

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Ethanol Denatured Anhydrous

Other means of identification

Product Code(s) E193
UN/ID no. 1170
Synonyms No information available

Recommended use of the chemical and restrictions on use

Recommended Use For Further Manufacturing Use Only.
Uses advised against Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet

| Company Address | Manufacturer Address |
|---|---|
| VWR International, LLC Radnor Corporate Center 100 Matsonford Road Radnor, PA 19087-8660 | VWR International, LLC 28600 Fountain Parkway Solon, Ohio 44139 |
| Company Phone Number | 1-800-448-4442 |
| E-mail Address | info@amresco-inc.com |

Emergency Telephone Number

Emergency Telephone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|------------|
| Acute Toxicity - Oral | Category 4 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Specific target organ toxicity (single exposure) | Category 1 |
| Flammable liquids | Category 2 |

Label elements

Emergency Overview

Danger

Hazard statements

H225 - Highly flammable liquid and vapor
 H302 - Harmful if swallowed
 H319 - Causes serious eye irritation
 H370 - Causes damage to organs



Appearance Colorless

Physical State Liquid

Odor Mild, rather pleasant, like wine or whiskey

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

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

Precautionary Statements - Response

IF exposed: Call a POISON CENTER or doctor/physician

Specific treatment (see .? on this label)

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not regulated

Other Information

Unknown Acute Toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS-No | EC No. | Weight % | Trade Secret |
|---------------|---------|-----------|----------|----------------|
| Ethanol | 64-17-5 | 200-578-6 | 95-100 | Not applicable |
| Methanol | 67-56-1 | 200-659-6 | 0-7 | Not applicable |

4. FIRST AID MEASURES**First Aid Measures****Eye Contact**

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation

Move to fresh air. If not breathing, give artificial respiration.

Ingestion

Never give anything by mouth to an unconscious person. Rinse mouth.

Most important symptoms and effects, both acute and delayed**Most Important Symptoms/Effects** No information available.**Indication of any immediate medical attention and special treatment needed****Notes to Physician** Treat symptomatically.**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**Dry chemical, CO₂, appropriate foam. Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal protection Ensure adequate ventilation, especially in confined areas.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete. Use non-sparking tools and equipment.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Handle in accordance with good industrial hygiene and safety practice. Keep away from sources of ignition.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from sources of ignition-no smoking.

Incompatible Products Oxidizing agents. Peroxides. Acids. Anhydrides. Acid chlorides. Alkali metals. Ammonia.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---------------------|------------------------------|--|--|
| Ethanol 64-17-5 | 1000 ppm STEL | TWA: 1000 ppm TWA: 1900 mg/m ³ | IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³ |
| Methanol 67-56-1 | 250 ppm STEL TWA: 200 ppm | TWA: 200 ppm TWA: 260 mg/m ³ | IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³ |

Appropriate engineering controls

Engineering Measures Showers

Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

| | |
|---------------------------------|---|
| Eye/Face Protection | Avoid contact with eyes. Safety glasses with side-shields. |
| Skin and Body Protection | Wear protective gloves/clothing. |
| Respiratory Protection | If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|-------------------------------------|--------------------------------|-------------------------|---|
| Physical State | Liquid | Odor | Mild, rather pleasant, like wine or whiskey |
| Appearance | Colorless | Odor Threshold | No information available |
| Color | No information available | Remarks • Method | |
| Property | Values | | |
| pH | No information available | | |
| Melting point/freezing point | -130 °C | | |
| Boiling Point/Range | 75 °C | | |
| Flash Point (High in °C) | No information available 55 °F | | |
| Evaporation Rate | No information available | | |
| Flammability (solid, gas) | No information available | | |
| Flammability Limit in Air | | | |
| Upper flammability limit: | No information available | | |
| Lower flammability limit: | No information available | | |
| Vapor pressure | No information available | | |
| Vapor Density | No information available | | |
| Specific Gravity | No information available | | |
| Water Solubility | No information available | | |
| Solubility in other solvents | No information available | | |
| Partition coefficient | No information available | | |
| Autoignition Temperature | 421 °C / 789 °F | | |
| Decomposition Temperature | No information available | | |
| Kinematic viscosity | No information available | | |
| Dynamic viscosity | No information available | | |
| Explosive Properties | No information available | | |
| Oxidizing Properties | No information available | | |

Other Information

| | |
|-------------------------|--------------------------|
| Softening Point | No information available |
| Molecular Weight | No information available |
| VOC Content | No information available |
| Density | 1.59 |
| Bulk Density | No information available |

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Keep away from sources of ignition-no smoking.

