

**Safety Data Sheet**

according to 29CFR1910/1200 and GHS Rev. 3

**Initial preparation date:** : 11.19.2014**Ethanol, Anhydrous****SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Ethanol, Anhydrous**Manufacturer/Supplier Article number:** S25307A**Recommended uses of the product and restrictions on use:** Nov 2 2015 12:00AM**Manufacturer Details:**

AquaPhoenix Scientific  
860 Gitts Run Road,  
Hanover, PA 17331  
(717) 632-1291

**Supplier Details:**

Fisher Science Education  
6771 Silver Crest Road, Nazareth, PA 18064  
800 955-1177

**Emergency telephone number:**

Emergency Telephone No.: 800-255-3924

**SECTION 2: Hazards identification****Classification of the substance or mixture:****Flammable**

Flammable liquids, category 2

**Toxic**

Acute toxicity (oral, dermal, inhalation), category 3

**Health hazard**

Reproductive toxicity, category 2

Specific target organ toxicity following repeated exposure, category 2

**Irritant**

Specific target organ toxicity following single exposure, category 3

Narcotic effects

Flammable Liquid 2.

Acute Toxicity 3 (oral).

Specific Target Organ Toxicity, Single Exposure 3.

Specific Target Organ Toxicity, Repeat Exposure 1.

Reproductive toxicity 2.

**Signal word:** Danger**Hazard statements:**

Highly flammable liquid and vapour.

Toxic if swallowed.

May cause drowsiness or dizziness.

May damage fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure.

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If medical advice is needed have product container or label at hand.  
 Keep out of reach of children.  
 Read label before use.  
 Do not eat, drink or smoke when using this product.  
 Avoid breathing dust/fume/gas/mist/vapors/spray.  
 Use only outdoors or in a well-ventilated area.  
 Use personal protective equipment as required.  
 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/light/.../equipment.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 Wash thoroughly after handling.  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 In case of fire: Use ... for extinction.  
 Rinse mouth.  
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 Get Medical advice/attention if you feel unwell.  
 Collect spillage.  
 IF exposed or concerned: Get medical advice/attention.  
 Store in a well ventilated place. Keep cool.  
 Store locked up.  
 Store in a well ventilated place. Keep container tightly closed.  
 Dispose of contents/container.

**Other Non-GHS Classification:** None**SECTION 3: Composition/information on ingredients****Ingredients:**

| <b>Ingredients:</b>       |                   |       |
|---------------------------|-------------------|-------|
| CAS 64-17-5               | Ethanol           | >90 % |
| CAS 67-56-1               | Methanol          | <10 % |
| CAS 108-10-1              | MIBK              | <10 % |
| CAS 67-63-0               | Isopropyl Alcohol | <10 % |
| Percentages are by weight |                   |       |

**SECTION 4: First aid measures****Description of first aid measures****After inhalation:**

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists.

**After skin contact:**

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Wash affected area with soap and water. Rinse thoroughly. Seek medical attention if irritation, discomfort or vomiting persists.

**After eye contact:**

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

**After swallowing:**

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

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

Irritation. Nausea. Headache. Shortness of breath. Dizziness. Vomiting. Impact to organs (liver, eyes, other-various). Impact to fetus (if pregnant).

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

If seeking medical attention, provide SDS document to physician.

**SECTION 5: Firefighting measures****Extinguishing media****Suitable extinguishing agents:**

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition. Water. Dry chemical. Foam. Carbon dioxide.

**Unsuitable extinguishing agents:** None

**Special hazards arising from the substance or mixture:**

Combustion products may include carbon oxides or other toxic vapors. Dangerous fire hazard when exposed to heat, sparks and open flames.

**Advice for firefighters:****Protective equipment:**

Wear protective equipment. Use NIOSH-approved respiratory protection/breathing apparatus. Use spark-proof tools and explosion-proof equipment.

**Additional information (precautions):**

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

**SECTION 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

**Environmental precautions:**

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13. Collect spilled liquid for recovery, treatment or disposal.

