

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

MATERIAL SAFETY DATA SHEETS

Part Number/Trade Name: PETROLEUM ETHER This MSDS is valid for all grades and catalog numbers

This MSDS is valid for all grades and catalog numbers _____ === **General Information** _____ ____ Company's Name: PHARMCO PRODUCTS, Date MSDS Revised: Nishant-8/23/99 INC. Safety Data Review Date: 8/23/99 Company's Street: 58 VALE RD. Preparer's Company: PHARMCO PRODUCTS, Company's City: BROOKFIELD INC. Company's State: CT Preparer's St Or P. O. Box: 58 VALE RD. Company's Zip Code: 06804 Preparer's City: BROOKFIELD Company's Emerg Ph #: (203) 740-3471 Preparer's State: CT Company's Info Ph #: (203) 740-3471 Preparer's Zip Code: 06804 _____ ___ Ingredients/Identity Information _____ ___ Ingredient: BLEND OF MINERAL SPIRITS **OSHA PEL: NOT ESTABLISHED** Ingredient Sequence Number: 01 ACGIH TLV: NOT ESTABLISHED NIOSH (RTECS) Number: DE3030000 Other Recommended Limit: NONE SPECIFIED CAS Number: 8030-30-6 _____ ___ Physical/Chemical Characteristics _____ Appearance And Odor: COLORLESS TO Specific Gravity: 0.642 LIGHT YELLOW LIQUID, GASOLINE-LIKE Decomposition Temperature: UNKNOWN

LIGHT YELLOW LIQUID,GASOLINE-LIK ODOR Boiling Point: 95.0F,35.0C Melting Point: <163F,<73C Vapor Pressure (MM Hg/70 F): 100 Vapor Density (Air=1): 2.5 Decomposition Temperature: UNKNOWN Evaporation Rate And Ref: FAST,>1(BUT.ACET=1) Solubility In Water: NEGLIGIBLE Percent Volatiles By Volume: 100 Corrosion Rate (IPY): UNKNOWN

===

Fire and Explosion Hazard Data

=== Flash Point: -50F,-46C Lower Explosive Limit: 1.1 Upper Explosive Limit: 5.9

MSDS 148, Rev 2.0 12/18/01 JC Petroleum Ether/Page 1 of 7 Extinguishing Media: USE WATER FOG, CARBON DIOXIDE, FOAM, OR DRY CHEMICAL. Special Fire Fighting Proc: WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A FULL FACED SELF CONTAINED BREATHING APPARATUS. EVACUATE AREA. COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY. Unusual Fire And Expl Hazrds: CONFINED MATERIAL MAY EXPLODE UPON HEATING.

=== Reactivity Data	
==== Stability: YES Cond To Avoid (Stability): HIGH HEAT, OPEN FLAMES AND OTHER SOURCES OF IGNITION Materials To Avoid: STRONG OXIDIZING AGENTS	Hazardous Decomp Products: OXIDES OF CARBON Hazardous Poly Occur: NO Conditions To Avoid (Poly): NONE NOTED
=== Health Hazard Data	
LD50-LC50 Mixture: LDL0=50 MG/KG Route Of Entry - Inhalation: YES Route Of Entry - Skin: YES Route Of Entry - Ingestion: YES Health Haz Acute And Chronic: ACUTE:IRRITATIC HEADACHE,NAUSEA,COMA,DIARRHEA,BURN HEMORRHAGES INTO VITAL ORGANS. Carcinogenicity - NTP: NO Carcinogenicity - IARC: NO Carcinogenicity - OSHA: NO INTOXICATION,HEADACHE,NAUSEA COMA. I PULMONARY EDEMA,BURNING SENSATION. Emergency/First Aid Proc: INHALE:REMOVE TO NEED;EYES/SKIN:FLUSH W LG AMTS H*20 FC MEDICAL ATTENTION FOR EYES, BREATHING OVEREXPOSURE.	NING SENSATION.CHRONIC:MAY CAUSE NGESTION:NAUSEA,DIARRHEA,DROWSINESS; FRESH AIR, GIVE CPR/O*2 IF DR 15 MIN;INGEST:RINSE MOUTH; GET
=== Precautions for Safe Handling and Use	
======================================	NAL PROTECTION;ELIMINATE ALL UITABLE ABSORBENT MATERIAL AND D MATERIAL IN ACCORDANCE WITH RY AND WELL VENTILATED AREA. MES.
=== Control Measures	
======================================	VED RESPIRATOR FOR ORGANIC

Respiratory Protection: USE NIOSH/MSHA APPROVED RESPIRATOR FOR ORGANIC VAPORS/MIST IF ABOVE TLV.

