

Safety Data Sheet


in accordance with HSNO

Revision: 02 January 2020

1 Identification of the substance or mixture and of the supplier

- **Product identifier**
- **Trade name:** Sulfuric Acid, 50% v/v (1:1)
- **Product code:** SA1940SS
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No further relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Phone: (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Emergency telephone number:**
ChemTel Inc.
1-800-526-4727 (North America)
1-314-985-1511 (International)
Emergencies within Australia - 131126 (NSW Poison Control Centre)
Emergencies within New Zealand - 0800 764 766 (National Poison Control Centre)

2 Hazards identification

- **Classification (Australia, New Zealand)**
New Zealand HSNO - Hazardous (Classified according to the Minimum Degrees of Hazard Regulations 2001)
- **Hazard pictograms**


GHS05 GHS07 GHS08
- **Signal word** Danger
- **Hazard statements**
 H290 May be corrosive to metals.
 H302 Harmful if swallowed.
 H313 May be harmful in contact with skin.
 H333 May be harmful if inhaled.
 H314 Causes severe skin burns and eye damage.
 H350 May cause cancer.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H402 Harmful to aquatic life.
- **Precautionary statements**
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P234 Keep only in original container.
 P260 Do not breathe dusts or mists.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P273 Avoid release to the environment.

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- P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 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.
 P308+P313 If exposed or concerned: Get medical advice/attention.
 P321 Specific treatment (see on this label).
 P314 Get medical advice/attention if you feel unwell.
 P363 Wash contaminated clothing before reuse.
 P390 Absorb spillage to prevent material damage.
 P405 Store locked up.
 P406 Store in corrosive resistant container /container with a corrosion resistant inner liner.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards** There are no other hazards not otherwise classified that have been identified.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/Information on ingredients

- **Chemical characterisation: Mixtures**

· Components:

7664-93-9	Sulphuric Acid	Carc. 1A, H350; STOT RE 1, H372 Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318 Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332 Aquatic Acute 3, H402	25-75%
7732-18-5	Water		25-75%

- **Additional information:** For the wording of the listed Hazard Statements refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
 Immediately remove any clothing soiled by the product.
 Immediately rinse with water.
 Seek immediate medical help for blistering or open wounds.
 If skin irritation continues, consult a doctor.
- **After eye contact:**
 Protect unharmed eye.
 Remove contact lenses if worn.

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Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

- **Most important symptoms and effects, both acute and delayed**

Strong caustic effect on skin and mucous membranes.

Gastric or intestinal disorders when ingested.

Eye damage.

Acidosis

- **Hazards:**

Causes severe skin burns and eye damage.

May be harmful in contact with skin.

May be harmful if inhaled.

Harmful if swallowed.

Causes damage to organs through prolonged or repeated exposure.

May cause cancer.

- **Indication of any immediate medical attention and special treatment needed**

Medical supervision for at least 48 hours.

If medical advice is needed, have product container or label at hand.

5 Fire fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

The product is not flammable.

Use fire extinguishing methods suitable to surrounding conditions.

- **For safety reasons unsuitable extinguishing agents:** None.

- **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

- **Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

- **Environmental precautions** Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up**

Use limestone to neutralize and/or absorb spill.

Clean the affected area carefully; suitable cleaners are:

Warm water

Dispose of the material collected according to regulations.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
Avoid breathing mist/vapours/spray.
Avoid contact with the eyes and skin.
Open and handle receptacle with care.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
Store in cool, dry conditions in well sealed receptacles.
Store only in the original receptacle.
Unsuitable material for receptacle: steel.
Unsuitable material for receptacle: aluminium.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with alkalis (caustic solutions).
Store away from metals.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

7664-93-9 Sulphuric Acid

WES (New Zealand)	Long-term value: 0.1 mg/m ³ confirmed carcinogen
WES (Australia)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³
PEL (USA)	Long-term value: 1 mg/m ³
REL (USA)	Long-term value: 1 mg/m ³
TLV (USA)	Long-term value: 0.2* mg/m ³ *as thoracic fraction

- **Exposure controls**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not inhale dust / smoke / mist.

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- **Respiratory protection:**

Use suitable respiratory protective device when high concentrations are present.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**

Nitrile rubber, NBR

Neoprene gloves

Natural rubber, NR

Laminated film gloves.

- **Not suitable are gloves made of the following materials:** PVA gloves

- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment:**

No further relevant information available.

- **Risk management measures:** No further relevant information available.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **Appearance**

Form:

Liquid

Colour:

Colourless

- **Odour:**

Characteristic

- **Odour threshold:**

Not determined.

- **pH-value at 20 °C:**

<2.0

- **Melting point/freezing point:**

Not determined.

- **Initial boiling point and boiling range:**

Not determined.

- **Flash point:**

The product is not flammable.

- **Flammability (solid, gas):**

Not applicable.

- **Auto/Self-ignition temperature:**

Not determined.

- **Decomposition temperature:**

Not determined.

- **Explosive properties:**

Product does not present an explosion hazard.

- **Explosion limits**

Lower:

Not determined.

Upper:

Not determined.

- **Oxidising properties**

Not determined.

- **Vapour pressure:**

Not determined.

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· Density:	
Relative density:	1.4-1.5
Vapour density:	Not determined.
Evaporation rate:	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Toxic fumes may be released if heated above the decomposition point.
Corrosive action on metals.
Reacts with certain metals.
Reacts with alkali (lyes).
Reacts with oxidising agents.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials**
Metals.
Alkalis
Strong oxidisers such as perchlorates, bromates, and nitrates; hydrofluoric acid.
- **Hazardous decomposition products** Sulphur oxides (SO_x)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
Harmful if swallowed.
May be harmful in contact with skin.
May be harmful if inhaled.
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect**
- **Skin corrosion/irritation:** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation:** Strong caustic effect.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

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- **Probable routes of exposure:**
 - Ingestion.
 - Inhalation.
 - Eye contact.
 - Skin contact.
- **Acute effects (acute toxicity, irritation and corrosivity):**
 - Causes severe skin burns and eye damage.
 - Harmful if swallowed.
 - May be harmful if inhaled.
 - May be harmful in contact with skin.
- **Repeated dose toxicity:** Danger of very serious irreversible effects.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** May cause cancer.
- **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:** Causes damage to organs through prolonged or repeated exposure.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
 - Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. If the dilution of the use-level pH-value is considerably increased after use, the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 - Dilute concentrate with water and neutralize afterwards with suitable material (lime or chalk). The formed salts are inert and pose little hazard.
 - The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

· UN-Number	UN1830
· DOT, ADR/RID/ADN, IMDG, IATA	
· UN proper shipping name	Sulfuric acid
· DOT	SULPHURIC ACID
· ADR/RID/ADN, IMDG	Sulphuric acid
· IATA	
· Transport hazard class(es)	
· DOT	
	
· Class	8
· Label	8
· ADR/RID/ADN	
	
· Class	8 (C1)
· Label	8
· IMDG, IATA	
	
· Class	8
· Label	8
· Packing group	II
· DOT, ADR/RID/ADN, IMDG, IATA	
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

15 Regulatory information

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

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· IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

· Australia

· Australian Inventory of Chemical Substances
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All ingredients are listed.

· Standard for the Uniform Scheduling of Medicines and Poisons

7664-93-9	Sulphuric Acid	S6
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· New Zealand Inventory of Chemicals (NZIOC)

All ingredients are listed.

· HSNO Approval numbers

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulable, Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity - oral – Category 4

Acute Tox. 5: Acute toxicity - dermal – Category 5

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Carc. 1A: Carcinogenicity – Category 1A

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

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