

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/22/2022

Reviewed on 12/22/2022

1 Identification

- **Product identifier**
- **Trade name:** Sodium Sulfate
4.0 ppm w/w in Denatured Alcohol
- **Article number:** MID033
- **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
- **Emergency telephone number:**
Chemtrec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 2

H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Specific Target Organ Toxicity - Single Exposure 2 H371 May cause damage to the central nervous system and the visual organs.

- **Label elements**

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

- **Hazard pictograms**



GHS02



GHS08

- **Signal word** Danger

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

Methanol

- **Hazard statements**

Highly flammable liquid and vapor.

May cause damage to the central nervous system and the visual organs.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

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Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Do not breathe dust/fume/gas/mist/vapors/spray.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Wear protective gloves/protective clothing/eye protection/face protection.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF exposed or concerned: Call a poison center/doctor.
 In case of fire: Use CO₂, powder or water spray to extinguish.
 Store in a well-ventilated place. Keep cool.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **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: 64-17-5 | Ethyl Alcohol, Absolute 200 Proof | 89.64% |
| CAS: 67-56-1 | Methanol | 4.98% |
| CAS: 67-63-0 | Isopropanol | 4.98% |

· **Table of Nonhazardous Ingredients**

| | | |
|----------------|--------------------------|---------|
| CAS: 7732-18-5 | Water | 0.4% |
| CAS: 7757-82-6 | Sodium Sulfate Anhydrous | 0.0004% |

4 First-aid measures

· **Description of first aid measures**

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

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** If symptoms persist consult doctor.

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- **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:**
 CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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).
 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: 64-17-5 | Ethyl Alcohol, Absolute 200 Proof | 1,800 ppm |
| CAS: 67-56-1 | Methanol | 530 ppm |
| CAS: 67-63-0 | Isopropanol | 400 ppm |
| CAS: 7757-82-6 | Sodium Sulfate Anhydrous | 9.8 mg/m ³ |

· PAC-2:

| | | |
|----------------|-----------------------------------|-----------------------|
| CAS: 64-17-5 | Ethyl Alcohol, Absolute 200 Proof | 3300* ppm |
| CAS: 67-56-1 | Methanol | 2,100 ppm |
| CAS: 67-63-0 | Isopropanol | 2000* ppm |
| CAS: 7757-82-6 | Sodium Sulfate Anhydrous | 110 mg/m ³ |

· PAC-3:

| | | |
|--------------|-----------------------------------|-------------|
| CAS: 64-17-5 | Ethyl Alcohol, Absolute 200 Proof | 15000* ppm |
| CAS: 67-56-1 | Methanol | 7200* ppm |
| CAS: 67-63-0 | Isopropanol | 12000** ppm |

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CAS: 7757-82-6 Sodium Sulfate Anhydrous

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650 mg/m³

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:**
 Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.
 Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 Keep receptacle tightly sealed.
 Store in cool, dry conditions in well sealed receptacles.
- **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: 64-17-5 Ethyl Alcohol, Absolute 200 Proof

PEL Long-term value: 1900 mg/m³, 1000 ppm
 REL Long-term value: 1900 mg/m³, 1000 ppm
 TLV Short-term value: 1000 ppm
 A3

CAS: 67-56-1 Methanol

PEL Long-term value: 260 mg/m³, 200 ppm
 REL Short-term value: 325 mg/m³, 250 ppm
 Long-term value: 260 mg/m³, 200 ppm
 Skin
 TLV Short-term value: 250 ppm
 Long-term value: 200 ppm
 Skin; BEI

CAS: 67-63-0 Isopropanol

PEL Long-term value: 980 mg/m³, 400 ppm
 REL Short-term value: 1225 mg/m³, 500 ppm
 Long-term value: 980 mg/m³, 400 ppm
 TLV Short-term value: 400 ppm
 Long-term value: 200 ppm
 BEI, A4

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· **Ingredients with biological limit values:**

CAS: 67-56-1 Methanol

BEI 15 mg/L
 LD50 Intraperitoneal: urine
 Time: end of shift
 LD50: Methanol (background, nonspecific)

CAS: 67-63-0 Isopropanol

BEI 40 mg/L
 LD50 Intraperitoneal: urine
 Time: end of shift at end of workweek
 LD50: Acetone (background, nonspecific)

· **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:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

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9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Liquid
Color: Clear water white
Odor: Alcohol
Odor threshold: Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 78.3 °C (172.9 °F)

· **Flash point:** 11 °C (51.8 °F)

· **Flammability (solid, gaseous):** Highly flammable.

