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**PHARMCO-AAPER**

AND COMMERCIAL ALCOHOLS

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

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# MATERIAL SAFETY DATA SHEETS

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Manufacturer: PHARMCO-AAPER  
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## Ethylbenzene

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### 1. CHEMICAL PRODUCT IDENTIFICATION

Product Name: Ethylbenzene  
Synonyms: Ethylbenzol, Phenylethane  
Molecular Formula:  $C_6H_5C_2H_5$   
Molecular Weight: 106.17

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
Ethylbenzene	100-41-4	100.0

### 3. HAZARDS IDENTIFICATION

WARNING! FLAMMABLE LIQUID. CAUSES SKIN IRRITATION. CAUSES EYE IRRITATION. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. ASPIRATION HAZARD. MAY BE ABSORBED THROUGH THE SKIN. CAUSES DIGESTIVE AND RESPIRATORY TRACT IRRITATION.

NFPA Hazard Ratings: Health - 2, Flammability - 3, Reactivity - 0

NOTE: NFPA ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

## Potential Health Effects

Eye: Causes moderate eye irritation. Vapors may cause eye irritation.

Skin: Prolonged and/or repeated contact may cause irritation and/or dermatitis. May be absorbed through the skin. Contact with the liquid may cause erythema, exfoliation and vesiculation.

Ingestion: May cause irritation of the digestive tract. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. Vapors may cause dizziness or suffocation.

Chronic: Chronic inhalation may cause effects similar to those of acute inhalation.

## 4. FIRST AID MEASURES

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.

Skin: Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

## 5. FIRE FIGHTING MEASURES

Fire:

Autoignition Temperature: 810 deg F (432.22 deg C)

Flash Point: 21 deg C (69.80 deg F)

Explosion Limits, Lower: 0.8 Upper: 6.7

General Information: Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Use water spray to keep fire-exposed containers cool. Flammable Liquid. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. For large fires, use water spray, fog or alcohol-resistant foam. Contact professional fire-fighters immediately. Cool containers with flooding quantities of water until well after fire is out.

## 6. ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Remove all sources of ignition. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces.

## 7. HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Use with adequate ventilation. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### Exposure Limits

ACGIH: 100 ppm ; 434 mg/m<sup>3</sup>; 125 ppm STEL; 543 mg/m<sup>3</sup> STEL

NIOSH: 100 ppm TWA; 435 mg/m<sup>3</sup> TWA 800 ppm IDLH (10 percent lower explosive limit)

OSHA - Final PELs: 100 ppm TWA; 435 mg/m<sup>3</sup> TWA

OSHA Vacated PELs: Ethylbenzene: 100 ppm TWA; 435 mg/m<sup>3</sup> TWA

### Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing: Wear appropriate protective gloves and clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: clear, colorless

Odor: aromatic odor

pH: Not available.

Vapor Pressure: 7.1 mm Hg @ 20 C

Vapor Density: 3.7

Evaporation Rate:

Viscosity: 0.63 mPa s 20 C  
Boiling Point: 277 deg F  
Freezing/Melting Point: -139 deg F  
Decomposition Temperature: Not available.  
Solubility: Insoluble.  
Specific Gravity/Density: 0.9

## 10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat.  
Incompatibilities with Other Materials: Oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

## 11. TOXICOLOGICAL INFORMATION

RTECS#: CAS# 100-41-4: DA0700000

LD50/LC50: CAS# 100-41-4:

Oral, rat: LD50 = 3500 mg/kg;

Skin, rabbit: LD50 = 17800 mg/kg;

Carcinogenicity: CAS# 100-41-4: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Neurotoxicity: No data available.

Mutagenicity: No data available.

Other Studies: No data available.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity: Shrimp (*mysidopsis bahia*), LC50=87.6 mg/L/96hr. Sheepshead minnow LC50=275 mg/L/96hr.

Fathead minnow LC50=42.3 mg/L/96hr in hard water & 48.5 mg/L/96hr in softwater.

Environmental Fate: Substance may absorb to sediment and bioconcentrate in fish.

Physical/Chemical: Not available.

Other: Not available.

## 13. DISPOSAL CONSIDERATION

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants: None listed.

RCRA D-Series Chronic Toxicity Reference Levels: None listed.