Ventilation: PROVIDE MECHAN(GEN/LOCAL EXHAUST)VENT TO MAINTN <TLV Protective Gloves: NEOPRENE Eye Protection: SAFETY/CHEM GOGGLES Other Protective Equipment: FULL PROTECTIVE CLOTHING, SAFETY SHOWER, EYE WASH STATION Work Hygienic Practices: AVOID CONTACT WITH EYES AND SKIN; DO NOT USE CONTAMINATED CLOTHES.WASH AFTER EACH USE.DO NOT BREATHE VAPORS OR EAT OR SMO ______ === **Transportation Data** . ______ ____ Trans Data Review Date: 91286 IATA UN Class: 3 IATA Label: FLAMMABLE LIQUID DOT PSN Code: LLS DOT Proper Shipping Name: PETROLEUM AFI PSN Code: TKP SPIRIT AFI Prop. Shipping Name: PETROLEUM DOT Class: 3 SPIRIT AFI Class: 3 DOT ID Number: UN1271 AFI ID Number: UN1271 DOT Pack Group: II DOT Label: FLAMMABLE LIQUID AFI Pack Group: II IMO PSN Code: LML AFI Label: FLAMMABLE LIQUID IATA PSN Code: TKP AFI Basic Pac Ref: 7-7 IATA UN ID Number: 1271 Additional Trans Data: SHIPPING NAME PER IATA Proper Shipping Name: PETROLEUM MSDS DATED:8/81 SPIRIT _____ === **Disposal** Data _____ === Disposal Data Review Date: 88235 Rec # For This Disp Entry: 05 Tot Disp Entries Per NSN: 007 Landfill Ban Item: YES Disposal Supplemental Data: MSDS DATED:8/81 IN CASE OF ACCIDENTAL EXPOSURE OR DISCHARGE, CONSULT HEALTH AND SAFETY FILE FOR PRECAUTIONS. 1st EPA Haz Wst Code New: D001 1st EPA Haz Wst Name New: IGNITIBLE 1st EPA Haz Wst Char New: IGNITABILITY 1st EPA Acute Hazard New: NO === Label Data _____ === Label Required: P Technical Review Date: 13OCT91 Label Status: F Common Name: PETROLEUM ETHER Signal Word: DANGER! Acute Health Hazard-Moderate: X Contact Hazard-Moderate: X Fire Hazard-Severe: X

