An ISO 9001:2000 Certified Company

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

Manufacturer: PHARMCO-AAPER
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Emergency Contact:
CHEMTREC 1-800-424-9300

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PRODUCT IDENTIFICATION
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PRODUCT NAME: GLYCOL ETHER DB,

MSDS#: EZ001285

1. CHEMICAL PRODUCT IDENTIFICATION
Product Name Glycol Ether DB
Chemical Name 2-(2-butoxyethoxy)ethanol
Molecular Formula C8H18O3
Molecular Weight 162.23
Product Use solvent
OSHA Status hazardous
For emergency transportation information, call CHEMTREC at 800-424-9300

2. COMPOSITION INFORMATION ON INGREDIENTS
(Typical composition is given, and it may vary. A certificate of analysis can be provided.)
Weight - Component - CAS Registry No.
100 diethylene glycol monobutyl ether 000112-34-5

3. HAZARDS IDENTIFICATION
WARNING
CAUSES EYE IRRITATION
PEROXIDE FORMER
HMIS Hazard Ratings: Health - 2, Flammability - 1, Chemical Reactivity - 0
NOTE: HMIS rating 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.

4. FIRST-AID MEASURES

Inhalation: If symptomatic, move to fresh air. Get medical attention if symptom persists.
Eyes: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.
Skin: Wash with soap and water. Get medical attention if symptoms occur.
Ingestion: Seek medical advice.

5. FIRE FIGHTING MEASURES
Extinguishing Media: water spray, dry chemical, carbon dioxide (CO_2), alcohol foam
Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.
Hazardous Combustion Products: carbon dioxide, carbon monoxide
Unusual Fire and Explosion Hazards: Forms peroxides of unknown stability.

6. ACCIDENTAL RELEASE MEASURES
Use personal protective equipment. (See EXPOSURE CONTROLS/PERSONAL PROTECTION.) Absorb spill with vermiculite or other inert material, then place in a Connor for chemical waste.
For Large Spills: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams.

7. HANDLING AND STORAGE
Personal Precautionary Measures: Avoid contact with eyes.
Prevention of Fire and Explosion: Keep from contact with oxidizing materials. Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Do not allow to evaporate to near dryness. Distill with caution. If peroxide formation is suspected, do not open or move container.
Storage: Keep container closed.
Additional Information: Store away from heat and light.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Country specific exposure limits have not been established or are not applicable unless listed below.
Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions.
Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, evaporation from large surfaces, spraying, heating, etc.
Respiratory Protection: If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. Respirator type: organic vapor. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152.
January 8, 1998.
Eye Protection: Wear safety glasses with side shields (or goggles) and a face shield.
Skin Protection: It is a good industrial hygiene practice to minimize skin contact.
Recommended Decontamination Facilities: eye bath, washing facilities, safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES
Physical Form: liquid
Color: colorless
Odor: slight
Odor Threshold: not available
Specific Gravity : 0.948 (25 C)
Vapor Pressure at 20 C : 0.027 mbar
Vapor Density: 5.6
Freezing Point: -76 C
Boiling Point: 228 C
Evaporation Rate (n-butyl acetate = 1): 0.01
Viscosity at 25 C (77 F): 4.74 mPa.s or cP
Solubility in Water: complete
Flash Point (Setaflash closed cup): 100 C (212 F)
Autoignition Temperature (ASTM D 2155): 204 C (ASTM D2155)
tHERMAL dECOMPOSITION tEMPERATURE: (DTA): No exotherm

10.STABILITY AND REACTIVITY
Stability: Stable
Incompatibility: Material reacts with strong oxidizing agents

Hazardous Polymerization: Will not occur

11.TOXICOLOGICAL INFORMATION
Toxicity data are not available unless listed below.
Oral LD-50 (rat): 7292 mg/kg
Oral LD-50 (mouse): 2406 mg/kg
Dermal LD-50 (rabbit): 2764 mg/kg
Skin irritation (rabbit): slight
Skin irritation (guinea pig): slight
Eye irritation (rabbit): moderate

12.ECOLOGICAL INFORMATION
Oxygen Demand Data:
BOD-5: 250 mg/g
COD: 2.080 mg/g
Acute Aquatic Effects Data:
24-h LC-50 (goldfish): 2700 mg/L
96-h LC-50 (bluegill sunfish): 1300 mg/L
13.DISPOSAL CONSIDERATIONS
Discharge, treatment, or disposal may be subject to national, state, or local law. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.
14.TRANSPORT INFORMATION
Marine pollutant components: none unless listed below.
DOT (USA) Status: Class not regulated
ICAO Status: Class not regulated
IMDG Status: Class not regulated

15. REGULATORY INFORMATION
WHMIS (Canada) Status: controlled
WHMIS (Canada) Hazard Classification: D/2/13
SARA 311-312 Hazard Classification(s): immediate (acute) health hazard
SARA 313: none, unless listed below
diethylene glycol monobutyl ether (glycol ethers category)
Carcinogenicity Classification (components present at 0.1% or more): none, unless listed below
TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.
DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is listed on the DSL. Any impurities present in this product are exempt from listing.
EINECS (European Inventory of Existing Commercial Chemical Substances): This product is listed on EINECS.
EINECS Number: 203-961-6
AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.
MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.
ECL (Korean Toxic Substances Control Act): This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.

16. OTHER INFORMATION
The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable, PHARMCO-AAPER assumes not responsibility for the completeness or accuracy of the information contained herein.