

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2019

Reviewed on 11/04/2019

## 1 Identification

- **Product identifier**
- **Trade name:** Phosphoric Acid 1:1 - Sulfuric Acid 1:2  
Mixed Acid
- **Article number:** OXY537
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Aqua Solutions, Inc.  
6913 Highway 225  
DEER PARK, TX 77536  
USA  
800-256-2586
- **Information department:**  
Technical Coordinator  
Sherman Nelson sherman@aquasolutions.org
- **Emergency telephone number:**  
Chemtrec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 1A      H350 May cause cancer.



GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05      GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
Phosphoric Acid 85%  
Sulfuric Acid 96 - 98%
- **Hazard statements**  
Causes severe skin burns and eye damage.  
May cause cancer.
- **Precautionary statements**  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2019

Reviewed on 11/04/2019

**Trade name: Phosphoric Acid 1:1 - Sulfuric Acid 1:2  
Mixed Acid**

(Contd. of page 1)

*Do not breathe dusts or mists.*

*Wash thoroughly after handling.*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*If swallowed: Rinse mouth. Do NOT induce vomiting.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Immediately call a poison center/doctor.*

*IF exposed or concerned: Get medical advice/attention.*

*Specific treatment (see on this label).*

*Wash contaminated clothing before reuse.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*3

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 7664-38-2	Phosphoric Acid 85%	32.126%
CAS: 7664-93-9	Sulfuric Acid 96 - 98%	23.385%

· **Table of Nonhazardous Ingredients**

CAS: 7732-18-5	Water	44.489%
----------------	-------	---------

## 4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2019

Reviewed on 11/04/2019

**Trade name: Phosphoric Acid 1:1 - Sulfuric Acid 1:2**  
**Mixed Acid**

(Contd. of page 2)

- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
 No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**  
 During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
 Mount respiratory protective device.  
 Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
 Dilute with plenty of water.  
 Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
 Use neutralizing agent.  
 Dispose contaminated material as waste according to item 13.  
 Ensure adequate ventilation.
- **Reference to other sections**  
 See Section 7 for information on safe handling.  
 See Section 8 for information on personal protection equipment.  
 See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

### · PAC-1:

CAS: 7664-38-2	Phosphoric Acid 85%	3 mg/m <sup>3</sup>
CAS: 7664-93-9	Sulfuric Acid 96 - 98%	0.20 mg/m <sup>3</sup>

### · PAC-2:

CAS: 7664-38-2	Phosphoric Acid 85%	30 mg/m <sup>3</sup>
CAS: 7664-93-9	Sulfuric Acid 96 - 98%	8.7 mg/m <sup>3</sup>

### · PAC-3:

CAS: 7664-38-2	Phosphoric Acid 85%	150 mg/m <sup>3</sup>
CAS: 7664-93-9	Sulfuric Acid 96 - 98%	160 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
 Ensure good ventilation/exhaustion at the workplace.  
 Open and handle receptacle with care.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2019

Reviewed on 11/04/2019

**Trade name: Phosphoric Acid 1:1 - Sulfuric Acid 1:2  
Mixed Acid**

(Contd. of page 3)

- Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**CAS: 7664-38-2 Phosphoric Acid 85%**

PEL Long-term value: 1 mg/m<sup>3</sup>

REL Short-term value: 3 mg/m<sup>3</sup>

Long-term value: 1 mg/m<sup>3</sup>

TLV Short-term value: 3 mg/m<sup>3</sup>

Long-term value: 1 mg/m<sup>3</sup>

**CAS: 7664-93-9 Sulfuric Acid 96 - 98%**

PEL Long-term value: 1 mg/m<sup>3</sup>

REL Long-term value: 1 mg/m<sup>3</sup>

TLV Long-term value: 0.2\* mg/m<sup>3</sup>

\*as thoracic fraction

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Store protective clothing separately.
  - Avoid contact with the eyes.
  - Avoid contact with the eyes and skin.
- **Breathing equipment:**
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

(Contd. on page 5)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 11/04/2019

Reviewed on 11/04/2019

**Trade name: Phosphoric Acid 1:1 - Sulfuric Acid 1:2**  
**Mixed Acid**

(Contd. of page 4)

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

**Form:** Liquid  
**Color:** Clear water white

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** 100 °C (212 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

**Lower:** Not determined.  
**Upper:** Not determined.

· **Vapor pressure at 20 °C (68 °F):** 23 hPa (17.3 mm Hg)

· **Density at 20 °C (68 °F):** 1.31907 g/cm<sup>3</sup> (11.00764 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

**Water:** Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

(Contd. on page 6)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 11/04/2019

Reviewed on 11/04/2019

**Trade name: Phosphoric Acid 1:1 - Sulfuric Acid 1:2**  
**Mixed Acid**

(Contd. of page 5)