RCRA F-Series: None listed.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

## 14. TRANSPORT INFORMATION

Domestic (Land, D.O.T.)  
Proper Shipping Name: Ethylbenzene  
Hazard Class: 3  
UN/NA: UN1175  
Packing Group: II

International (Water, I.M.O.)  
Proper Shipping Name: Ethylbenzene  
Hazard Class: 3.2  
UN/NA: UN1175  
Packing Group: II

International (Air, I.C.A.O.)  
Proper Shipping Name: Ethylbenzene  
Hazard Class: 3  
UN/NA: UN UN1175  
Packing Group: II

## 15. REGULATORY INFORMATION

### US FEDERAL

TSCA: CAS# 100-41-4 is listed on the TSCA inventory.

Health & Safety Reporting List: CAS# 100-41-4: Effective Date: June 19, 1987; Sunset Date: June 19, 19 97

Chemical Test Rules: None of the chemicals in this product are under a Chemical Test Rule.

Section 12b: None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule: None of the chemicals in this material have a SNUR under TSCA.

### SARA

Section 302 (RQ): CAS# 100-41-4: final RQ = 1000 pounds (454 kg)

Section 302 (TPQ): None of the chemicals in this product have a TPQ.

SARA Codes: CAS # 100-41-4: acute, chronic, flammable.

Section 313: This material contains Ethylbenzene (CAS# 100-41-4, 99 0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:: CAS# 100-41-4 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:: CAS# 100-41-4 is listed as a Hazardous Substance under the CWA. CAS# 100-41-4 is listed as a Priority Pollutant under the Clean Water Act. CAS# 100-41-4 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

### STATE

CAS# 100-41-4 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed.

### European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F

Risk Phrases: R 11 Highly flammable. R 20 Harmful by inhalation.

Safety Phrases: S 16 Keep away from sources of ignition - No smoking. S 24/25 Avoid contact with skin and eyes. S 29 Do not empty into drains.

WGK (Water Danger/Protection)

CAS# 100-41-4: 1

Canada

CAS# 100-41-4 is listed on Canada's DSL/NDSL List.

This product has a WHMIS classification of B2, D2B.

CAS# 100-41-4 is not listed on Canada's Ingredient Disclosure List.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal or greater than the reportable quantities (RQs) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are:

Chemical Name	CAS Number	RQ
Ethylbenzene	100-41-4	1,000lb

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Ethylbenzene

#### Exposure Limits

CAS# 100-41-4: OEL-AUSTRALIA:TWA 100 ppm (435 mg/m<sup>3</sup>);STEL 125 ppm (545 mg/m<sup>3</sup>) OEL-BELGIUM:TWA 100 ppm (434 mg/m<sup>3</sup>);STEL 125 ppm (543 mg/m<sup>3</sup>) OEL-CZECHOSLOVAKIA:TWA 200 mg/m<sup>3</sup>;STEL 1000 mg/m<sup>3</sup> OEL-DENMARK:TWA 50 ppm (217 mg/m<sup>3</sup>) OEL-FINLAND:TWA 100 ppm (435 mg/m<sup>3</sup>);STEL 150 ppm (655 mg/m<sup>3</sup>) OEL-FRANCE:TWA 100 ppm (435 mg/m<sup>3</sup>) OEL-GERMANY:TWA 100 ppm(440 mg/m<sup>3</sup>);Skin OEL-HUNGARY:TWA 100 mg/m<sup>3</sup>;STEL 200 mg/m<sup>3</sup>;Skin OEL- JAPAN:TWA 100 ppm (430 mg/m<sup>3</sup>) OEL-THE NETHERLANDS:TWA 100 ppm (435 mg/m<sup>3</sup>) OEL-THE PHILIPPINES:TWA 100 ppm (435 mg/m<sup>3</sup>) OEL-POLAND:TWA 100 mg/m<sup>3</sup> OEL-RUSSIA:TWA 100 ppm;STEL 50 mg/m<sup>3</sup> OEL-SWEDEN:TWA 50 ppm (200 mg/m<sup>3</sup>);STEL 100 ppm (450 mg/m<sup>3</sup>) OEL-SWITZERLAND:TWA 100 ppm (435 mg/m<sup>3</sup>);STEL 500 ppm OEL-TURKEY:TWA 100 ppm (435 mg/m<sup>3</sup>) OEL-UNITED KINGDOM:TWA 100 ppm (435 mg/m<sup>3</sup>);STEL 125 ppm OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

## 16. OTHER INFORMATION

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.