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Certified Company



THE POWER OF THREE²

PHARMCO-AAPER

AND COMMERCIAL ALCOHOLS

Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300 or 202-483-7616

MATERIAL SAFETY DATA SHEETS

Part Number/Trade Name: ETHYL ETHER

General Information

Manufacturer:	PHARMCO-AAPER	
	58 Vale Road	1101 Isaac Shelby Drive
	Brookfield, CT 06804	Shelbyville, KY 40065
	Phone (203) 740-3471	Phone (502) 633-0650
	Fax (203) 740-3481	Fax (502) 633-0685

Ingredients/Identity Information

Proprietary: NO	CAS Number: 60-29-7
Ingredient: ETHYL ETHER	OSHA PEL: 400 PPM
Ingredient Sequence Number: 01	ACGIH TLV: 400 PPM
Percent: 100	Other Recommended Limit: N/K (FP N)
NIOSH (RTECS) Number: K15775000	

Physical/Chemical Characteristics

Appearance And Odor: CLEAR, COLORLESS LIQUID WITH A SWEET, PUNGENT ODOR.	Decomposition Temperature: N/K (FP N)
Boiling Point: 94F/34C	Evaporation Rate And Ref: >10 BUTYL ACETATE=1
Melting Point: N/K (FP N)	Solubility In Water: 6.89% AT 20 C
Vapor Pressure (MM Hg/70 F): 442	Percent Volatiles By Volume: 100
Vapor Density (Air=1): 2.6	Corrosion Rate (IPY): N/K FP N
Specific Gravity: 0.713	

Fire and Explosion Hazard Data

Flash Point: -49 F (-45 C)
Flash Point Method: TCC
Lower Explosive Limit: 1.85
Upper Explosive Limit: 48
Extinguishing Media: DIOXIDE, DRY CHEMICAL OR FOAM
Special Fire Fighting Proc: USE NIOSH/MSHA APVD SCBA + FULL PROT EQPT (FP N).HEAT WILL BUILD PRESS + MAY RUPTURE CLOSED STORAGE CNTNR.COOL CNTNR W/H*20 SPRAY.TREAT AS FLAMMABLE GAS.
Unusual Fire And Expl Hazrds: EXTM VOLATILE + FLAMMABLE.CAN FORM HEAT SENS PEROXIDES WHICH MAY EXPLD ON CONC OR EVAP.KEEP AREA COOLED BLW 320F (160C) TO EXTINGUISH AN ETHER FIRE+PVNT REIGNIT

Reactivity Data

Stability: NO

Cond To Avoid (Stability): HEAT, SPARKS, OPEN FLAME, OPEN CONTAINERS, AND POOR VENTILATION.

Materials To Avoid: OXIDIZING AGENTS + STRONG ACIDS.

Hazardous Decomp Products: INCOMPL COMB CAN GENERATE CO + OTHER TOXIC VAPORS.XPL PEROXIDES CAN FORM AFT STAND OR UPON EXP TO AIR/DIRECT SUNLIGHT.

Hazardous Poly Occur: NO

Conditions To Avoid (Poly): N/K (FP N)

Health Hazard Data

LD50-LC50 Mixture: N/K (FP N)

Route Of Entry - Inhalation: YES

Route Of Entry - Skin: YES

Route Of Entry - Ingestion: YES

Health Haz Acute And Chronic: INHAL:EXP CAN CAUSE HDCH, NAUS, VOMIT, LOSS OF CONSCIOUS, + IN VERY HIGH CONC, DEATH DUE TO RESP PARAL.EYE:LIQ + HIGH VAPOR CONC CAN CAUSE IRRIT.SKIN:PRLNG/RPTD SKIN CONT CAN CAUSE IRRIT + DERMAT THROUGH DEFAT OF SKIN.INGESTION:SYMPTON INFORMATION IS INADEQUATE/ UNKNOWN. CONC IMMED DANGER TO HEALTH:OSHA/NIOSH:19,000 PPM

Carcinogenicity - NTP: NO

Carcinogenicity - IARC: NO

Carcinogenicity - OSHA: NO

Explanation Carcinogenicity: POSITIVE MUTAGEN(RTEC) (MFR).ETHANOL IS A SUSPECTED CARCINOGEN + TERATOGEN (NIOSH).(MFR)

Signs/Symptoms Of Overexp: ETHYL ETHER IS A MILD EYE + MUCOUS MEMBRANE IRRITANT, PRIMARY SKIN IRRITANT, + CENTRAL NERVOUS SYSTEM DEPRESSANT.ACUTE EXPOSURE CAN CAUSE ANESTHETIC EFFECTS SUCH AS VOMITING,EXCITEMENT, UNCONSCIOUSNESS, COMA, RESPIRATORY PARALYSIS, + DEATH.CHRONIC EXPOSURES MAY

PRODUCE CENTRAL NERVOUS SYSTEM DISTURBANCES.

Med Cond Aggravated By Exp: PRECLUDE FROM EXPOSURE THOSE INDIVIDUALS SUSCEPTIBLE TO DERMATITIS.