**Methods and material for containment and cleaning up:**

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor.

**Reference to other sections:** None

**SECTION 7: Handling and storage****Precautions for safe handling:**

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Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas. Wash hands before breaks and at the end of work.

**Conditions for safe storage, including any incompatibilities:**

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly closed. Store in secure flammable storage area away from sources of ignition. Protect from freezing and physical damage.

**SECTION 8: Exposure controls/personal protection****Control parameters:**

108-10-1, MIBK, ACGIH TLV STEL: 75 ppm.  
 64-17-5, Ethanol, NIOSH REL TWA: 1000 ppm (1900 mg/m<sup>3</sup>).  
 67-56-1, Methanol., OSHA PEL TWA: 260 mg/m<sup>3</sup> (200 ppm).  
 67-56-1, Methanol., OSHA PEL STEL: 325 mg/m<sup>3</sup> (250 ppm).  
 67-56-1, Methanol., ACGIH TLV TWA: 262 mg/m<sup>3</sup>.  
 67-56-1, Methanol., ACGIH TLV STEL: 328 mg/m<sup>3</sup> (250 ppm).  
 108-10-1, MIBK, OSHA PEL TWA: 205 mg/m<sup>3</sup> (50 ppm).  
 108-10-1, MIBK, OSHA PEL STEL: 300 mg/m<sup>3</sup> (75 ppm).  
 108-10-1, MIBK, ACGIH TLV TWA: 20 mg/m<sup>3</sup>.  
 67-63-0, 2-Propanol, OSHA PEL TWA: 400 ppm (980 mg/m<sup>3</sup>).  
 67-63-0, 2-Propanol, NIOSH REL: TWA 400 ppm (980 mg/m<sup>3</sup>).  
 67-63-0, 2-Propanol, NIOSH REL ST: 500 ppm (1225 mg/m<sup>3</sup>).  
 67-63-0, 2-Propanol, ACGIH TLV TWA: 200 ppm.  
 67-63-0, 2-Propanol, ACGIH TLV STEL: 400 ppm.  
 64-17-5, Ethanol, ACGIH TLV TWA: 1000 ppm (1881mg/m<sup>3</sup>).  
 64-17-5, Ethanol, OSHA PEL: TWA 1000 ppm (1900 mg/m<sup>3</sup>).  
 64-17-5, Ethanol, NIOSH IDLH: 3300 ppm [10%LEL].

**Appropriate engineering controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

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

**Protection of skin:** The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Eye protection:** Safety glasses with side shields or goggles.

**General hygienic measures:** The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

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**Ethanol, Anhydrous****SECTION 9: Physical and chemical properties**

|  |                         |   |  |
|--|-------------------------|---|--|
| <b>Appearance (physical state, color):</b> | Clear, colorless liquid | <b>Explosion limit lower:</b>                   | 4  |
|  |                         | <b>Explosion limit upper:</b>                   | 20   |
| <b>Odor:</b>                               | Alcohol                 | <b>Vapor pressure at 20°C:</b>                  | 42 mm Hg   |
| <b>Odor threshold:</b>                     | 10 ppm                  | <b>Vapor density:</b>                           | 1.6  |
| <b>pH-value:</b>                           | Not determined          | <b>Relative density:</b>                        | 0.795  |
| <b>Melting/Freezing point:</b>             | - 80 C                  | <b>Solubilities:</b>                            | infinite solubility  |
| <b>Boiling point/Boiling range:</b>        | 74-80 C                 | <b>Partition coefficient (n-octanol/water):</b> | Not determined   |
| <b>Flash point (closed cup):</b>           | 5°C                     | <b>Auto/Self-ignition temperature:</b>          | 400°C  |
| <b>Evaporation rate:</b>                   | 4.1                     | <b>Decomposition temperature:</b>               | Not determined   |
| <b>Flammability (solid, gaseous):</b>      | Flammable               | <b>Viscosity:</b>                               | a. Kinematic: Not determined<br>b. Dynamic: Not determined |
| <b>Density at 20°C:</b>                    | Not determined          |   |  |

**SECTION 10: Stability and reactivity****Reactivity:**

Stable under normal conditions of use and storage.

