



THE POWER OF THREE<sup>3</sup>  
**PHARMCO-AAPER**  
 AND COMMERCIAL ALCOHOLS

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

# MATERIAL SAFETY DATA SHEETS

Manufacturer: PHARMCO-AAPER  
 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

## TPM GLYCOL ETHER

**2. COMPOSITION/INFORMATION ON INGREDIENTS**  
 TRIPROPYLENE GLYCOL METHYL ETHER CAS# 025498-49-1 99%

**3. HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW

\*\*\*\*\*

\* COLORLESS LIQUID. SLIGHT ODOR. NO SIGNIFICANT IMMEDIATE HAZARDS \*  
 \* FOR EMERGENCY RESPONSE ARE KNOWN. \*

POTENTIAL HEALTH EFFECTS (SEE SECTION 11 FOR TOXICOLOGICAL DATA.)  
 EYE: MAY CAUSE SLIGHT TRANSIENT (TEMPORARY) EYE IRRITATION.

CORNEAL INJURY IS UNLIKELY.

SKIN: PROLONGED OR REPEATED EXPOSURE NOT LIKELY TO CAUSE SIGNIFICANT SKIN IRRITATION. A SINGLE PROLONGED EXPOSURE IS NOT LIKELY TO RESULT IN THE MATERIAL BEING ABSORBED THROUGH SKIN IN HARMFUL AMOUNTS. PROLONGED OR REPEATED EXPOSURE TO VERY LARGE AMOUNTS OF COMPONENT(S) IN THIS MIXTURE MAY CAUSE NARCOSIS (DROWSINESS).

INGESTION: SINGLE DOSE ORAL TOXICITY IS CONSIDERED TO BE LOW. SMALL AMOUNTS SWALLOWED INCIDENTAL TO NORMAL HANDLING OPERATIONS ARE NOT LIKELY TO CAUSE INJURY; SWALLOWING AMOUNTS LARGER THAN THAT MAY CAUSE INJURY.

INHALATION: SINGLE EXPOSURE TO VAPORS IS NOT LIKELY TO BE HAZARDOUS.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: SIGNS AND SYMPTOMS OF EXCESSIVE EXPOSURE MAY BE ANESTHETIC OR NARCOTIC EFFECTS. TERATOLOGY (BIRTH DEFECTS): BIRTH DEFECTS ARE UNLIKELY. EVEN EXPOSURES HAVING AN ADVERSE EFFECT ON THE MOTHER SHOULD HAVE NO EFFECT ON THE FETUS.

**4. FIRST AID**

EYES: FLUSH EYES WITH PLENTY OF WATER.  
 SKIN: WASH OFF IN FLOWING WATER OR SHOWER.

INGESTION: IF SWALLOWED, SEEK MEDICAL ATTENTION. DO NOT INDUCE VOMITING UNLESS DIRECTED TO DO SO BY MEDICAL PERSONNEL.  
INHALATION: REMOVE TO FRESH AIR IF EFFECTS OCCUR. CONSULT A PHYSICIAN.

NOTE TO PHYSICIAN: NO SPECIFIC ANTIDOTE. SUPPORTIVE CARE.  
TREATMENT BASED ON JUDGMENT OF THE PHYSICIAN IN RESPONSE TO REACTIONS OF THE PATIENT.

#### **5. FIRE FIGHTING MEASURES**

FLAMMABLE PROPERTIES

FLASH POINT: 232F, 111C

METHOD USED: SETAFLASH

AUTOIGNITION TEMPERATURE: 531F, 277C

FLAMMABILITY LIMITS

LFL: 1.5 VOL% @ 151C

UFL: 10.9 VOL% @ 151C

HAZARDOUS COMBUSTION PRODUCTS: DURING A FIRE, SMOKE MAY CONTAIN THE ORIGINAL MATERIAL IN ADDITION TO UNIDENTIFIED TOXIC AND/OR IRRITATING COMPOUNDS.

OTHER FLAMMABILITY INFORMATION: VIOLENT STEAM GENERATION OR ERUPTION MAY OCCUR UPON APPLICATION OF DIRECT WATER STREAM TO HOT LIQUIDS.

