



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

MATERIAL SAFETY DATA SHEETS

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1. PRODUCT INFO

MSDS Number: DZ22345 MSDS Version: 010

PRODUCT NAME: GLYCOL ETHER DPM

MSDS NUMBER: DZ22345

2. COMPOSITION/INFORMATION ON INGREDIENTS

DIPROPYLENE GLYCOL MONOMETHYL ETHER CAS# 034590-94-8 99%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

* CLEAR, COLORLESS LIQUID. SLIGHT ETHER ODOR. COMBUSTIBLE. *

POTENTIAL HEALTH EFFECTS (SEE SECTION 11 FOR TOXICOLOGICAL DATA.)

EYE: MAY CAUSE SLIGHT TRANSIENT (TEMPORARY) EYE IRRITATION.

CORNEAL INJURY IS UNLIKELY.

SKIN: PROLONGED EXPOSURE NOT LIKELY TO CAUSE SIGNIFICANT SKIN

IRRITATION. PROLONGED SKIN CONTACT WITH VERY LARGE AMOUNTS

MAY CAUSE DROWSINESS.

INGESTION: SINGLE DOSE ORAL TOXICITY IS CONSIDERED TO BE EXTREME-

LY LOW. SMALL AMOUNTS SWALLOWED INCIDENTAL TO NORMAL HANDLING

OPERATIONS ARE NOT LIKELY TO CAUSE INJURY; SWALLOWING AMOUNTS LARGER THAN THAT MAY CAUSE INJURY.

INHALATION: EXCESSIVE EXPOSURE MAY CAUSE IRRITATION TO UPPER

RESPIRATORY TRACT. SIGNS AND SYMPTOMS OF EXCESSIVE EXPOSURE

MAY BE ANESTHETIC OR NARCOTIC EFFECTS.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: OBSERVATIONS IN ANIMALS

INCLUDE MINOR LIVER OR KIDNEY EFFECTS. SIGNS AND SYMPTOMS

OF EXCESSIVE EXPOSURE MAY BE ANESTHETIC OR NARCOTIC EFFECTS.

TERATOLOGY (BIRTH DEFECTS): BIRTH DEFECTS ARE UNLIKELY.

EXPOSURES HAVING NO ADVERSE EFFECTS ON THE MOTHER SHOULD

HAVE NO EFFECT ON THE FETUS.

4. FIRST AID

EYE: 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 NOT BREATHING, GIVE
ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, OXYGEN
SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. CALL A
PHYSICIAN OR TRANSPORT TO A MEDICAL FACILITY.
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: 175F, 79.4C

METHOD USED: TCC

AUTOIGNITION TEMPERATURE: NOT DETERMINED.

FLAMMABILITY LIMITS

LFL: 1.1 VOL% @ 100C

UFL: 14 VOL% @ 150C

HAZARDOUS COMBUSTION PRODUCTS: DURING A FIRE, SMOKE MAY CONTAIN
THE ORIGINAL MATERIAL IN ADDITION TO UNIDENTIFIED TOXIC AND/OR
IRRITATING COMPOUNDS. HAZARDOUS COMBUSTION PRODUCTS MAY INCLUDE
AND ARE NOT LIMITED TO: CARBON MONOXIDE, CARBON DIOXIDE.
OTHER FLAMMABILITY INFORMATION: VIOLENT STEAM GENERATION OR ERUP-
TION MAY OCCUR UPON APPLICATION OF DIRECT WATER STREAM TO HOT.
LIQUIDS. SPILLS OF THESE ORGANIC LIQUIDS ON HOT FIBROUS
INSULATIONS MAY LEAD TO LOWERING OF THE AUTOIGNITION
TEMPERATURES POSSIBLY RESULTING IN SPONTANEOUS COMBUSTION.
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.

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: ISOLATE AREA.

