

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/29/2017

Reviewed on 09/29/2017

## 1 Identification

- **Product identifier**
- **Trade name:** Alcohol, Reagent HPLC Grade  
Denatured Ethyl Alcohol
- **Article number:** A2702
- **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**



GHS02 Flame

Flam. Liq. 1 H224 Extremely flammable liquid and vapor.



GHS08 Health hazard

STOT SE 2 H371 May cause damage to 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:**  
Isopropanol  
Methanol (Methyl Alcohol)
- **Hazard statements**  
Extremely flammable liquid and vapor.  
May cause damage to 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.

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/29/2017

Reviewed on 09/29/2017

**Trade name: Alcohol, Reagent HPLC Grade  
Denatured Ethyl Alcohol**

(Contd. of page 1)

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 for extinction: CO<sub>2</sub>, powder or water spray.  
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)**



Health = 2  
Fire = 4  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*2  
Fire = 4  
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: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	90.0%
CAS: 67-56-1	Methanol (Methyl Alcohol)	5.0%
CAS: 67-63-0	Isopropanol	5.0%

### 4 First-aid measures

· **Description of first aid measures**

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

· **After skin contact:** Generally the product does not irritate the skin.

· **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.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/29/2017

Reviewed on 09/29/2017

**Trade name: Alcohol, Reagent HPLC Grade  
Denatured Ethyl Alcohol**

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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**  
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 (Methyl Alcohol)	530 ppm
CAS: 67-63-0	Isopropanol	400 ppm

- **PAC-2:**

CAS: 64-17-5	Ethyl Alcohol, Absolute 200 Proof	3300* ppm
CAS: 67-56-1	Methanol (Methyl Alcohol)	2,100 ppm
CAS: 67-63-0	Isopropanol	2000* ppm

- **PAC-3:**

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

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Open and handle receptacle with care.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/29/2017

Reviewed on 09/29/2017

**Trade name: Alcohol, Reagent HPLC Grade  
Denatured Ethyl Alcohol**

(Contd. of page 3)

Protect against electrostatic charges.

- **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.
  - Do not gas tight seal receptacle.
  - Store in cool, dry conditions in well sealed receptacles.
  - Protect from heat and direct sunlight.
- **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/m<sup>3</sup>, 1000 ppm

REL Long-term value: 1900 mg/m<sup>3</sup>, 1000 ppm

TLV Short-term value: 1880 mg/m<sup>3</sup>, 1000 ppm

**CAS: 67-56-1 Methanol (Methyl Alcohol)**

PEL Long-term value: 260 mg/m<sup>3</sup>, 200 ppm

REL Short-term value: 325 mg/m<sup>3</sup>, 250 ppm

Long-term value: 260 mg/m<sup>3</sup>, 200 ppm

Skin

TLV Short-term value: 328 mg/m<sup>3</sup>, 250 ppm

Long-term value: 262 mg/m<sup>3</sup>, 200 ppm

Skin; BEI

**CAS: 67-63-0 Isopropanol**

PEL Long-term value: 980 mg/m<sup>3</sup>, 400 ppm

REL Short-term value: 1225 mg/m<sup>3</sup>, 500 ppm

Long-term value: 980 mg/m<sup>3</sup>, 400 ppm

TLV Short-term value: 984 mg/m<sup>3</sup>, 400 ppm

Long-term value: 492 mg/m<sup>3</sup>, 200 ppm

BEI

- **Ingredients with biological limit values:**

**CAS: 67-56-1 Methanol (Methyl Alcohol)**

BEI 15 mg/L

LD50 Intraperitoneal: urine

Time: end of shift

LD50: Methanol (background, nonspecific)

**CAS: 67-63-0 Isopropanol**

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/29/2017

Reviewed on 09/29/2017

**Trade name: Alcohol, Reagent HPLC Grade  
Denatured Ethyl Alcohol**

(Contd. of page 4)

<b>BEI</b>	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.

Wash hands before breaks and at the end of work.

· **Breathing equipment:** Not required.