- |                            |  |
|----------------------------|--|
| · <b>Viscosity:</b>        |  |
| <b>Dynamic:</b>            | Not determined.                            |
| <b>Kinematic:</b>          | Not determined.                            |
| · <b>Solvent content:</b>  |  |
| <b>Water:</b>              | 44.5 %                                     |
| <b>VOC content:</b>        | 0.00 %                                     |
|                            | 0.0 g/l / 0.00 lb/gal                      |
| · <b>Solids content:</b>   |  |
|                            | 0.0 %                                      |
| · <b>Other information</b> |  |
|                            | No further relevant information available. |

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**  
 Strong caustic effect.  
 Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
 The product shows the following dangers according to internally approved calculation methods for preparations:  
 Corrosive  
 Irritant  
 Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>		
CAS: 7664-93-9	Sulfuric Acid 96 - 98%	I

· <b>NTP (National Toxicology Program)</b>		
CAS: 7664-93-9	Sulfuric Acid 96 - 98%	K

· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
None of the ingredients is listed.		

US

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2019

Reviewed on 11/04/2019

**Trade name:** *Phosphoric Acid 1:1 - Sulfuric Acid 1:2*  
**Mixed Acid**

(Contd. of page 6)


## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **Persistence and degradability** *No further relevant information available.*
- **Behavior in environmental systems:**
- **Bioaccumulative potential** *No further relevant information available.*
- **Mobility in soil** *No further relevant information available.*
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 1 (Self-assessment): slightly hazardous for water*  
*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*  
*Must not reach bodies of water or drainage ditch undiluted or unneutralized.*
- **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:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*
- **Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

## 14 Transport information

- |   |   |
|---|---|
| · <b>UN-Number</b>  |   |
| · <b>DOT, IMDG, IATA</b>  | UN3264  |
| · <b>UN proper shipping name</b>  |   |
| · <b>DOT</b>  | Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, Phosphoric acid solution)   |
| · <b>IMDG, IATA</b>   | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID, PHOSPHORIC ACID, SOLUTION) |
| · <b>Transport hazard class(es)</b>   |   |
| · <b>DOT</b>  |   |
|  |   |
| · <b>Class</b>  | 8 Corrosive substances  |

(Contd. on page 8)

# Safety Data Sheet


acc. to OSHA HCS

Printing date 11/04/2019

Reviewed on 11/04/2019

**Trade name: Phosphoric Acid 1:1 - Sulfuric Acid 1:2  
Mixed Acid**

(Contd. of page 7)

· <b>Label</b>	8
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	8 Corrosive substances
· <b>Label</b>	8
· <b>Packing group</b>	
· <b>DOT, IMDG, IATA</b>	II
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Warning: Corrosive substances
· <b>Danger code (Kemler):</b>	80
· <b>EMS Number:</b>	F-A,S-B
· <b>Segregation groups</b>	Acids
· <b>Stowage Category</b>	B
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID, PHOSPHORIC ACID, SOLUTION), 8, II

## 15 Regulatory information

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

### · Section 355 (extremely hazardous substances):

CAS: 7664-93-9	Sulfuric Acid 96 - 98%
----------------	------------------------

### · Section 313 (Specific toxic chemical listings):

CAS: 7664-38-2	Phosphoric Acid 85%
CAS: 7664-93-9	Sulfuric Acid 96 - 98%

### · TSCA (Toxic Substances Control Act):

Phosphoric Acid 85%	ACTIVE
Sulfuric Acid 96 - 98%	ACTIVE
Water	ACTIVE

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2019

Reviewed on 11/04/2019

**Trade name: Phosphoric Acid 1:1 - Sulfuric Acid 1:2**  
**Mixed Acid**

(Contd. of page 8)

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

CAS: 7664-93-9 | Sulfuric Acid 96 - 98%

A2

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05   GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Phosphoric Acid 85%

Sulfuric Acid 96 - 98%

· **Hazard statements**

Causes severe skin burns and eye damage.

May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

(Contd. on page 10)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 11/04/2019

Reviewed on 11/04/2019

**Trade name:** *Phosphoric Acid 1:1 - Sulfuric Acid 1:2*  
**Mixed Acid**

(Contd. of page 9)

*Wash contaminated clothing before reuse.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **National regulations:**

· **Information about limitation of use:**

*Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.*

*Exceptions can be made by the authorities in certain cases.*

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

## 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.*

· **Department issuing SDS:** *Environment protection department.*

· **Contact:**

· **Date of preparation / last revision**

*Revision 0.0, 11-04-2019: Creation date for SDS. STN*

*11/04/2019 / -*

· **Abbreviations and acronyms:**

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*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)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*VOC: Volatile Organic Compounds (USA, EU)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety & Health*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

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

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

*Carc. 1A: Carcinogenicity – Category 1A*