

	n number: 14.0 lentifier: V7350SDS	Revision: 2023-11-08
SEC	TION 1: Identification	
1.1	Product identifier	
	SDS Identifier	V7350SDS
	Catalog numbers	K-7350S, K-7355
1.2	Relevant identified uses of the substance or mi	xture 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



-	Hazard	statements
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H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H360FD	May damage fertility. May damage the unborn child.
H410	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, g	et medical advice.					
P321	Specific treatment (see on t	his label).					
P363	Wash contaminated clothin	g before reuse.					
P391 Collect spillage.							
P403+P233	Store in a well-ventilated pl	ace. Keep container tightly closed.					
P405	Store locked up.						
P501	Dispose of contents/contain	ner to industrial combustion plant.					
- Hazardous ingredients 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	Endpoint		Protection goal, route of exposure	Used in	Exposure time	
sulfuric acid	7664-93-9	DNEL	0.05 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
sulfuric acid	7664-93-9	DNEL	0.1 mg/m <sup>3</sup>	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 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	freshwater	short-term (single in- stance)
sulfuric acid	7664-93-9	PNEC	0 <sup>mg</sup> /l	aquatic organisms	marine water	short-term (single in- stance)
sulfuric acid	7664-93-9	PNEC	8.8 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	sewage treatment plant (STP)	short-term (single in- stance)
sulfuric acid	7664-93-9	PNEC	0.002 <sup>mg</sup> / <sub>kg</sub>	aquatic organisms	freshwater sediment	short-term (single in- stance)
sulfuric acid	7664-93-9	PNEC	0.002 <sup>mg</sup> / <sub>kg</sub>	aquatic organisms	marine sediment	short-term (single in- stance)
silver sulfate	10294-26-5	PNEC	0.04 <sup>µg</sup> / <sub>l</sub>	aquatic organisms	freshwater	short-term (single in- stance)
silver sulfate	10294-26-5	PNEC	0.86 <sup>µg</sup> / <sub>l</sub>	aquatic organisms	marine water	short-term (single in- stance)
silver sulfate	10294-26-5	PNEC	0.025 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	sewage treatment plant (STP)	short-term (single in- stance)
silver sulfate	10294-26-5	PNEC	438.1 <sup>mg</sup> / <sub>kg</sub>	aquatic organisms	freshwater sediment	short-term (single in- stance)
silver sulfate	10294-26-5	PNEC	438.1 <sup>mg</sup> / <sub>kg</sub>	aquatic organisms	marine sediment	short-term (single in- stance)
silver sulfate	10294-26-5	PNEC	0.794 <sup>mg</sup> / <sub>kg</sub>	terrestrial organ- isms	soil	short-term (single in- stance)
potassium dichromate	7778-50-9	PNEC	0 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	freshwater	short-term (single in- stance)
potassium dichromate	7778-50-9	PNEC	0.21 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	sewage treatment plant (STP)	short-term (single in- stance)
potassium dichromate	7778-50-9	PNEC	0.15 <sup>mg</sup> / <sub>kg</sub>	aquatic organisms	freshwater sediment	short-term (single in- stance)
potassium dichromate	7778-50-9	PNEC	0.15 <sup>mg</sup> / <sub>kg</sub>	aquatic organisms	marine sediment	short-term (single in- stance)
potassium dichromate	7778-50-9	PNEC	0.035 <sup>mg</sup> / <sub>kg</sub>	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
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Vapor pressure	23.7 mmHg at 25 °C
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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)
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## 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 <sup>mg</sup> / <sub>kg</sub>
Inhalation: vapor	3.448 <sup>mg</sup> / <sub>l</sub> /4h

### Acute toxicity estimate (ATE) of components

, , ,			
Name of substance	CAS No	Exposure route	ATE
sulfuric acid	7664-93-9	oral	2,140 <sup>mg</sup> / <sub>kg</sub>
sulfuric acid	7664-93-9	inhalation: vapor	3 <sup>mg</sup> / <sub>l</sub> /4h
sulfuric acid	7664-93-9	inhalation: dust/mist	0.85 <sup>mg</sup> / <sub>l</sub> /4h
mercury sulfate; mercury persulfate	7783-35-9	oral	57 <sup>mg</sup> / <sub>kg</sub>
mercury sulfate; mercury persulfate	7783-35-9	dermal	625 <sup>mg</sup> / <sub>kg</sub>
potassium dichromate	7778-50-9	oral	129.5 <sup>mg</sup> / <sub>kg</sub>
potassium dichromate	7778-50-9	dermal	1,100 <sup>mg</sup> / <sub>kg</sub>
potassium dichromate	7778-50-9	inhalation: dust/mist	0.099 <sup>mg</sup> /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   GE §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 <sup>mg</sup> / <sub>l</sub>	fish	96 h
sulfuric acid	7664-93-9	EC50	>100 <sup>mg</sup> / <sub>l</sub>	aquatic invertebrates	48 h
sulfuric acid	7664-93-9	ErC50	>100 <sup>mg</sup> / <sub>l</sub>	algae	72 h
silver sulfate	10294-26-5	LC50	1.2 <sup>µg</sup> / <sub>l</sub>	fish	96 h
silver sulfate	10294-26-5	ErC50	2.52 <sup>µg</sup> / <sub>l</sub>	algae	72 h
silver sulfate	10294-26-5	EC50	0.82 <sup>µg</sup> / <sub>l</sub>	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 <sup>µg</sup> / <sub>l</sub>	aquatic invertebrates	14 d
silver sulfate	10294-26-5	EC50	12.01 <sup>µg</sup> / <sub>l</sub>	aquatic invertebrates	21 d
mercury sulfate; mercury persulfate	7783-35-9	LC50	0.14 <sup>mg</sup> / <sub>l</sub>	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 <sup>mg</sup> / <sub>l</sub>	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)	<b>1,010 lbs</b> (458.6 kg) (sulfuric acid) (mercury sulfate; mercury per- sulfate)
Danger label(s)	8, fish and tree
Environmental hazards	<b>YES</b> (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	<b>Yes</b> (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	<b>Yes</b> (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 quantity (pounds)				
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		



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## **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
ACGIH® 2023	From ACGIH®, 2023 TLVs® and BEIs® Book. Copyright 2023. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presenta-tions/tlv-bei-position-statement
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
IATA	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
PBT	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.