

Safety Data Sheet


according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: July 17, 2020

1 Identification

- **Product identifier**
- **Trade name:** Ethanol, Lab Grade
- **Product code:** ET1050
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No 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
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Flam. Liq. 2 H225 Highly flammable liquid and vapor.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 2 H371 May cause damage to the central nervous system and the eyes.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**


GHS02 GHS07 GHS08
- **Signal word:** Danger
- **Hazard statements:**
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H371 May cause damage to the central nervous system and the eyes.
- **Precautionary statements:**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.

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- P240 Ground/bond container and receiving equipment.
 P241 Use explosion-proof electrical/ventilating/lighting/equipment.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P280 Wear protective gloves / eye protection / face protection.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = *2
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

* - Indicates a long term health hazard from repeated or prolonged exposures.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

64-17-5	Ethanol 	>80%
67-56-1	Methanol 	≥3-<5%
67-63-0	Propan-2-ol 	2.5-5%

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

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48

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hours after the accident.

Take affected persons out into the fresh air.

· **After inhalation:**

Supply fresh air; consult doctor in case of complaints.

Provide oxygen treatment if affected person has difficulty breathing.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After skin contact:**

Immediately remove any clothing soiled by the product.

Immediately rinse with water.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Remove contact lenses if worn.

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; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Headache

Coughing

Breathing difficulty

Dizziness

Gastric or intestinal disorders when ingested.

Nausea in case of ingestion.

Slight irritant effect on skin and mucous membranes.

Causes eye irritation.

Blindness

Acidosis

Disorientation

Unconsciousness

· **Danger:**

Danger of impaired breathing.

May be harmful if inhaled.

Repeated exposure may cause skin dryness or cracking.

May cause respiratory irritation.

Vapors may cause drowsiness and dizziness.

Causes damage to organs through prolonged or repeated exposure.

Danger of disturbed cardiac rhythm.

Danger of convulsion.

· **Indication of any immediate medical attention and special treatment needed:**

Contains ethanediol. Consult literature for specific antidotes.

Medical supervision for at least 48 hours.

Monitor circulation, possible shock treatment.

If necessary oxygen respiration treatment.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray.

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

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- **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information:**
Eliminate all ignition sources if safe to do so.
Use large quantities of foam as it is partially destroyed by the product.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Keep away from ignition sources.
Protect from heat.
- **Environmental precautions**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up**
Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
Pick up mechanically.
Dispose contaminated material as waste according to item 13.
Used rags or other cleaning materials should be soaked with water and placed in a sealed container.
- **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.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
Prevent formation of aerosols.
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
Rags, metal wools / cuttings / shavings and waste papers soaked with product must be placed in a sealed metal container rated for flammable waste.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Flammable gas-air mixtures may be formed in empty containers/receptacles.
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.

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Provide ventilation for receptacles.

Avoid storage near extreme heat, ignition sources or open flame.

· **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from oxidizing agents.

Do not store together with acids.

· **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Keep containers tightly sealed.

· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

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

64-17-5 Ethanol

PEL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm
EL (Canada)	Short-term value: 1000 ppm
EV (Canada)	Long-term value: 1,900 mg/m ³ , 1,000 ppm
LMPE (Mexico)	Long-term value: 1000 ppm A3

67-56-1 Methanol

PEL (USA)	Long-term value: 260 mg/m ³ , 200 ppm
REL (USA)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV (USA)	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI
EL (Canada)	Short-term value: 250 ppm Long-term value: 200 ppm Skin
EV (Canada)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
LMPE (Mexico)	Short-term value: 250 ppm Long-term value: 200 ppm PIEL, IBE

67-63-0 Propan-2-ol

PEL (USA)	Long-term value: 980 mg/m ³ , 400 ppm
REL (USA)	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV (USA)	Short-term value: 984 mg/m ³ , 400 ppm

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EL (Canada)	Long-term value: 492 mg/m ³ , 200 ppm BEI
EV (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
LMPE (Mexico)	Short-term value: 400 ppm Long-term value: 200 ppm A4, IBE

· **Ingredients with biological limit values:**

67-56-1 Methanol

BEI (USA)	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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67-63-0 Propan-2-ol

BEI (USA)	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)
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· **Exposure controls**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Do not inhale gases / fumes / aerosols.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

· **Engineering controls:** No relevant information available.