EXTINGUISHING MEDIA: WATER FOG OR FINE SPRAY, CARBON DIOXIDE, DRY CHEMICAL, FOAM. ALCOHOL RESISTANT FOAMS (ATC TYPE) ARE PREFERRED IF AVAILABLE. GENERAL PURPOSE SYNTHETIC FOAMS (INCLUDING AFFF) OR PROTEIN FOAMS MAY FUNCTION, BUT MUCH LESS EFFECTIVELY. DO NOT USE DIRECT WATER STREAM. WILL SPREAD FIRE.

MEDIA TO BE AVOIDED: DO NOT USE DIRECT WATER STREAM.

FIRE FIGHTING INSTRUCTIONS: KEEP PEOPLE AWAY. ISOLATE FIRE AREA AND DENY UNNECESSARY ENTRY. BURNING LIQUIDS MAY BE MOVED BY FLUSHING WITH WATER TO PROTECT PERSONNEL AND MINIMIZE PROPERTY DAMAGE. BURNING LIQUIDS MAY BE EXTINGUISHED BY DILUTION WITH WATER. DO NOT USE DIRECT WATER STREAM. MAY SPREAD FIRE.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: WEAR POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS (SCBA) AND PROTECTIVE FIRE FIGHTING CLOTHING (INCLUDES FIRE FIGHTING HELMET, COAT, PANTS, BOOTS, AND GLOVES). IF PROTECTIVE EQUIPMENT IS NOT AVAILABLE OR NOT USED, FIGHT FIRE FROM A PROTECTED LOCATION OR SAFE DISTANCE.

#### **6. ACCIDENTAL RELEASE MEASURES (SEE SECTION 15 FOR REGULATORY INFORMATION)**

PROTECT PEOPLE: CLEAR NON-EMERGENCY PERSONNEL FROM AREA.

PROTECT THE ENVIRONMENT: CONTAIN LIQUID TO PREVENT CONTAMINATION OF SOIL, SURFACE WATER OR GROUND WATER.

CLEANUP: SOAK UP WITH SUITABLE, NON-REACTIVE ABSORBENT MATERIAL. COLLECT INTO SUITABLE CONTAINERS FOR DISPOSAL.

#### **7. HANDLING AND STORAGE**

HANDLING: AVOID CONTACT WITH VAPORS FROM HEAD SPACE OF CONTAINERS.

STORAGE: TO AVOID UNCONTROLLED EMISSIONS VENT VAPOR FROM CONTAINER TO STORAGE TANK.

#### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

ENGINEERING CONTROLS: GOOD GENERAL VENTILATION SHOULD BE SUFFICIENT FOR MOST CONDITIONS. LOCAL EXHAUST VENTILATION MAY BE NECESSARY FOR SOME OPERATIONS.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: USE SAFETY GLASSES.

SKIN PROTECTION: WHEN PROLONGED OR FREQUENTLY REPEATED CONTACT COULD OCCUR, USE PROTECTIVE CLOTHING IMPERVIOUS TO THIS MATERIAL. SELECTION OF SPECIFIC ITEMS SUCH AS FACESHIELD, DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. ALL DISPOSAL METHODS MUST BE IN COMPLIANCE WITH ALL FEDERAL, STATE/PROVINCIAL AND LOCAL LAWS AND REGULATIONS. REGULATIONS MAY VARY IN DIFFERENT LOCATIONS. WASTE CHARACTERIZATIONS AND COMPLIANCE WITH APPLICABLE LAWS ARE THE RESPONSIBILITY SOLELY OF THE WASTE GENERATOR. THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (COMPOSITION/INFORMATION ON INGREDIENTS).

FOR UNUSED & UNCONTAMINATED PRODUCT, THE PREFERRED OPTIONS INCLUDE SENDING TO A LICENSED, PERMITTED: RECYCLER, RECLAIMER, INCINERATOR OR OTHER THERMAL DESTRUCTION DEVICE.