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

CLEANUP: CLEAN UP RESIDUAL WITH NON-COMBUSTIBLE ABSORBENT
MATERIAL AND WASH WITH WATER. COLLECT MATERIAL IN SUITABLE AND PROPERLY LABELED
OPEN CONTAINERS.

7. HANDLING AND STORAGE

HANDLING: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, CAN
CONTAIN VAPORS. DO NOT CUT, DRILL, GRIND, WELD, OR PERFORM SIMILAR OPERATIONS ON
OR NEAR EMPTY CONTAINERS.

STORAGE: STORE IN CARBON STEEL, STAINLESS STEEL, TEFLON.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: LOCAL EXHAUST VENTILATION MAY BE NECESSARY FOR SOME
OPERATIONS.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: USE SAFETY GLASSES. WHERE CONTACT WITH
THIS MATERIAL IS LIKELY, CHEMICAL GOGGLES ARE RECOMMENDED
BECAUSE EYE CONTACT MAY CAUSE DISCOMFORT EVEN THOUGH IT IS UNLIKELY TO CAUSE
INJURY.

SKIN PROTECTION: FOR BRIEF CONTACT, NO PRECAUTIONS OTHER THAN
CLEAN BODY-COVERING CLOTHING SHOULD BE NEEDED. USE GLOVES

IMPERVIOUS TO THIS MATERIAL WHEN PROLONGED OR FREQUENTLY REPEATED CONTACT COULD OCCUR.
RESPIRATORY PROTECTION: WHEN AIRBORNE EXPOSURE GUIDELINES AND/OR COMFORT LEVELS MAY BE EXCEEDED, USE AN APPROVED AIR-PURIFYING RESPIRATOR.

EXPOSURE GUIDELINES: DIPROPYLENE GLYCOL METHYL ETHER: ACGIH TLV AND OSHA PEL ARE 100 PPM TWA, 150 PPM STEL. PELS ARE IN ACCORD WITH THOSE RECOMMENDED BY OSHA, AS IN THE 1989 REVISION OF PELS.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: CLEAR, COLORLESS LIQUID

ODOR: SLIGHT ETHER.

VAPOR PRESSURE: 0.41 MMHG @ 25C

VAPOR DENSITY: 5.14

BOILING POINT: 374F, 190C

SOLUBILITY IN WATER: INFINITELY

SPECIFIC GRAVITY: 0.951 @ 25/25C

VOLATILE ORGANIC COMPOUNDS (VOC) CONTENT: 951 G/L OR 7.91 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: AVOID STATIC DISCHARGE. FLAMMABLE VAPORS CAN BE RELEASED AT ELEVATED TEMPERATURES.

INCOMPATIBILITY WITH OTHER MATERIALS: AVOID CONTACT WITH OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION PRODUCTS: DOES NOT NORMALLY DECOMPOSE.

HAZARDOUS DECOMPOSITION PRODUCTS DEPEND UPON TEMPERATURE, AIR SUPPLY AND THE PRESENCE OF OTHER MATERIALS.

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 5.4 ML/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 THE POMONA-MED CHEM STRUCTURAL FRAGMENT METHOD TO BE -0.064.

DEGRADATION & PERSISTENCE: MATERIAL IS READILY BIODEGRADABLE.

PASSES OECD TEST(S) FOR READY BIODEGRADABILITY. MATERIAL IS ULTIMATELY BIODEGRADABLE. REACHES MORE THAN 70% MINERALIZATION

IN OECD TEST(S) FOR INHERENT BIODEGRADABILITY. BIODEGRADATION UNDER AEROBIC STATIC LABORATORY CONDITIONS IS MODERATE (BOD20 OR BOD28/THOD BETWEEN 10 AND 40%). BIODEGRADATION RATE MAY INCREASE IN SOIL AND/OR WATER WITH ACCLIMATION.

20-DAY BIOCHEMICAL OXYGEN DEMAND (BOD20) IS 0.65 P/P.