· **Breathing equipment:**

Not required under normal conditions of use.
Use suitable respiratory protective device when aerosol or mist is formed.
Use suitable respiratory protective device when high concentrations are present.
For spills, respiratory protection may be advisable.

· **Protection of hands:**



Protective gloves

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

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

· **Eye protection:**



Safety glasses

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

No relevant information available.

· **Risk management measures**

See Section 7 for additional information.

No relevant information available.

9 Physical and chemical properties

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

· **Appearance:**

Form: Liquid
Color: Colorless

· **Odor:** Alcohol-like

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Melting point/Melting range:** Not determined.

· **Boiling point/Boiling range:** 171 °F / 77 °C (339.8 °F / 170.6 °F)

· **Flash point:** 59.9 °F / 15.5 °C (139.8 °F / 59.9 °F)

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

· **Auto-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

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

· **Explosion limits**

Lower: 1.0 Vol %

Upper: 15.0 Vol %

· **Oxidizing properties:** Not determined.

· **Vapor pressure at 20 °C (68 °F):** 64 hPa (48 mm Hg)

· **Density at 20 °C (68 °F):** 0.8 ± 0.05 g/cm³ (6.68 ± 0.42 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.

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- **Viscosity**
 - Dynamic: Not determined.
 - Kinematic: Not determined.
- **Other information** No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** Keep away from heat and direct sunlight.
- **Possibility of hazardous reactions**
 - Flammable.
 - Reacts violently with oxidizing agents.
 - Used empty containers may contain product gases which form explosive mixtures with air.
 - Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
 - Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid**
 - Keep ignition sources away - Do not smoke.
 - Keep away from heat and direct sunlight.
 - Store away from oxidizing agents.
- **Incompatible materials** No relevant information available.
- **Hazardous decomposition products** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

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

67-56-1 Methanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)
Inhalative	LC50/4h	130.7 mg/l (rat)

- **Primary irritant effect:**
- **On the skin:** Slight irritant effect on skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

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

64-17-5	Ethanol	1
67-63-0	Propan-2-ol	3

- **NTP (National Toxicology Program):**

None of the ingredients are listed.

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

None of the ingredients are listed.

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· **Acute effects (acute toxicity, irritation and corrosivity):**

Vapors have narcotic effect.
May be harmful if inhaled.

· **Repeated dose toxicity:**

May cause damage to organs through prolonged or repeated exposure.
Repeated exposure may cause skin dryness or cracking.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity** No relevant information available.

· **Persistence and degradability** Biodegradable.

· **Bioaccumulative potential:** No relevant information available.

· **Mobility in soil:** No 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.

Due to available data on eliminability/decomposition and bioaccumulation potential, a prolonged damage of the environment is unlikely.

· **Other adverse effects** No 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. Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. Contact waste processors for recycling information.

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. Residual materials should be treated as hazardous.

· **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**

· **DOT, ADR/RID/ADN, IMDG, IATA** UN1987

· **UN proper shipping name**

· **DOT** Alcohols, n.o.s. (Ethanol, Methanol)
· **ADR/RID/ADN** 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL)

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· IMDG	ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL)
· IATA	ALCOHOLS, N.O.S. (ETHANOL, METHANOL)
· Transport hazard class(es)	
· DOT	
	
· Class	3
· Label	3
· ADR/RID/ADN	
	
· Class	3 (F1)
· Label	3
· IMDG, IATA	
	
· Class	3
· Label	3
· Packing group	
· DOT, ADR/RID/ADN, IMDG, IATA	II
· Environmental hazards	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code):	33
· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

Section 302 (extremely hazardous substances):

None of the ingredients are listed.

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

67-56-1	Methanol
67-63-0	Propan-2-ol

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

64-17-5	Ethanol
67-56-1	Methanol
67-63-0	Propan-2-ol
7732-18-5	Water

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

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

64-17-5	Ethanol
67-56-1	Methanol

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

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

64-17-5	Ethanol	1
67-63-0	Propan-2-ol	3

· **Canadian Domestic Substances List (DSL):**

64-17-5	Ethanol
67-56-1	Methanol
67-63-0	Propan-2-ol
7732-18-5	Water

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
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 OSHA: Occupational Safety & Health Administration

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Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
STOT SE 2: Specific target organ toxicity (single exposure) – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3