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THE POWER OF THREE³

PHARMCO-AAPER

AND COMMERCIAL ALCOHOLS

Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

MATERIAL SAFETY DATA SHEETS

SECTION I

PRODUCT AND COMPANY IDENTIFICATION

Product: 10 Proof Ethyl Alcohol

This MSDS is valid for all grades and catalog #'s

Synonyms: Ethyl Alcohol 5%; Ethanol; 10 Proof Ethanol;
Methylated spirits

Formula: C₂H₅OH

Manufacturer: Pharmco Products Inc.
58 Vale Road
Brookfield, Connecticut 06804, USA
Phone (203) 740-3471
Fax (203) 740-3481

1101 Isaac Shelby Drive
Shelbyville, KY 40065
Phone (502) 633-0650
Fax (502) 633-0685

Emergency Contact:
CHEMTREC 1-800-424-9300

SECTION II

COMPOSITION / INFORMATION ON INGREDIENTS

%wt	Material	CAS	Exposure Limits
4.0% (5%v/v)	Ethanol	64-17-5	1000ppm TWA
96.0% (95.31v/v)	Water	7732-18-5	None established

SECTION III

HAZARDS IDENTIFICATION

Carcinogen Status: Not classifiable as a human carcinogen

Routes of Exposure:

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 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 evidence of 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.

SECTION IV FIRST AID

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.

Eyes: Flush eyes with water for at least 15 minutes. Obtain medical assistance.

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; 50-95% of individuals are clinically intoxicated at these levels. Severe poisoning occurs when the blood is 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.

SECTION V FIRE FIGHTING MEASURES

Fire/Explosive Properties

Flash Point: 190F (88C) Tag Closed Cup

Flammable Limits in Air: For 100% ethanol 3.3 - 19.0% (by volume)

Flammability Classification: 2 (NFPA)

1993 Emergency Response Guidebook: Guide 26

1996 North American Emergency Response Guidebook: Guide 127

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 Hazards:

- 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.
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SECTION VI

SPILL/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.

SECTION VII 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 temperature may result in ignitions without the presence of obvious ignition sources.
 - 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
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SECTION VIII EXPOSURE CONTROLS / PERSONAL PROTECTION

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

Respiratory Protection: Use self-contained breathing apparatus in high vapor concentration

Personal Protective Equipment: gloves, lab coat or uniform, safety glasses, eye wash, safety shower

SECTION IX

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: clear, colorless liquid

Odor: characteristic

Vapor pressure @ 20C: 44.6 mm Hg

Vapor density: 1.6 (air =1) for 100% ethanol

Boiling point @ 760mm Hg: 97C

Freezing Point: -3C

Solubility in Water: 100% @ 20C

Specific Gravity : .9928 @ 20/20C

Density @ 15.56C (60F) 8.28lbs/gal

Evaporation Rate: 3.3 (butyl acetate = 1)

Percent Volatiles: 100%

SECTION X

STABILITY/REACTIVITY INFORMATION

Stability: Stable

Conditions to avoid: None known

Incompatibility/Materials to avoid: strong oxidizing agents; strong inorganic acids

Hazardous Combustion/Decomposition Products:

Carbon monoxide and/or carbon dioxide

Hazardous Polymerization: Will not occur

SECTION XI DISPOSAL CONSIDERATIONS

Vapors may collect in empty containers. Treat empty containers as hazardous.

Dispose of spill-clean up and other wastes in accordance with Federal, State, and local regulations.

SECTION XII TRANSPORTATION INFORMATION

Proper Shipping Name: Ethyl Alcohol

SECTION XIII REGULATORY INFORMATION

Federal EPA

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA): No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312). Components present in this product at a level which could require reporting under this statute are: none.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS's that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are: none.

Toxic Substances Control Act (TSCA) Status:
The ingredients of this product are on the TSCA inventory.

State Right to Know

Massachusetts: Hazardous substances and extraordinarily hazardous substances must be identified. Components present which could require reporting:

Hazardous (\Rightarrow 1%): Ethanol (CAS 64-17-5) upper bound conc. 5%

Pennsylvania: Hazardous substances must be identified.
Hazardous (\Rightarrow 1%): Ethanol

The information contained herein is based on data considered to be accurate. However, no warranty is expressed regarding the accuracy of these data or the results

to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use of the product.