· **Protection of hands:**

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

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

**Form:** Liquid

**Color:** Clear

· **Odor:** Alcohol

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** <35 °C (<95 °F)

· **Flash point:** 11 °C (52 °F)

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

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

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/29/2017

Reviewed on 09/29/2017

**Trade name: Alcohol, Reagent HPLC Grade  
Denatured Ethyl Alcohol**

(Contd. of page 5)

· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Explosion limits:</b>	
<b>Lower:</b>	3.5 Vol %
<b>Upper:</b>	19.0 Vol %
· <b>Vapor pressure at 20 °C (68 °F):</b>	59 hPa (44 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	0.78923 g/cm <sup>3</sup> (6.586 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 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>Organic solvents:</b>	100.0 %
<b>VOC content:</b>	100.0 %
	789.2 g/l / 6.59 lb/gl
<b>Solids content:</b>	90.0 %
· <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:**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>ATE (Acute Toxicity Estimate)</b>		
Inhalative	LC50/4 h	54.5 mg/l

(Contd. on page 7)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/29/2017

Reviewed on 09/29/2017

**Trade name: Alcohol, Reagent HPLC Grade  
Denatured Ethyl Alcohol**

(Contd. of page 6)

**CAS: 67-56-1 Methanol (Methyl Alcohol)**

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)
Inhalative	LC50/4 h	3 mg/l (ATE)

- **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.
- **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.

US

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS



Printing date 09/29/2017

Reviewed on 09/29/2017

**Trade name: Alcohol, Reagent HPLC Grade  
Denatured Ethyl Alcohol**

(Contd. of page 7)

## 14 Transport information

<b>· UN-Number</b>	UN1987
<b>· DOT, IMDG, IATA</b>	UN1987
<b>· UN proper shipping name</b>	Alcohols, n.o.s. (Ethanol, Methanol, Isopropanol)
<b>· DOT</b>	ALCOHOLS, N.O.S. (ETHANOL, METHANOL, Isopropanol)
<b>· IMDG, IATA</b>	ALCOHOLS, N.O.S. (ETHANOL, METHANOL, Isopropanol)
<b>· Transport hazard class(es)</b>	
<b>· DOT</b>	
	
<b>· Class</b>	3 Flammable liquids
<b>· Label</b>	3
<b>· IMDG, IATA</b>	
	
<b>· Class</b>	3 Flammable liquids
<b>· Label</b>	3
<b>· Packing group</b>	II
<b>· DOT, IMDG, IATA</b>	II
<b>· Environmental hazards:</b>	No
<b>· Marine pollutant:</b>	No
<b>· Special precautions for user</b>	Warning: Flammable liquids
<b>· Danger code (Kemler):</b>	33
<b>· EMS Number:</b>	F-E,S-D
<b>· Stowage Category</b>	B
<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>· UN "Model Regulation":</b>	UN 1987 ALCOHOLS, N.O.S. (ETHANOL, METHANOL, ISOPROPANOL), 3, II

US

(Contd. on page 9)



# Safety Data Sheet

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**Trade name: Alcohol, Reagent HPLC Grade  
Denatured Ethyl Alcohol**

(Contd. of page 8)

## 15 Regulatory information

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

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

None of the ingredients is listed.

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

CAS: 67-56-1 Methanol (Methyl Alcohol)

CAS: 67-63-0 Isopropanol

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

All ingredients are 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:**

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

CAS: 67-56-1 Methanol (Methyl Alcohol)

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

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:**

Isopropanol

Methanol (Methyl Alcohol)

- **Hazard statements**

Extremely flammable liquid and vapor.

May cause damage to organs.

(Contd. on page 10)

# Safety Data Sheet

acc. to OSHA HCS

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**Trade name: Alcohol, Reagent HPLC Grade  
Denatured Ethyl Alcohol**

(Contd. of page 9)

· **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 for extinction: CO2, powder or water spray.*
  - 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:**

· **Date of preparation / last revision**

*09-29-2017: review SDS for accuracy. STN*

*Revision 0.0, 04-10-2015: Creation Date for SDS. STN*

*09/29/2017 / -*

· **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (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*

*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)*

*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*

*Flam. Liq. 1: Flammable liquids – Category 1*

*STOT SE 2: Specific target organ toxicity (single exposure) – Category 2*