

DOW CHEMICAL CO -- ETHYLENE GLYCOL, REGULAR GRADE, 30478 -- 6810-00-006-4206

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Product Identification
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Product ID:ETHYLENE GLYCOL, REGULAR GRADE, 30478

MSDS Date:04/10/2000

FSC:6810

NIIN:00-006-4206

MSDS Number: CKJXH

=== Responsible Party ===

Company Name:DOW CHEMICAL CO

Address:100 LARKIN CENTER

City:MIDLAND

State:MI

ZIP:48674

Country:US

Info Phone Num:800-258-2436

Emergency Phone Num:

517-636-4400

Resp. Party Other MSDS Num.:000597

CAGE:96717

=== Contractor Identification ===

Company Name:AMJAY CORP. DBA AMJAY CHEMICALS

Address:11200 WESTHEIMER SUITE 310

Box:218786

City:HOUSTON

State:TX

ZIP:77218-8786

Country:US

Phone:713-492-2000

Contract Num:DLA450-93-C-1057

CAGE:64184

Company Name:DOW CHEMICAL CO

Address:100 LARKIN CENTER

Box:City:MIDLAND

State:MI

ZIP:48674

Country:US

Phone:800-258-2436

CAGE:96717

Company Name:DOW CHEMICAL U S A ENGINEERING AND METAL PRODUCTS DEPT

Address:

2020 DOW CENTER
Box:City:MIDLAND
State:MI
ZIP:48674
Country:US
Phone:517-636-1000
CAGE:2B819
Company Name:DOW CHEMICAL U.S.A.
City:MIDLAND
State:MI
ZIP:48674
Country:US
Phone:517-636-4400
CAGE:71983
Company Name:DOW CHEMICAL USA
Address:3501 JAMBOREE RD SUITE 4100
Box:City:NEWPORT BEACH
State:CA
ZIP:92660
Country:US
Phone:714-509-2836
CAGE:01LX5

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===== Composition/Information on Ingredients =====

Ingred Name:ETHYLENE GLYCOL
CAS:107-21-1
RTECS #:KW2975000
> Wt:99.
ACGIH STEL
:C127 MG/M3;C50 PPM
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

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===== Hazards Identification =====

LD50 LC50 Mixture:ORAL (RAT) LD50= 6,000-13,000 MG/KG.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:EYES: IRRITATION. SKIN: NONIRRITATING.
EXPOSURE TO LARGE QUANTITIES MAY RESULT IN ABSORPTION OF HARMFUL
AMOUNTS. CONTACT WITH DAMAGED SKIN OR MATERIAL SUFFICIENTLY HOT T

O

BURN SKIN MAY RESULT IN ABSORPTION OF LETHAL AMOUNT. INHALATION: VAPOR EXPOSURE AT ROOM TEMPERATURE IS MINIMAL; AT HIGHER TEMPERATURE, VAPOR LEVEL MAY CAUSE ADVERSE EFFECTS, INCLUDING IRRITATION OF UPPER RESPIRATORY TRACT. INGESTION: SINGLE DOSE ORAL TOXICITY IS CONSIDERED MODERATE. EXCESSIVE EXPOSURE MAY CAUSE CNS EFFECTS, CARDIOPULMONARY EFFECTS, KIDNEY FAILURE. SMALL AMOUNTS SWALLOWED NOT LIKELY TO CAUSE INJURY; LARGER AMOUNT MAY CAUSE SERIOUS INJURY, EVEN

DEATH.

Explanation of Carcinogenicity:ETHYLENE GLYCOL DID NOT CAUSE CANCER IN LONG-TERM ANIMAL STUDIES.

Effects of Overexposure:EYES: IRRITATION. SKIN: IRRITATION, ABSORPTION OF HARMFUL OR LETHAL AMOUNTS. INHALATION: ADVERSE EFFECTS, IRRITATION OF UPPER RESPIRATORY TRACT. INGESTION: CENTRAL NERVOUS SYSTEM EFFECTS, CARDIOPULMONARY EFFECTS (METABOLIC ACIDOSIS), KIDNEY FAILURE, DEATH.

===== First Aid Measures =====

First Aid:EYES: FLUSH

WITH PLENTY OF WATER. SKIN: WASH OFF IN FLOWING WATER. INGESTION: IF SWALLOWED, INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CONSULT MEDICAL PERSONNEL. INHALATION: MOVE TO FRESH AIR IF EFFECTS OCCUR. CONSULT A PHYSICIAN. NOTE TO PHYSICIAN: EARLY ADMINISTRATION OF ETHANOL MAY COUNTER TOXIC EFFECTS OF ETHYLENE GLYCOL , METABOLIC ACIDOSIS AND RENAL DAMAGE. HEMODIALYSIS OR PERITONEAL DIALYSIS HAVE BENEFIT.

===== Fire Fighting Measures =====

Flash Point Method:SCC

Flash Point:=119.4C, 247.F

Autoignition Temp:=397.8C, 748.F

Lower Limits:3.2

Upper Limits:ND

Extinguishing Media:WATER FOG, FINE SPRAY, CARBON DIOXIDE, DRY CHEMICAL, FOAM. ALCOHOL RESISTANT FOAMS (ATC TYPE) PREFERRED. GENERAL PURPOSE SYNTHETIC FOAMS (INCLUDING AFFF) OR PROTEIN FOAMS.