· **Ignition temperature:** 425 °C (797 °F)

· **Decomposition temperature:** Not determined.

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

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower: 3.5 Vol %
Upper: 19 Vol %

· **Vapor pressure at 20 °C (68 °F):** 59 hPa (44.3 mm Hg)

· **Density at 20 °C (68 °F):** 0.79008 g/cm³ (6.59322 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.

· **Viscosity:**

Dynamic: Not determined.
Kinematic: Not determined.

· **Solvent content:**

Organic solvents: 99.6 %
Water: 0.4 %
VOC content: 99.60 %
786.9 g/l / 6.57 lb/gal

Solids content: 89.6 %

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

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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:**

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

ATE (Acute Toxicity Estimate)

| | | |
|------------|---------|-------------|
| Oral | LD50 | 2,008 mg/kg |
| Dermal | LD50 | 6,024 mg/kg |
| Inhalative | LC50/4h | 60.2 mg/l |

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

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

- **Carcinogenic categories**

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

| | | |
|--------------|-----------------------------------|---|
| CAS: 64-17-5 | Ethyl Alcohol, Absolute 200 Proof | 1 |
| CAS: 67-63-0 | Isopropanol | 3 |

· **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.

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- **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

- | | |
|---|---|
| · UN-Number | UN1993 |
| · DOT, IMDG, IATA | |
| · UN proper shipping name | Flammable liquids, n.o.s. (Ethanol, Methanol, Isopropanol) |
| · DOT | |
| · IMDG, IATA | FLAMMABLE LIQUID, N.O.S. (Ethanol, Methanol, Isopropanol) |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · Packing group | II |
| · DOT, IMDG, IATA | |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Warning: Flammable liquids |
| · Hazard identification number (Kemler code): | 33 |
| · EMS Number: | F-E,S-D |

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| | |
|--|---|
| · Stowage Category | B |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · DOT | |
| · Quantity limitations | On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L |
| · IMDG | |
| · Limited quantities (LQ) | 5L |
| · Excepted quantities (EQ) | Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml |
| · UN "Model Regulation": | UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL, METHANOL, ISOPROPANOL), 3, II |

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):**

CAS: 67-56-1 Methanol

CAS: 67-63-0 Isopropanol

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

Ethyl Alcohol, Absolute 200 Proof

ACTIVE

Methanol

ACTIVE

Isopropanol

ACTIVE

Water

ACTIVE

Sodium Sulfate Anhydrous

ACTIVE

· **Hazardous Air Pollutants**

CAS: 67-56-1 Methanol

· **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:**

CAS: 64-17-5 Ethyl Alcohol, Absolute 200 Proof

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CAS: 67-56-1 Methanol

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

CAS: 64-17-5 Ethyl Alcohol, Absolute 200 Proof

A3

CAS: 67-63-0 Isopropanol

A4

· **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**

GHS02 GHS08

· **Signal word** Danger· **Hazard-determining components of labeling:**

Methanol

· **Hazard statements**

Highly flammable liquid and vapor.

May cause damage to the central nervous system and the visual organs.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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

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

IF exposed or concerned: Call a poison center/doctor.

In case of fire: Use CO₂, powder or water spray to extinguish.

Store in a well-ventilated place. Keep cool.

Store locked up.

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:**

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· **Date of preparation / last revision**

Revision 0.0, 12-22-2022 Creation date for SDS. STN
12/22/2022

· **Abbreviations and acronyms:**

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)

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

BEI: Biological Exposure Limit

Flammable Liquids 2: Flammable liquids – Category 2

Specific Target Organ Toxicity - Single Exposure 2: Specific target organ toxicity (single exposure) – Category 2

US