DPM 2461 Dated 2/8/82

DPM2461

Ashland Chemical Company

DIVISION OF ASHLAND OIL, INC.

P.O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333

MATERIAL SAFETY DATA SHEET

003026 **GLYCOL ETHER PM**

ACCEPTED BY O.S.H.A. AS ESSENTIALLY SIMILIAR TO O.S.H.A. FORM 20

24-HOUR EMERGENCY TELEPHONE: 606-324-1133 (LOCATED AT ASHLAND, KENTUCKY)

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ASHLAND PRODUCT NAME: GLYCOL ETHER PM

MCDONALD DOUGLAS CORP.
P.O.BOX 2731
LONG BEACH CA 90801

ATTN: PURCHASING/SAFETY DEPT.

05 50 033 5754560-
DATA SHEET NO: 0000788-002
LATEST REVISION DATE: 12/81-81350
PRODUCT: 3989300
INVOICE: 640240
INVOICE DATE: 08/19/82
TO: MCDONALD DOUGLAS
GATE #5
2900 E. COVER ROAD
LONG BEACH CA 90846

SECTION I-PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: GLYCOL ETHER

HAZARD CLASSIFICATION: (03) FLAMMABLE LIQUID (173.115)

SECTION II-HAZARDOUS COMPONENTS

INGREDIENT	PERCENT	PEL	*
PROPYLENE GLYCOL MONOMETHYL ETHER	>95 %		(1)

(1): ACGIH RECOMMENDS A TLV OF 100 PPM.

SECTION III-PHYSICAL DATA

PROPERTY	REFINEMENT	MEASUREMENT
INITIAL BOILING POINT	FOR PRODUCT	250.00 DEG F (121.11 DEG C) @ 760.00 MMHG
VAPOR PRESSURE	FOR PRODUCT	8.00 MMHG @ 68.00 DEG F (20.00 DEG C)
VAPOR DENSITY	AIR = 1	3.1
SPECIFIC GRAVITY		.923 @ 68.00 DEG F (20.00 DEG C)
PERCENT VOLATILES		100.00 %
EVAPORATION RATE	(BU AC = 1)	.83

SECTION IV-FIRE AND EXPLOSION DATA

FLASH POINT(CLOSED CUP) 73-100 DEG F
(23-38 DEG C)

LOWER EXPLOSIVE LIMIT (PRODUCT) 2.4 %

EXTINGUISHING MEDIA: ALCOHOL FOAM OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

SPECIAL FIREFIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.

UNUSUAL FIRE & EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.
NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

SECTION V-HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL: 100 PPM
(SKIN)

EFFECTS OF OVEREXPOSURE: FOR PRODUCT

EYES - CAN CAUSE IRRITATION.
SKIN - CAN CAUSE SLIGHT IRRITATION.
CAN BE ABSORBED IN TOXIC AMOUNTS, ESPECIALLY FROM PROLONGED OR REPEATED EXPOSURE.
BREATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, POSSIBLE UNCONSCIOUSNESS, AND EVEN ASPHYXIATION.
SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, DIARRHEA.

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SECTION V-HEALTH HAZARD DATA (CONTINUED)

FIRST AID:

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION.

IF SWALLOWED: GIVE TWO GLASSES OF WATER; INDUCE VOMITING IMMEDIATELY BY STICKING FINGER DOWN THROAT. CALL A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

SECTION VI-REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CANNOT OCCUR
STABILITY: STABLE

INCOMPATABILITY: AVOID CONTACT WITH:, STRONG OXIDIZING AGENTS.

SECTION VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD. VENTILATE AREA.

LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.

WASTE DISPOSAL METHOD:

SMALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DISPOSE OF REMAINING MATERIAL IN ACCORDANCE WITH APPLICABLE REGULATIONS.

LARGE SPILL: DESTROY BY LIQUID INCINERATION. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MSHA JOINTLY APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, BUNA-N

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.

