercury persulfate | | R1 |
| potassium dichromate | | CA MU |

Legend

- CA Carcinogenic
- CO Corrosive
- MU Mutagenic
- R1 Reactive First Degree

R2 Reactive - Second Degree

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

| Proposition 65 List of chemicals | | | | |
|---|--|-----------------------------|--|--|
| Name acc. to inventory Remarks Type of the toxicity | | | | |
| mercury compounds | | developmental | | |
| chromium(VI) compounds | | cancer | | |
| chromium(VI) compounds | | developmental, female, male | | |



National inventories

| Country | Inventory | Status |
|---------|------------|-------------------------------------|
| AU | AIIC | all ingredients are listed |
| CA | DSL | all ingredients are listed |
| CN | IECSC | all ingredients are listed |
| EU | ECSI | all ingredients are listed |
| EU | REACH Reg. | all ingredients are listed |
| JP | CSCL-ENCS | all ingredients are listed |
| JP | ISHA-ENCS | not all ingredients are listed |
| KR | KECI | all ingredients are listed |
| MX | INSQ | all ingredients are listed |
| NZ | NZIoC | all ingredients are listed |
| PH | PICCS | all ingredients are listed |
| TR | CICR | not all ingredients are listed |
| TW | TCSI | all ingredients are listed |
| VN | NCI | all ingredients are listed |
| US | TSCA | all ingredients are listed (ACTIVE) |

Legend

| Legena | |
|------------|---|
| AIIC | Australian Inventory of Industrial Chemicals |
| CICR | Chemical Inventory and Control Regulation |
| CSCL-ENCS | List of Existing and New Chemical Substances (CSCL-ENCS) |
| DSL | Domestic Substances List (DSL) |
| ECSI | EC Substance Inventory (EINECS, ELINCS, NLP) |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ | National Inventory of Chemical Substances |
| ISHA-ENCS | Inventory of Existing and New Chemical Substances (ISHA-ENCS) |
| KECI | Korea Existing Chemicals Inventory |
| NCI | National Chemical Inventory |
| NZIoC | New Zealand Inventory of Chemicals |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances (PICCS) |
| REACH Reg. | REACH registered substances |
| TCSI | Taiwan Chemical Substance Inventory |
| TSCA | Toxic Substance Control Act |
| | |

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.



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SECTION 16: Other information, including date of preparation or last revision

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|------------------|--|
| 29 CFR 1910.1000 | 29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Sub- stances (permissible exposure limits) |
| 49 CFR US DOT | 49 CFR U.S. Department of Transportation |
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| Acute Tox. | Acute toxicity |
| Aquatic Acute | Hazardous to the aquatic environment - acute hazard |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic hazard |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BOD | Biochemical Oxygen Demand |
| Cal/OSHA PEL | California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs) |
| Carc. | Carcinogenicity |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| Ceiling-C | Ceiling value |
| COD | Chemical oxygen demand |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| DOT | Department of Transportation (USA) |
| EbC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| EC50 | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |
| ED | Endocrine disruptor |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| ErC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| ERG No | Emergency Response Guidebook - Number |



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| Abbr. | Descriptions of used abbreviations |
|-------------|---|
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IARC | International Agency for Research on Cancer |
| ΙΑΤΑ | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | Technical instructions for the safe transport of dangerous goods by air |
| IMDG | International Maritime Dangerous Goods Code |
| IMDG-Code | International Maritime Dangerous Goods Code |
| LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval |
| log KOW | n-Octanol/water |
| Muta. | Germ cell mutagenicity |
| NIOSH REL | National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs) |
| NLP | No-Longer Polymer |
| OSHA | Occupational Safety and Health Administration (United States) |
| Ox. Sol. | Oxidizing solid |
| РВТ | Persistent, Bioaccumulative and Toxic |
| PEL | Permissible exposure limit |
| PNEC | Predicted No-Effect Concentration |
| ppm | Parts per million |
| Repr. | Reproductive toxicity |
| Resp. Sens. | Respiratory sensitization |
| RTECS | Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information) |
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| Skin Sens. | Skin sensitization |
| STEL | Short-term exposure limit |
| STOT RE | Specific target organ toxicity - repeated exposure |
| STOT SE | Specific target organ toxicity - single exposure |



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| Abbr. | Descriptions of used abbreviations |
|-------|--|
| TLV® | Threshold Limit Values |
| TWA | Time-weighted average |
| vPvB | Very Persistent and very Bioaccumulative |

Key literature references and sources for data

Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture. Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text |
|--------|--|
| H272 | May intensify fire; oxidizer. |
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H303 | May be harmful if swallowed. |
| H311 | Toxic 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. |
| H335 | May cause respiratory irritation. |
| H340 | May cause genetic defects. |
| H350 | May cause cancer. |
| H360FD | May damage fertility. May damage the unborn child. |
| H370 | Causes damage to organs. |



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| Code | Text |
|------|---|
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H402 | Harmful to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.