Incompatible Materials

Oxidizing agents. Peroxides. Acids. Anhydrides. Acid chlorides. Alkali metals. Ammonia.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

| | | | |
|----------------------------|--|--|--|
| Product Information | Irritating to eye, skin and respiratory system Harmful if swallowed,inhaled,or absorbed through skin | | |
| Inhalation | There is no data available for this product. | | |
| Eye Contact | There is no data available for this product. | | |
| Skin Contact | There is no data available for this product. | | |
| Ingestion | There is no data available for this product. | | |

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---------------------|----------------------|--------------------------|---|
| Ethanol 64-17-5 | = 7060 mg/kg (Rat) | - | = 124.7 mg/L (Rat) 4 h |
| Methanol 67-56-1 | = 6200 mg/kg (Rat) | = 15800 mg/kg (Rabbit) | = 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h |

Information on toxicological effects

| | |
|-----------------|---------------------------|
| Symptoms | No information available. |
|-----------------|---------------------------|

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | | | |
|--------------------------|--|--|--|
| Sensitization | No information available. | | |
| Mutagenic Effects | No information available. | | |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. | | |

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|---------------------|-------|---------|-------|------|
| Ethanol 64-17-5 | A3 | Group 1 | Known | X |
| Methanol 67-56-1 | - | - | - | - |

| | |
|------------------------------|---------------------------|
| Reproductive Toxicity | No information available. |
|------------------------------|---------------------------|

| | |
|-------------------------------|---------------------------|
| STOT - single exposure | No information available. |
|-------------------------------|---------------------------|

| | |
|---------------------------------|---------------------------|
| STOT - repeated exposure | No information available. |
|---------------------------------|---------------------------|

| | |
|-------------------------|---|
| Chronic Toxicity | Prolonged skin contact may defat the skin and produce dermatitis. |
|-------------------------|---|

| | |
|-----------------------------|---|
| Target Organ Effects | Nerves, Eyes, Kidneys, Heart, Cardiovascular system, Gastrointestinal tract (GI). |
|-----------------------------|---|

| | |
|--------------------------|---------------------------|
| Aspiration hazard | No information available. |
|--------------------------|---------------------------|

Numerical measures of toxicity - Product Information

| | |
|-------------------------------|--|
| Unknown Acute Toxicity | 0 % of the mixture consists of ingredient(s) of unknown toxicity |
|-------------------------------|--|

The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION**Ecotoxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

| Chemical Name | Algae/aquatic plants | Toxicity to Fish | Crustacea |
|---------------------|----------------------|--|---|
| Ethanol 64-17-5 | - | 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static | 9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50 |
| Methanol 67-56-1 | - | 100: 96 h Pimephales promelas mg/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 28200: 96 h Pimephales promelas mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through | - |

Persistence and Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

| Chemical Name | Partition coefficient |
|---------------------|-----------------------|
| Ethanol 64-17-5 | -0.32 |
| Methanol 67-56-1 | -0.77 |

Other Adverse Effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations.

Contaminated Packaging Do not re-use empty containers.

| Chemical Name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|---------------------|--------------------------------------|------------------------|------------------------|------------------------|
| Ethanol 64-17-5 | - | - | - | - |
| Methanol 67-56-1 | - | - | - | - |

| Chemical Name | California Hazardous Waste Status |
|---------------------|-----------------------------------|
| Ethanol 64-17-5 | Toxic; Ignitable |
| Methanol 67-56-1 | Toxic; Ignitable |

14. TRANSPORT INFORMATION**DOT**

UN/ID no. 1170
 Proper shipping name Ethanol Solution
 Hazard Class 3
 Packing Group II

IATA

UN/ID no. 1170

| | |
|----------------------|------------------|
| Proper shipping name | Ethanol Solution |
| Hazard Class | 3 |
| Packing Group | II |

15. REGULATORY INFORMATION

International Inventories

| | |
|---------------|----------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Complies |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

| Component | SARA 313 - Threshold Values % |
|-------------------------------|-------------------------------|
| Ethanol 64-17-5 (95-100) | - |
| Methanol 67-56-1 (0-7) | 1.0 |

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire Hazard | Yes |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Ethanol 64-17-5 | - | - | - | - |
| Methanol 67-56-1 | - | - | - | - |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical Name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | RQ |
|--------------------|--------------------------|------------------------------------|----|
| Ethanol 64-17-5 | - | - | - |

| | | | |
|---------------------|---------|---|--|
| Methanol 67-56-1 | 5000 lb | - | RQ 5000 lb final RQ RQ 2270 kg final RQ |
|---------------------|---------|---|--|

U.S. State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:

| Chemical Name | California Prop. 65 |
|--------------------|-----------------------------|
| Ethanol - 64-17-5 | Carcinogen Developmental |
| Methanol - 67-56-1 | Developmental |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|---------------------|------------|---------------|--------------|
| Ethanol 64-17-5 | X | X | X |
| Methanol 67-56-1 | X | X | X |

U.S. EPA Label Information

EPA Pesticide Registration Number Not regulated

16. OTHER INFORMATION

Issuing Date 08-Jun-2010

Revision Date 08-Jan-2016

Revision Note

No information available

Disclaimer

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and its Affiliates shall not be held liable for any damage resulting from handling.

End of Safety Data Sheet