Reactivity Hazard-None: X

Special Hazard Precautions: FLAMMABLE MATERIAL; MAY BE IGNITED BY HEAT

SPARKS, HEAT OR FLAMES. MAY BE POISONOUS IF INHALED OR ABSORBED THROUGH SKIN. VAPORS MAY CAUSE HEADACHE, NAUSEA, 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.AVOID CONTACT WITH EYES AND SKIN.DO NOT BREATHE VAPORS/MIST.KEEP AWAY FROM HEAT, OPEN FLAMES AND SPARKS.FIRST AID:IF INGESTED OR INHALED, REMOVE TO FRESH AIR/CPR AND CONSULT A PHYSICIAN.FOR EYES AND SKIN,FLUSH WITH RUNNING WATER FOR ABOUT 15-20 MINUTES AND SEEK MEDICAL HELP IMMEDIATELY. Protect Eye: Y Protect Skin: Y Protect Respiratory: Y Label Name: PHARMCO PRODUCTS INC ... Label Street: 58 VALE ROAD Label City: BROOKFIELD Label State: CT Label Zip Code: 06804 Label Country: US Label Emergency Number: CHEMTREC 800-424-9300 _____ PHARMCO PRODUCTS INC. -- PETROLEUM ETHER - PETROLEUM ETHER, ACS MATERIAL SAFETY DATA SHEET FSC: 6810 NIIN: 002271307 Manufacturer's CAGE: 63415 Part No. Indicator: A Part Number/Trade Name: PETROLEUM ETHER _____ === General Information ___ Item Name: PETROLEUM ETHER, ACS Status: SM Date MSDS Prepared: 09OCT90 Company's Name: PHARMCO PRODUCTS Safety Data Review Date: 13OCT91 INC.. Company's Street: 58 VALE ROAD Supply Item Manager: CX Company's City: BROOKFIELD MSDS Preparer's Name: C.A. EISENHARD Company's State: CT MSDS Serial Number: BDKSW Company's Country: US Specification Number: O-C-265 Company's Zip Code: 06804 Hazard Characteristic Code: F2 Company's Emerg Ph #: CHEMTREC 800-424-Unit Of Issue: CN 9300 Unit Of Issue Container Qty: 5.0GL Company's Info Ph #: 203 740-3471 Type Of Container: CAN Record No. For Safety Entry: 007 Net Unit Weight: 27 POUNDS Tot Safety Entries This Stk#: 009 _____ === Ingredients/Identity Information ___ Ingredient: BLEND OF MINERAL SPIRITS **OSHA PEL: NOT ESTABLISHED** Ingredient Sequence Number: 01 ACGIH TLV: NOT ESTABLISHED NIOSH (RTECS) Number: DE3030000 Other Recommended Limit: NONE SPECIFIED CAS Number: 8030-30-6 ===

MSDS 148, Rev 2.0 12/18/01 JC Petroleum Ether/Page 4 of 7

Physical/Chemical Characteristics _____ Appearance And Odor: COLORLESS TO Specific Gravity: 0.642 LIGHT YELLOW LIQUID, GASOLINE-LIKE Decomposition Temperature: UNKNOWN Evaporation Rate And Ref: ODOR Boiling Point: 95.0F,35.0C FAST,>1(BUT.ACET=1) Solubility In Water: NEGLIGIBLE Melting Point: <163F,<73C Percent Volatiles By Volume: 100 Vapor Pressure (MM Hg/70 F): 100 Corrosion Rate (IPY): UNKNOWN Vapor Density (Air=1): 2.5 _____ _____ === Fire and Explosion Hazard Data _____ === Flash Point: -50F,-46C Lower Explosive Limit: 1.1 Upper Explosive Limit: 5.9 Extinguishing Media: USE WATER FOG, CARBON DIOXIDE, FOAM, OR DRY CHEMICAL. Special Fire Fighting Proc: WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A FULL FACED SELF CONTAINED BREATHING APPARATUS. EVACUATE AREA. COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY. Unusual Fire And Expl Hazrds: CONFINED MATERIAL MAY EXPLODE UPON HEATING. _____ === Reactivity Data === Stability: YES Hazardous Decomp Products: OXIDES OF Cond To Avoid (Stability): HIGH HEAT, CARBON OPEN FLAMES AND OTHER SOURCES OF Hazardous Poly Occur: NO Conditions To Avoid (Poly): NONE NOTED **IGNITION** Materials To Avoid: STRONG OXIDIZING AGENTS _____ === Health Hazard Data ______ Route Of Entry - Inhalation: YES Route Of Entry - Skin: YES Route Of Entry - Ingestion: YES Health Haz Acute And Chronic: ACUTE: IRRITATION OF EYES, SKIN; INTOXICATION HEADACHE,NAUSEA,COMA,DIARRHEA,BURNING SENSATION.CHRONIC:MAY CAUSE HEMORRHAGES INTO VITAL ORGANS. Carcinogenicity - NTP: NO Carcinogenicity - IARC: NO Carcinogenicity - OSHA: NO INTOXICATION, HEADACHE, NAUSEA COMA. INGESTION: NAUSEA, DIARRHEA, DROWSINESS; PULMONARY EDEMA, BURNING SENSATION. Emergency/First Aid Proc: INHALE:REMOVE TO FRESH AIR, GIVE CPR/O*2 IF NEED;EYES/SKIN:FLUSH W LG AMTS H*20 FOR 15 MIN;INGEST:RINSE MOUTH; GET MEDICAL ATTENTION FOR EYES, BREATHING DIFFICULTY, OR OTHER SYMPTOMS OF OVEREXPOSURE.