AS A SERVICE TO ITS CUSTOMERS, DOW CAN PROVIDE NAMES OF INFORMATION RESOURCES TO HELP IDENTIFY WASTE MANAGEMENT COMPANIES AND OTHER FACILITIES WHICH RECYCLE, REPROCESS OR MANAGE CHEMICALS OR PLASTICS, AND THAT MANAGE USED DRUMS. GLOVES, BOOTS, APRON, OR FULL-BODY SUIT WILL DEPEND ON OPERATION.

RESPIRATORY PROTECTION: NO RESPIRATORY PROTECTION SHOULD BE NEEDED.

EXPOSURE GUIDELINE: NONE ESTABLISHED.

#### **9. PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE: COLORLESS LIQUID.

ODOR: SLIGHT.

VAPOR PRESSURE: 0.02 MMHG @ 25C

VAPOR DENSITY: 7.15

BOILING POINT: 468F, 242C

SOLUBILITY IN WATER: COMPLETELY MISCIBLE.

SPECIFIC GRAVITY: .965 25/25C

VOLATILE ORGANIC COMPOUNDS (VOC) CONTENT: 965 G/L OR 8.03 LB/GAL

AS PER RULE 443.1 OF CALIFORNIA SCAQMD

#### **10. STABILITY AND REACTIVITY**

CHEMICAL STABILITY: STABLE UNDER RECOMMENDED STORAGE CONDITIONS. SEE STORAGE SECTION.

CONDITIONS TO AVOID: NONE KNOWN.

INCOMPATIBILITY WITH OTHER MATERIALS: AVOID CONTACT WITH OXIDIZING MATERIALS. AVOID CONTACT WITH METALS SUCH AS ALUMINUM.

HAZARDOUS DECOMPOSITION PRODUCTS: NONE KNOWN.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

#### **11. TOXICOLOGICAL INFORMATION (SEE SECTION 3 FOR POTENTIAL HEALTH**

EFFECTS. FOR DETAILED TOXICOLOGICAL DATA, WRITE OR CALL THE ADDRESS OR NON-EMERGENCY NUMBER SHOWN IN SECTION 1)

SKIN: THE LD50 FOR SKIN ABSORPTION IN RABBITS IS > 20 ML/KG.

INGESTION: THE ORAL LD50 FOR RATS IS 3200 MG/KG.

MUTAGENICITY: IN VITRO MUTAGENICITY STUDIES WERE NEGATIVE.

#### **12. ECOLOGICAL INFORMATION (FOR DETAILED ECOLOGICAL DATA, WRITE OR CALL**

THE ADDRESS OR NON-EMERGENCY NUMBER SHOWN IN SECTION 1)

##### **ENVIRONMENTAL FATE**

MOVEMENT & PARTITIONING: BIOCONCENTRATION POTENTIAL IS LOW (BCF LESS THAN 100 OR LOG POW LESS THAN 3). LOG OCTANOL/WATER PARTITION COEFFICIENT (LOG POW) IS ESTIMATED USING A STRUCTURAL FRAGMENT METHOD TO BE -0.20. POTENTIAL FOR MOBILITY IN SOIL IS VERY HIGH (KOC BETWEEN 0 AND 50). SOIL ORGANIC CARBON/WATER PARTITION COEFFICIENT (KOC) IS ESTIMATED TO BE 0.398. HENRY'S LAW CONSTANT (H) IS ESTIMATED TO BE <1.14E-08 ATM-M3/MOLE.

DEGRADATION & PERSISTENCE: MATERIAL IS READILY BIODEGRADABLE. PASSES OECD TEST(S) FOR READY BIODEGRADABILITY. 20-DAY BIOCHEMICAL OXYGEN DEMAND (BOD20) IS 1/08 P/P. 10-DAY BIOCHEMICAL OXYGEN DEMAND (BOD10) IS BELOW DETECTABLE LIMITS. 5-DAY BIOCHEMICAL OXYGEN DEMAND (BOD5) IS BELOW DETECTABLE LIMITS. THEORETICAL OXYGEN DEMAND (THOD) IS CALCULATED TO BE 2.09 P/P. BIODEGRADATION RATE MAY INCREASE IN SOIL AND/OR WATER WITH ACCLIMATION. BIODEGRADATION REACHED IN MANOMETRIC RESPIROMETRY TEST (OECD TEST NO. 301 F) AFTER 28 DAYS: 60%.