**Chemical stability:**

No decomposition if used and stored according to specifications.

**Possible hazardous reactions:**

None under normal processing.

**Conditions to avoid:**

Excess heat, Incompatible Materials, Ignition source, or Flame.

**Incompatible materials:**

Strong oxidizers, heat, sparks, open flames, platinum, sodium, bromine pentafluoride, potassium dioxide, acetyl bromide, acetyl chloride.

**Hazardous decomposition products:**

Oxides of carbon, acrid and irritating fumes.

**SECTION 11: Toxicological information****Acute Toxicity:** No additional information.**Chronic Toxicity:** No additional information.**Skin corrosion/irritation:** No additional information.**Serious eye damage/irritation:**

May cause eye irritation.

**Respiratory or skin sensitization:** No additional information.**Carcinogenicity:**

: Group 3: Not classifiable as to its carcinogenicity to humans (2-Propanol)

**Germ cell mutagenicity:** No additional information.

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Classified as STOT in Section 2 (multiple organs - see above, Section 11)

**Additional toxicological information:**

No additional information.

**SECTION 12: Ecological information****Ecotoxicity:**

, Ethanol has a slight acute and chronic toxicity to aquatic life.

**Persistence and degradability:**

Readily degradable in the environment.

**Bioaccumulative potential:**

No information available.

**Mobility in soil:**

Aqueous solution has high mobility in soil.

**Other adverse effects:**

None Identified.

**SECTION 13: Disposal considerations****Waste disposal recommendations:**

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

**SECTION 14: Transport information****US DOT****UN Number:**

ADR, ADN, DOT, IMDG, IATA

1170

**Limited Quantity Exception:**

None

**Bulk:****RQ (if applicable):** None**Proper shipping Name:** Ethanol (Mixture).**Hazard Class:** 3**Packing Group:** II.**Marine Pollutant (if applicable):** No additional information.**Comments:** None**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:** Ethanol (Mixture).**Hazard Class:** 3**Packing Group:** II.**Marine Pollutant (if applicable):** No additional information.**Comments:** None

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**Ethanol, Anhydrous****SECTION 15: Regulatory information****United States (USA)****SARA Section 311/312 (Specific toxic chemical listings):**

Acute,Chronic,Fire

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

67-56-1 Methanol.

67-63-0 2-Propanol.

108-10-1 MIBK.

**RCRA (hazardous waste code):**

None of the ingredients are listed.

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

All ingredients are listed.

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):**

None of the ingredients are listed.

**Proposition 65 (California):****Chemicals known to cause cancer:**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

108-10-1 Methanol.

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

All ingredients are listed.

**SECTION 16: Other information**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**NFPA:** 1-0-0**HMIS:** 1-0-0

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|       |  |
|-------|--|
| IMDG  | International Maritime Code for Dangerous Goods.                         |
| PNEC. | Predicted No-Effect Concentration (REACH).                               |
| CFR   | Code of Federal Regulations (USA)  |
| SARA  | Superfund Amendments and Reauthorization Act (USA).                      |
| RCRA. | Resource Conservation and Recovery Act (USA).                            |
| TSCA. | Toxic Substances Control Act (USA).                                      |
| NPRI  | National Pollutant Release Inventory (Canada).                           |
| DOT   | US Department of Transportation.   |
| IATA  | International Air Transport Association.                                 |
| GHS   | Globally Harmonized System of Classification and Labelling of Chemicals. |
| ACGIH | American Conference of Governmental Industrial Hygienists                |
| CAS   | Chemical Abstracts Service (division of the American Chemical Society).  |
| NFPA  | National Fire Protection Association (USA).                              |
| HMIS  | Hazardous Materials Identification System (USA).                         |
| WHMIS | Workplace Hazardous Materials Information System (Canada).               |
| DNEL  | Derived No-Effect Level (REACH).   |