===

Precautions for Safe Handling and Use

=======================================	
Steps If Matl Released/Spill: USE PROPER PERSO IGNITION SOURCES; VENTILATE AREA; USE SU RECOVER	
FOR PROPER DISPOSAL.	D MATERIAL IN ACCORDANCE WITH
Waste Disposal Method: DISPOSE OF COLLECTE LOCAL, STATE AND FEDERAL REGULATIONS	
Precautions-Handling/Storing: STORE IN COOL DF KEEP AWAY FROM HEAT, SPARKS, OPEN FLA Other Precautions: USE CAUTION WHEN HANDL	MES.
=== Control Measures	
=== Descriptory Drotection, USE NIOSU/MSUA ADDD	AVED RESPIRATOR FOR ODCANIC
Respiratory Protection: USE NIOSH/MSHA APPRO VAPORS/MIST IF ABOVE TLV.	JVED RESPIRATOR FOR ORGANIC
Ventilation: PROVIDE MECHAN(GEN/LOCAL EX Protective Gloves: NEOPRENE	(HAUST)VENT TO MAINTN <tlv< td=""></tlv<>
Eye Protection: SAFETY/CHEM GOGGLES	
Other Protective Equipment: FULL PROTECTIVE (WASH STATION	CLOTHING, SAFETY SHOWER, EYE
Work Hygienic Practices: AVOID CONTACT WITH	
CONTAMINATED CLOTHES.WASH AFTER EAD	CH USE.DO NOT BREATHE VAPORS OR EAT
SMO	
=== Transportation Data	
=== Trans Data Review Date: 91286	IATA Proper Shipping Name: PETROLEUM
DOT PSN Code: LLS	SPIRIT
DOT Proper Shipping Name: PETROLEUM SPIRIT	IATA UN Class: 3 IATA Label: FLAMMABLE LIQUID
DOT Class: 3	AFI PSN Code: TKP
DOT ID Number: UN1271	AFI Prop. Shipping Name: PETROLEUM
DOT Pack Group: II	SPIRIT
DOT Label: FLÂMMABLE LIQUID	AFI Class: 3
IMO PSN Code: LML	AFI ID Number: UN1271
IATA PSN Code: TKP	AFI Pack Group: II
IATA UN ID Number: 1271	AFI Label: FLAMMABLE LIQUID AFI Basic Pac Ref: 7-7
=== Disposal Data	
======================================	
Landfill Ban Item: YES	N CASE OF A CODENTAL EXPOSURE
Disposal Supplemental Data: MSDS DATED:8/81 I OR DISCHARGE, CONSULT HEALTH AND SAF	
1st EPA Haz Wst Code New: D001	LITTILL FORTRECAUTIONS.
1st EPA Haz Wst Name New: IGNITIBLE	
1st EPA Haz Wst Char New: IGNITABILITY	
1st EPA Acute Hazard New: NO	

Label Data

____ Common Name: PETROLEUM ETHER Signal Word: DANGER! Acute Health Hazard-Moderate: X Contact Hazard-Moderate: X Fire Hazard-Severe: X Reactivity Hazard-None: X Special Hazard Precautions: FLAMMABLE MATERIAL; MAY BE IGNITED BY HEAT SPARKS, HEAT OR FLAMES. MAY BE POISONOUS IF INHALED OR ABSORBED THROUGH SKIN. VAPORS MAY CAUSE HEADACHE, NAUSEA, 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.AVOID CONTACT WITH EYES AND SKIN.DO NOT BREATHE VAPORS/MIST.KEEP AWAY FROM HEAT. OPEN FLAMES AND SPARKS.FIRST AID:IF INGESTED OR INHALED.REMOVE TO FRESH AIR/CPR AND CONSULT A PHYSICIAN.FOR EYES AND SKIN,FLUSH WITH RUNNING WATER FOR ABOUT 15-20 MINUTES AND SEEK MEDICAL HELP IMMEDIATELY. Protect Eye: Y Protect Skin: Y Protect Respiratory: Y

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.