DEGRADATION IS EXPECTED IN THE ATMOSPHERIC ENVIRONMENT WITHIN MINUTES TO HOURS.

BIODEGRADATION REACHED IN CO2 EVOLUTION TEST (MODIFIED STURM TEST, OECD TEST NO. 301 B) AFTER 28 DAYS: 34%.

BIODEGRADATION REACHED IN MODIFIED OECD SCREENING TEST (OECD TEST NO. 301 E) AFTER 28 DAYS: 72.9%.

ECOTOXICITY: 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 EMERALD SHINER (NOTROPIS ATERINOIDES) IS GREATER THAN 150 MG/L.

ACUTE LC50 FOR FATHEAD MINNOW (PIMEPHALES PROMELAS) IS GREATER THAN 10000 MG/L.

ACUTE LC50 FOR WATER FLEA (DAPHNIA MAGNA) IS 1919 MG/L.

ACUTE LC50 FOR BROWN SHRIMP (CRANGON CRANGON) IS GREATER THAN

1000 MG/L.

THE 21 DAY NO-OBSERVED EFFECT CONCENTRATION LEVEL (NOEC) (REPRODUCTION) FOR WATER FLEA (DAPHNIA MAGNA) IS >0.5 MG/L.
GROWTH INHIBITION THRESHOLD IN BACTERIA IS 4168 MG/L.

13. DISPOSAL CONSIDERATIONS

(SEE SECTION 15 FOR REGULATORY INFORMATION)

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 VENDOR 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.

14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (D.O.T.): FOR DOT REGULATORY INFORMATION, IF REQUIRED, CONSULT TRANSPORTATION REGULATIONS, PRODUCT SHIPPING PAPERS, OR YOUR VENDOR REPRESENTATIVE.
CANADIAN TDG INFORMATION: FOR TDG REGULATORY INFORMATION, IF REQUIRED, CONSULT TRANSPORTATION REGULATIONS, PRODUCT SHIPPING PAPERS, OR YOUR VENDOR 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 313 INFORMATION: TO THE BEST OF OUR KNOWLEDGE, THIS PRODUCT CONTAINS NO CHEMICAL SUBJECT TO SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION REQUIREMENTS.

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
A FIRE 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 034590-94-8

STATE RIGHT-TO-KNOW: THIS PRODUCT IS NOT KNOWN TO CONTAIN ANY SUBSTANCES SUBJECT TO THE DISCLOSURE REQUIREMENTS OF
NEW JERSEY
PENNSYLVANIA

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

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:
HEALTH 0
FLAMMABILITY 2

REACTIVITY 0

CANADIAN REGULATIONS

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WHMIS INFORMATION: THE CANADIAN WORKPLACE HAZARDOUS MATERIALS
INFORMATION SYSTEM (WHMIS) CLASSIFICATION FOR THIS PRODUCT IS:
B3 - COMBUSTIBLE LIQUID WITH A FLASH POINT BETWEEN 37.8C AND 93.3C
REFER ELSEWHERE IN THE MSDS FOR SPECIFIC WARNINGS AND
SAFE HANDLING INFORMATION. REFER TO THE EMPLOYER'S
WORKPLACE EDUCATION PROGRAM.

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CPR STATEMENT: THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE
HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS (CPR)
AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

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HAZARDOUS PRODUCTS ACT INFORMATION: THIS PRODUCT CONTAINS THE FOLLOWING
INGREDIENTS WHICH ARE CONTROLLED PRODUCTS AND/OR ON THE INGREDIENT
DISCLOSURE LIST (CANADIAN HPA SECTION 13 AND 14):
COMPONENTS: CAS # AMOUNT(%W/W)
DIPROPYLENE GLYCOL MONOMETHYL ETHER 034590-94-8 99%

16. OTHER INFORMATION

MSDS STATUS: REVISED SECTION 15.
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:
HEALTH 0
FLAMMABILITY 2
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.