

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2021

Reviewed on 05/07/2021

## 1 Identification

- **Product identifier**
- **Trade name:** Sodium Persulfate  
0.4 Molar Solution
- **Article number:** 8721
- **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 [shermann@aquasolutions.org](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtrec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS03 Flame over circle

Ox. Liq. 2 H272 May intensify fire; oxidizer.



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**

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

- **Hazard pictograms**



GHS03 GHS08

- **Signal word** Danger

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

Sodium Persulfate

- **Hazard statements**

May intensify fire; oxidizer.

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

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2021

Reviewed on 05/07/2021

**Trade name: Sodium Persulfate  
0.4 Molar Solution**

(Contd. of page 1)

*May cause an allergic skin reaction.*

· **Precautionary statements**

*Keep away from heat.*

*Keep/Store away from clothing/combustible materials.*

*Take any precaution to avoid mixing with combustibles.*

*Avoid breathing dust/fume/gas/mist/vapors/spray*

*Contaminated work clothing must not be allowed out of the workplace.*

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

*[In case of inadequate ventilation] wear respiratory protection.*

*If on skin: Wash with plenty of water.*

*If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*Specific treatment (see on this label).*

*If experiencing respiratory symptoms: Call a poison center/doctor.*

*Wash contaminated clothing before reuse.*

*In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.*

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 3

Reactivity = 0

*The substance possesses oxidizing properties.*

· **HMIS-ratings (scale 0 - 4)**



Health = \*0

Fire = 3

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: 7775-27-1	Sodium Persulfate	9.438%
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· **Table of Nonhazardous Ingredients**

CAS: 7732-18-5	Water	90.562%
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### 4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

*Supply fresh air and to be sure call for a doctor.*

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2021

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**Trade name: Sodium Persulfate**  
**0.4 Molar Solution**

(Contd. of page 2)

- 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.
- **After swallowing:** If symptoms persist consult doctor.
- **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** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **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).  
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: 7775-27-1	Sodium Persulfate	0.3 mg/m <sup>3</sup>
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- **PAC-2:**

CAS: 7775-27-1	Sodium Persulfate	8.2 mg/m <sup>3</sup>
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- **PAC-3:**

CAS: 7775-27-1	Sodium Persulfate	49 mg/m <sup>3</sup>
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## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2021

Reviewed on 05/07/2021

**Trade name: Sodium Persulfate  
0.4 Molar Solution**

(Contd. of page 3)

- *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:** None.
- **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: 7775-27-1 Sodium Persulfate**

TLV	Long-term value: 0.1 mg/m <sup>3</sup> as persulfate
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- **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.
- **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

- **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:** Goggles recommended during refilling.
- **Body protection:** Protective work clothing

US

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2021

Reviewed on 05/07/2021

**Trade name: Sodium Persulfate**  
**0.4 Molar Solution**

(Contd. of page 4)

## 9 Physical and chemical properties

· <b>Information on basic physical and chemical properties</b>	
· <b>General Information</b>	
· <b>Appearance:</b>	
<b>Form:</b>	Solution
<b>Color:</b>	Clear
· <b>Odor:</b>	Odorless
· <b>Odor threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Ignition temperature:</b>	>600 °C (>1,112 °F)
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C (68 °F):</b>	23 hPa (17.3 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	1.00865 g/cm <sup>3</sup> (8.41718 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b> Not determined.	
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Water:</b>	90.6 %
<b>VOC content:</b>	0.00 %
	0.0 g/l / 0.00 lb/gal
<b>Solids content:</b>	9.4 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

· **Reactivity** No further relevant information available.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2021

Reviewed on 05/07/2021

**Trade name: Sodium Persulfate**  
**0.4 Molar Solution**

(Contd. of page 5)

- **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:**

· **LD/LC50 values that are relevant for classification:**

**ATE (Acute Toxicity Estimate)**

Oral	LD50	9,748 mg/kg (rat)
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**CAS: 7775-27-1 Sodium Persulfate**

Oral	LD50	500 mg/kg (ATE)
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- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritating effect.

- **Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 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.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2021

Reviewed on 05/07/2021

**Trade name: Sodium Persulfate**  
**0.4 Molar Solution**



(Contd. of page 6)

- **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>              | UN3139  |
| <b>· UN proper shipping name</b>      |   |
| <b>· DOT</b>                          | Oxidizing liquid, n.o.s. (Sodium persulfate)  |
| <b>· IMDG, IATA</b>                   | OXIDIZING LIQUID, N.O.S. (SODIUM PERSULPHATE)                                       |
| <b>· Transport hazard class(es)</b>   |   |
| <b>· DOT</b>                          |   |
|                                       |  |
| <b>· Class</b>                        | 5.1 Oxidizing substances  |
| <b>· Label</b>                        | 5.1   |
|                                       |   |
| <b>· IMDG, IATA</b>                   |   |
|                                       |  |
| <b>· Class</b>                        | 5.1 Oxidizing substances  |
| <b>· Label</b>                        | 5.1   |
| <b>· Packing group</b>                |   |
| <b>· DOT, IMDG, IATA</b>              | III   |
| <b>· Environmental hazards:</b>       |   |
| <b>· Marine pollutant:</b>            | No  |
| <b>· Special precautions for user</b> | Warning: Oxidizing substances   |
| <b>· Stowage Category</b>             | B   |

(Contd. on page 8)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2021

Reviewed on 05/07/2021

**Trade name: Sodium Persulfate**  
**0.4 Molar Solution**

(Contd. of page 7)

· <b>Segregation Code</b>	SG38 Stow "separated from" SGG2-ammonium compounds. SG49 Stow "separated from" SGG6-cyanides SG60 Stow "separated from" SGG16-peroxides
· <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: 2.5 L On cargo aircraft only: 30 L
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 3139 OXIDIZING LIQUID, N.O.S. (SODIUM PERSULPHATE), 5.1, III

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
- **Sara**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

Water	ACTIVE
Sodium Persulfate	ACTIVE

· **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.

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/07/2021

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**Trade name: Sodium Persulfate**  
**0.4 Molar Solution**

(Contd. of page 8)

· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

· **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**



GHS03    GHS08

· **Signal word** *Danger*

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

*Sodium Persulfate*

· **Hazard statements**

*May intensify fire; oxidizer.*

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

*May cause an allergic skin reaction.*

· **Precautionary statements**

*Keep away from heat.*

*Keep/Store away from clothing/combustible materials.*

*Take any precaution to avoid mixing with combustibles.*

*Avoid breathing dust/fume/gas/mist/vapors/spray*

*Contaminated work clothing must not be allowed out of the workplace.*

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

*[In case of inadequate ventilation] wear respiratory protection.*

*If on skin: Wash with plenty of water.*

*If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*Specific treatment (see on this label).*

*If experiencing respiratory symptoms: Call a poison center/doctor.*

*Wash contaminated clothing before reuse.*

*In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.*

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

· **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 0.2, updated pH Information. STN*

*Creation date for SDS 07-16-2015. STN*

*05/07/2021 / 1.0*

· **Abbreviations and acronyms:**

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

(Contd. on page 10)

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 05/07/2021

Reviewed on 05/07/2021

**Trade name: Sodium Persulfate**  
**0.4 Molar Solution**

(Contd. of page 9)

*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)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*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*  
*Ox. Liq. 2: Oxidizing liquids – Category 2*  
*Resp. Sens. 1: Respiratory sensitisation – Category 1*  
*Skin Sens. 1: Skin sensitisation – Category 1*

· **\* Data compared to the previous version altered.**

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