ECOTOXICOLOGY: MATERIAL IS PRACTICALLY NON-TOXIC TO AQUATIC ORGANISMS ON AN ACUTE BASIS (LC50 GREATER THAN 100 MG/L IN MOST SENSITIVE SPECIES). ACUTE LC50 FOR WATER FLEA (DAPHNIA MAGNA) IS GREATER THAN 10000 MG/L. ACUTE LC50 FOR FATHEAD MINNOW (PIMEPHALES PROMELAS) IS 11619 MG/L.

GLOVES, BOOTS, APRON, OR FULL-BODY SUIT WILL DEPEND ON OPERATION.

RESPIRATORY PROTECTION: NO RESPIRATORY PROTECTION SHOULD BE NEEDED.

EXPOSURE GUIDELINE: NONE ESTABLISHED.

#### **13. DISPOSAL CONSIDERATIONS (SEE SECTION 15 FOR REGULATORY INFORMATION)**

**14. TRANSPORT INFORMATION**

DEPARTMENT OF TRANSPORTATION (D.O.T.):

FOR DOT REGULATORY INFORMATION, IF REQUIRED, CONSULT TRANSPORTATION REGULATIONS, PRODUCT SHIPPING PAPERS, OR YOUR DOW REPRESENTATIVE.

CANADIAN TDG INFORMATION:

FOR TDG REGULATORY INFORMATION, IF REQUIRED, CONSULT TRANSPORTATION REGULATIONS, PRODUCT SHIPPING PAPERS, OR YOUR DOW REPRESENTATIVE.

**15. REGULATORY INFORMATION (NOT MEANT TO BE ALL-INCLUSIVE--SELECTED REGULATIONS REPRESENTED)**

NOTICE: THE INFORMATION HEREIN IS PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE AS OF THE EFFECTIVE DATE SHOWN ABOVE. HOWEVER, NO WARRANTY, EXPRESS OR IMPLIED IS GIVEN. REGULATORY REQUIREMENTS ARE SUBJECT TO CHANGE AND MAY DIFFER FROM ONE LOCATION TO ANOTHER; IT IS THE BUYER'S RESPONSIBILITY TO ENSURE THAT ITS ACTIVITIES COMPLY WITH FEDERAL, STATE OR PROVINCIAL, AND LOCAL LAWS. THE FOLLOWING SPECIFIC INFORMATION IS MADE FOR THE PURPOSE OF COMPLYING WITH NUMEROUS FEDERAL, STATE OR PROVINCIAL, AND LOCAL LAWS AND REGULATIONS. SEE OTHER SECTIONS FOR HEALTH AND SAFETY INFORMATION.

SARA HAZARD CATEGORY: THIS PRODUCT HAS BEEN REVIEWED ACCORDING TO THE EPA "HAZARD CATEGORIES" PROMULGATED UNDER SECTIONS 311 AND 312 OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 (SARA TITLE III) AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES:

AN IMMEDIATE HEALTH HAZARD

-----  
TOXIC SUBSTANCES CONTROL ACT (TSCA):

ALL INGREDIENTS ARE ON THE TSCA INVENTORY OR ARE NOT REQUIRED TO BE LISTED ON THE TSCA INVENTORY.

-----  
THE CAS NUMBER FOR TSCA IS 025498-49-1.

-----  
OSHA HAZARD COMMUNICATION STANDARD:

THIS PRODUCT IS A "HAZARDOUS CHEMICAL" AS DEFINED BY THE OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200.

-----  
CANADIAN REGULATIONS

=====

WHMIS INFORMATION: THE CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) CLASSIFICATION FOR THIS PRODUCT IS: THIS PRODUCT IS NOT A "CONTROLLED PRODUCT" UNDER WHMIS.

-----  
**16. OTHER INFORMATION**

HAZARD RATING SYSTEM:

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

HEALTH 0

FLAMMABILITY 1

REACTIVITY 0

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.