

MATERIAL SAFETY DATA SHEET

(ENGLISH)

Emergency CHEMTREC: 800-424-9300 (USA)

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190 Proof Ethyl Alcohol (95%) USP, ACS

1. Product Identification

Synonyms: Ethanol, Ethyl Alcohol

Cas No: 64-17-5

Chemical Formula: C₂H₅OH

2. Composition/Information on Ingredients

Cas No: 64-17-5

Chemical Name: Ethanol

% wt: 92.42% (95%v/v)

Cas No: 7732-18-5

Chemical Name: Water

%wt: 7.58%

3. Hazardous Identification

Carcinogen Status: Not Classified as a human carcinogen.

Swallowing: May cause dizziness, faintness, drowsiness, decreased awareness or responsiveness, nausea, vomiting, staggering gait, lack of coordination and coma.

Skin Absorption: No harmful affects with normal skin.

Inhalation: High vapor concentration may cause burning sensation in the nose and throat and stinging and watering in the eyes. At concentrations which cause irritation, dizziness, faintness, drowsiness, nausea and vomiting may also occur.

Skin Contact: No harmful effects from available information

Eye Contact: May cause irritation including stinging, tearing and redness.

Effects of Repeated Overexposure: Long term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis.

Other Health Hazards: Repeated Ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus, producing a collection of effects which together constitute fetal alcohol syndrome. These include mental and physical retardation, disturbances of learning, motor and language deficiencies, behavioral disorders and small size head.

Medical Conditions aggravated by Overexposure: Repeated exposure to ethanol may aggravate liver injury produced from other causes.

4. First Aid Measures

Obtain medical attention for all cases of over-exposure.

Swallowing: If patient is fully conscious, give two glasses of water. Induce vomiting. Obtain medical attention.

Skin: Wash skin with soap and water for at least 15 minutes.

Inhalation: Remove to fresh air; give artificial respiration if not breathing. If breathing is difficult oxygen may be given by qualified personnel. Obtain medical assistance if discomfort persists.

Note to Physician: Symptoms vary with alcohol level of the blood. Mild alcohol intoxication occurs at blood levels between 0.5-.15%. Approximately 25% of individuals show signs of intoxication at these levels. Above .15% the person is definitely under the influence of ethanol and 50-95% of individuals are clinically intoxicated at these levels. Severe poisoning occurs when the blood ethanol level is 0.3-0.5%. Above 0.5% the individual will be comatose and death can occur. The unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration. Avoid the use of depressant drugs or the excessive administration of fluids.

5. Fire Fighting Measures

Flash Point: 62.0°F CC

Lower Explosive Limit: 3.3

Upper Explosive Limit: 19.0

Fire Extinguishing Media: Apply alcohol -type or all purpose foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

Special Fire Fighting Procedures: Use water spray to cool fire exposed containers and structures. Use water spray to disperse vapors - re-ignition is possible. Use self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion: Vapors may travel to source of ignition and flash back. Vapors may settle in low or confined spaces. May produce a floating fire hazard. Static ignition hazard can result from handling and use.

6. Accidental Release Measures

Small spills can be flushed with large amounts of water.

Large Spills: Eliminate all ignition sources. Ground all equipment. Do not walk through spill. Stop spill if possible. Prevent entry into sewers, confined spaces, etc. Use a vapor suppressing foam to reduce vapors. Absorb spill with non-combustible matter and transfer to containers. Use non sparking tools to collect absorbed material.

7. Handling and Storage

Flammable Material: Keep away from heat, sparks and flame. Sudden releases of hot organic vapors or mists from process equipment operating at elevated temperatures may result in ignitions without the presence of obvious ignition sources.

Other Precautions: Avoid contact with eyes. Keep container closed. Use with adequate ventilation. Ground container when transferring product. Vapors may collect in containers - treat empty containers as hazardous. Wash thoroughly after handling. Vapors may settle in low or confined areas.

8. Exposure Controls/Personal Protection

Ventilation Requirements: Special, local ventilation is needed where vapors escape to workplace air.

Personal Protective Equipment: Use self-contained breathing apparatus in high vapor concentration. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: impervious clothing including boots, gloves, lab coat, apron, or coveralls as appropriate

Eye Protection: safety glasses and/or full face shield where splashing is possible

Other Protective Equipment: eyewash, safety shower

Work Hygienic Practices: wash thoroughly after handling

9. Physical and Chemical Properties

Boiling Point: 176°F

Melting/Freezing Point: <-189°F

Vapor Pressure (mm Hg): 41.4 @ 68°

Evaporation rate: 3.0

Vapor Density (Air=1): 1.6

Solubility in Water: Completely

Appearance and Odor: Clear and Colorless

Specific Gravity: @ 68°F: 0.8107

10. Stability and Reactivity

Stability: Stable under normal conditions

Incompatibility (Materials to Avoid): Strong oxidants, silver salts, acid chlorides, alkali metals, metal hydrides, hydrazine, and many other substances.

Decomposition/By Products: Carbon Dioxide, Carbon Monoxide

Hazardous Polymerization: None

11. Ecological Information

Ethanol:

Soil: readily biodegrades, quickly evaporates, leaches into groundwater

Water: readily biodegrades, evaporates to moderate extent. Does not bioaccumulate

Air readily degrades by reaction with photochemically produced hydroxyl radicals, readily removed by dry and wet deposition, has a half-life between 1 and 10 days

12. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to an RCRA approved incinerator or disposed in an RCRA approved waste facility. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.

13. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: Ethyl Alcohol

Hazard Class: 3 (Flammable Liquid)

UN/NA: UN1170

Packing Group: II

Emergency Response Guide #127

International (Water, I.M.O.)

Proper Shipping Name: Ethyl Alcohol

IMO Information: Ethanol or Ethanol Solutions

Hazard Class: 3 (Flammable Liquid)

UN: UN1170

Packing Group: II

Emergency Response Guide #127

14. Regulatory Information

TSCA

CAS# 64-17-5 is listed on the TSCA inventory

Health & Safety Reporting List

None

Chemical Test Rules

None

Section 12b

None

TSCA Significant New Use Rule

None

EPCRA

Section 302

None

Section 304

None

SARA Codes

CAS# 64-17-5: acute, chronic, flammable

Section 313

None

CERCLA

Section 103

None

Clean Air Act

Hazardous Air Pollutants

None

Class 1 Ozone Depletors

None

Class 2 Ozone Depletors

None

Clean Water Act

Hazardous Substances

None

Priority Pollutants

None

Toxic Pollutants

None

15. Other Information

The information presented above is believed to be accurate and represents the best information currently available to us. We make no warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. In no way shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages even if we have been advised of the possibility of such damages.