OVEREXPOSURE TO MATERIAL HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS:, LIVER ABNORMALITIES, KIDNEY DAMAGE

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH ASHLAND OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

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MATERIAL SAFETY DATA SHEET

DEFINITIONS

THIS DEFINITION PAGE IS INTENDED FOR USE WITH MATERIAL SAFETY DATA SHEETS SUPPLIED BY THE ASHLAND CHEMICAL COMPANY. QUESTIONS CONCERNING THESE SHEETS SHOULD BE DIRECTED TO THE ENVIRONMENTAL AND OCCUPATIONAL SAFETY DEPARTMENT.

SECTION I
PRODUCT IDENTIFICATION

PRODUCT CLASS: GENERAL OR GENERIC IDENTIFICATION.

HAZARDOUS CLASSIFICATION: PRODUCT MEETS DOT CRITERIA FOR HAZARDS LISTED.

SECTION II
HAZARDOUS COMPONENTS

A HAZARDOUS INGREDIENT IS ONE WHICH MEETS ONE OR MORE OF THE FOLLOWING CRITERIA:

1. IT IS LISTED IN THE ANNUAL REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, OR IT IS KNOWN TO BE TOXIC WITHIN THE PARAMETERS OF THAT REGISTRY.

AND/OR

2. IT HAS A OSHA ESTABLISHED, 8-HOUR TIME-WEIGHTED AVERAGE PERMISSABLE EXPOSURE LIMIT (PEL) OR ACCEPTABLE CEILING (C), OR AN AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS' (ACGIH) THRESHOLD LIMIT VALUE, AND BY NATURE OF THE PRODUCT OR ITS KNOWN USE, IT IS LIKELY TO BECOME AIRBORNE.

AND/OR

3. IT CONTRIBUTES TO ONE OR MORE OF THE FOLLOWING HAZARDS OF THE PRODUCT:

   A. FLASHPOINT BELLOW 200 DEG F (CC), OR SUBJECT TO SPONTANEOUS HEATING OR DECOMPOSITION.

   B. CAUSES SKIN BURNS. (DOT)

   C. STRONG OXIDIZING AGENT. (DOT)

   D. SUBJECT TO HAZARDOUS POLYMERIZATION.

EACH INGREDIENT MEETING ONE OR MORE OF THE ABOVE CRITERIA IS LISTED IN SECTION II IF PRESENT AT A LEVEL AT LEAST GREATER THAN ONE PERCENT. INGREDIENTS WHICH ARE CLAIMED TO BE CARCINOGENS, TERATOGENS, MUTAGENS, OR CAUSATIVE AGENTS OF OTHER REPRODUCTIVE DISORDERS ARE LISTED IF KNOWN OR BELIEVED TO BE PRESENT, PROVIDED THAT THE DATA SUPPORTING SUCH CLAIMS IS CONSIDERED VALID.

EACH HAZARDOUS INGREDIENT IS LISTED BY CHEMICAL, GENERIC, OR PROPRIETARY NAME. ITS LEVEL IN THE PRODUCT IS EXPRESSED AS 1% OR LESS, 1-10%, 10-30%, 30-60%, OR GREATER THAN 60%, OR BY OTHER MEANS.

SECTION III
PHYSICAL DATA

INITIAL BOILING POINT: IF LIQUID AT 68 DEG F.

VAPOR PRESSURE: IF LIQUID AT 68 DEG F OR WHICH SUBLIMES.

VAPOR DENSITY: FOR VOLATILE PORTION OF PRODUCT.

SPECIFIC GRAVITY: IF SPECIFIC GRAVITY OF PRODUCT IS NOT KNOWN, INDICATED AS <1, =1, OR >1.

PERCENT VOLATILES: PERCENTAGE OF MATERIAL WITH INITIAL BOILING POINT BELOW 425 DEG F.

EVAPORATION RATE: INDICATED AS FASTER OR SLOWER THAN ETHYL ETHER, UNLESS STATED.