Emergency/First Aid Proc: INHAL:IMMED RMV TO FRESH AIR.IF NOT BRTHING, ADMIN MOUTH-TO-MOUTH RESCUE BRTHING.IF NO PULSE ADMIN CPR.CONT MD IMMED. EYE:RINSE W/COPIOUS AMT H*20 FOR AT LEAST 15 MIN.GET EMER MED ASST.SKIN:FL THOROUGH FOR AT LEAST 15 MIN.WASH AFFECT SKIN W/SOAP+H*20.RMV CONTAM CLTHG

+ SHOES.WASH CLTHG BFR RE-USE + DISCARD SHOES.GET EMER MED ASST.INGEST:CALL LCL POISON CONTROL CENTER FOR ASST.CONT MD IMMED(SUPP DAT)

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: PROT FROM IGN.WEAR PROT CLTHG + USE APVD RSPTR EQPT.ABSORB SPILL MATL IN AN ABSORB RECM FOR SOLVENT SPILL + RMV TO SAFE LOCATION FOR DISPOSAL BY APPROVED METHODS.IF RELEASED TO THE ENVIRONMENT, COMPLY W/ALL REGULATORY NOTIFICATION REQUIREMENTS.

Neutralizing Agent: N/K (FP N)

Waste Disposal Method: DISPOSAL MUST BE IN ACCORDANCE WITH FEDERAL, STATE + LOCAL REGULATIONS (FP N). DISPOSE OF ETHYL ETHER AS AN EPA HAZARDOUS WASTE. HAZARDOUS WASTE NUMBERS:U117 (IGNITABLE); D001 (IGNITABLE).

Precautions-Handling/Storing: ETHYL ETHER SHOULD BE PROT FR TEMP EXTM +

DIR SUNLIGHT.PROPER STORAGE OF ETHYL ETHER MUST BE DETERMINE BASED ON OTHER

MATL STORED + THEIR(SEE OT PREC)

Other Precautions: HAZ + POT CHEM INCOMPATIBILITY.IN GENL,ETHYL ETHER PERIOD CHECK FOR PEROXIDES IN STORE MATL + PRIOR TO USE,ESP BFR CONC OR HEAT.GND + BOND MET CNTNR TO MIN STATIC SPARKS

Control Measures

Respiratory Protection: USE NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN (FP N). USE APVD RSPTR EQPT. FOLLOW NIOSH + EQPT MANUFACTURERS RECM TO DETERMINE APPROPRIATE EQPT (AIR-PURIFYING,AIR-SUPPLIED, OR SELF CONTAINED BREATHING APPARATUS).
Ventilation: ADEQUATE VENT REQD TO PROT PERS FR EXPSR TO CHEM VAPORS EXCEED PEL + TO MIN FIRE HAZ.CHOICE OF VENT EQPT,LCL (SUPP DATA)
Protective Gloves: CHEM RESIST: NEOPRENE OR BUNA-N
Eye Protection: CHEM WORK GOGGLES,FACESHLD OPTIONAL FP N
Other Protective Equipment: EMERGENCY EYE WASH FOUNTAINS + SAFETY SHOWERS SHOULD BE AVAILABLE IN THE VICINITY OF ANY POTENTIAL EXPOSRE.PROT CLTHG.
Work Hygienic Practices: INDIVIDUALS WHO ARE ACUTELY + SPECIFICALLY SENSITIVE TO ETHYL ETHER MAY REQUIRE ADDITIONAL PROTECTIVE EQUIPMENT.
Suppl. Safety & Health Data: PH + CARC:FP N.HAZ POLY OCCUR:NOT EXPECTED TO OCCUR(MFR).FIRST AID:NEVER INDUCE VOMIT OR GIVE ANYTHING BY MOUTH TO VICTIM UNCON OR HAVING CONVULSIONS. VENTILATION:OR GENL, WILL DEPEND ON THE CONDITIONS OF USE, QUANTITY OF MATL, + OTHER OPERATE PARAMETERS.CONTAINER SIZE:5 LB CAN

Transportation Data

Trans Data Review Date: 84152	IATA PSN Code: JJB
DOT PSN Code: EYL	IATA UN ID Number: 1155
DOT Proper Shipping Name: DIETHYL ETHER OR ETHYL ETHER	IATA Proper Shipping Name: DIETHYL ETHER *
DOT Class: 3	IATA UN Class: 3
DOT ID Number: UN1155	IATA Label: FLAMMABLE LIQUID
DOT Pack Group: I	AFI PSN Code: JJB
DOT Label: FLAMMABLE LIQUID	AFI Prop. Shipping Name: DIETHYL ETHER OR ETHYL ETHER
IMO PSN Code: GXB	AFI Class: 3
IMO Proper Shipping Name: ETHYL ETHER	AFI ID Number: UN1155
IMO Regulations Page Number: SEE 3117	AFI Pack Group: I
IMO UN Number: 1155	AFI Label: FLAMMABLE LIQUID
IMO UN Class: 3.1	AFI Basic Pac Ref: 7-6
IMO Subsidiary Risk Label: -	

Disposal Data

Refer to applicable regional, state and federal codes.

Label Data

Special Hazard Precautions: MAY BE POISONOUS IF INHALED OR ABSORBED THROUGH SKIN. VAPORS MAY CAUSE DIZZINESS OR SUFFOCATION. CONTACT MAY IRRITATE OR BURN SKIN AND EYES. FIRE MAY PRODUCE IRRITATING OR POISONOUS GASES. RUNOFF FROM FIRE CONTROL OR DILUTION WATER MAY CAUSE POLLUTION.

Regulatory Data

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
<u>Ethyl ether</u>	60-29-7	100lb

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.