SECTION IV
PRODUCT IDENTIFICATION

FLASH POINT: CLOSED CUP.

LOWER EXPLOSION LIMIT: INDICATED FOR COMPONENT WITH LOWEST VALUE.

HAZARDOUS DECOMPOSITION PRODUCTS: KNOWN HAZARDOUS PRODUCTS RESULTING FROM HEATING, BURNING, ETC., OR REACTED RAW MATERIALS WHICH MAY ARISE THROUGH HEATING, BURNING, ETC.

SPECIAL FIREFIGHTING PROCEDURES: INDICATES EQUIPMENT TO PROTECT FIREMEN FROM TOXIC PROCEDURES OF COMBUSTION OR IF WATER IS NOT TO BE USED.

UNUSUAL FIRE AND EXPLOSION HAZARDS: HAZARDS NOT COVERED BY OTHER SECTIONS OF THIS REPORT ARE SHOWN HERE.

SECTION V
HEALTH HAZARD DATA

RECIPIENTS OF THIS DATA SHEET SHOULD CONSULT THE OSHA SAFETY AND HEALTH STANDARDS (29 CFR 1910), PARTICULARLY SUBPART G - OCCUPATIONAL HEALTH AND ENVIRONMENTAL CONTROL, AND SUBPART I - PERSONAL PROTECTIVE EQUIPMENT, FOR GENERAL GUIDANCE ON CONTROL OF POTENTIAL OCCUPATIONAL HEALTH HAZARDS.

PERMISSIBLE EXPOSURE LEVEL: OSHA ESTABLISHED PEL--IF NONE AVAILABLE, ADOPTED VALUE.

EFFECTS OF OVEREXPOSURE: GIVEN IN GENERAL TERMS, LOCAL AND SYSTEMIC EFFECTS TO THE EYES, SKIN, IF MATERIAL IS INHALED, UNLESS NOT APPLICABLE DUE TO PHYSICAL FORM OF PRODUCT.

SECTION VI
REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CONDITIONS TO AVOID HAZARDOUS POLYMERIZATION RESULTING IN A LARGE RELEASE OF ENERGY.

STABILITY: CONDITIONS TO AVOID IF UNSTABLE UNDER NORMAL CIRCUMSTANCES.

INCOMPATIBILITY: MATERIALS TO AVOID.

SECTION VII
SPILL OR LEAK PROCEDURES

REASONABLE PRECAUTIONS TO BE TAKEN AND THE METHODS OF CLEAN-UP TO BE USED IN THE EVENT OF SPILLAGE OF THE PRODUCT. CONSULT FEDERAL, STATE AND LOCAL REGULATIONS FOR ACCEPTED PROCEDURES AND ANY REPORTING OR NOTIFICATION REQUIREMENTS.

SECTION VIII
PROTECTIVE EQUIPMENT TO BE USED

THIS SECTION INDICATES PROTECTIVE EQIUPMENT TO BE USED WHEN HANDLING THE PRODUCT.

SECTION IX
SPECIAL PRECAUTIONS OR OTHER COMMENTS

THIS SECTION IS TO COVER ANY RELEVANT POINTS NOT PREVIOUSLY MENTIONED.

ADDITIONAL COMMENTS

ASHLAND WISHES TO INFORM YOU THAT SERIOUS ACCIDENTS HAVE RESULTED FROM THE MISUSE OF "EMPTIED" CONTAINERS (DRUMS, 1 AND 5 GALLON PAILS, ETC.). REFER TO SECTIONS IV AND IX.

WE RECOMMEND THAT CONTAINERS BE EITHER PROFESSIONALLY RECONDITIONED FOR REUSE BY CERTIFIED FIRMS OR PROPERLY DISPOSED OF BY CERTIFIED FIRMS TO HELP REDUCE THE POSSIBILITY OF AN ACCIDENT. DISPOSAL OF CONTAINERS SHOULD BE IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS. "EMPTY" DRUMS SHOULD NOT BE GIVEN TO INDIVIDUALS.