Fire Fighting Procedures:DO NOT USE DIRECT WATER STREAM. WILL SPREAD FIRE. WEAR POSITIVE-PRES

SURE, SELF-CONTAINED BREATHING APPARATUS (SCBA) AND PROTECTIVE FIRE FIGHTING CLOTHING (INCLUDES FIRE-FIGHTING HELMET, COAT, PANTS, B OOTS AND GLOVES). IF PROTECTIVE EQUIPMENT IS NOT AVAILABLE OR NOT USED, FIGHT FIRE FROM A PROTECTED OR SAFE DISTANCE.

Unusual Fire/Explosion Hazard:VIOLENT STEAM GENERATION, ERUPTION MAY OCCUR UPON APPLICATION OF DIRECT WATER STREAM. FLAMMABLE CONCENTRATION OF VAPOR CAN ACCUMULATE AT TEMPERATURES ABOVE 247 F. SPILLS OF THESE ORGANIC LIQUIDS ON HO T FIBROUS INSULATIONS MAY LEAD TO LOWERING OF THE AUTOIGNITION TEMERATURES POSSIBLY RESULTING IN SPONTANEOUS COMBUSTION.

===== Accidental Release Measures =====

Spill Release Procedures:PROTECT PEOPLE: CLEAR NON-EMERGENCY PERSONNEL FROM AREA. PROTECT THE ENVIRONMEMT: CONTAIN MATERIAL TO PREVENT CONTAMINATION OF SOIL, SURFACE WATER OR GROUND WATER. CLEANUP: SMALL SPILLS: ABSORB WITH M ATERIALS SUCH AS; CAT LITTER, SAND, SAWDUST, VERM ICLITE AND ZORB-ALL OR HAZORB. LARGE SPILLS: DIKE AND PUMP INTO SUITABLE AND PROPERLY LABELED CONTAINERS.

===== Handling and Storage =====

Handling and Storage Precautions:ACCUMULATION OF PRODUCT ON SURFACES CAN CAUSE SLIPPERY CONDITIONS WHEN WET. KEEP OUT OF REACH OF CHILDREN. PRODUCT MAY BECOME A SOLID AT TEMPERATURES BELOW 8F.DO NOT STORE NEAR FOOD, FOODSTUFFS, DRUGS , POTABLE SUPPLIES. FOR MORE STORAGE / HANDLING INFORMATION REFER TO " A GUIDE TO GLYCOLS" BULLENTIN.

Other Precautions:TOXIC FUMES ARE RELEASED IN FIRE SITUATIONS. DISPOSAL REGULATIONS MAY VARY IN DIFFERENT LOCATIONS. WASTE CHARACTERIZATION AND COMPLIANCE WITH APPLICABLE LAWS ARE THE RESPONSIBILITY SOLELY OF THE WAST E GENERATOR. FOR FURTHER INFORMATION CONTACT DOW'S INFORMATION CENTER AT 800-258-2436 OR 517-832-155 6.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:ATMOSPHERIC LEVELS SHOULD BE MAIN

TAINED BELOW

THE EXPOSURE GUIDELINE. FOR MOST CONDITIONS, NO RESPIRATORY PROTECTION SHOULD BE NEEDED; HOWEVER, IF MATERIAL IS HEATED OR SPRAYED, USE AN APPROVED AIR-PURIFYING RESPIRATOR.

Ventilation: PROVIDE GENERAL OR LOCAL EXHAUST VENTILATION TO CONTROL AIRBORNE LEVELS BELOW EXPOSURE GUIDELINES. LOCAL EXHAUST MAY BE NECESSARY FOR SOME OPERATIONS.

Protective Gloves: IMPERVIOUS GLOVES.

Eye Protection: SAFETY GLASSES. IF EXPOSURE CAUSES EYE DISCOMFORT, USE A FULL-FACE RESPIRATOR.

Other Protective Equipment: WHEN PROLONGED OR REPEATED CONTACT COULD OCCUR, USE PROTECTIVE CLOTHING IMPERVIOUS TO MATERIAL. SELECTION OF ITEMS SUCH AS FACESHIELD, GLOVES, BOOTS, APRON, OR FULL-BODYSUIT WILL DEPEND ON OPERATIONS.

Supplemental Safety and Health

===== Physical/Chemical Properties =====

HCC: V5

Boiling Pt: =197.3C, 387.1F

Vapor Pres: 0.12 MMHG @ 25C

Vapor Density: 2.14

Spec Gravity: 1.115 @ 20/20C

Solubility in Water: COMPLETELY MISCIBLE.

Appearance and Odor: COLORLESS LIQUID, SLIGHT ODOR.

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid: YES

AVOID CONTACT WITH OXIDIZING MATERIALS SUCH AS NITRIC ACID. AVOID CONTACT WITH ACIDS, BASES, STRONG ACIDS, STRONG BASES, STRONG OXIDIZERS.

Stability Condition to Avoid: AVOID TEMPERATURES BELOW 8F, -13C. AVOID TEMPERATURES ABOVE 775F, 413C. PRODUCT CAN DECOMPOSE AT ELEVATED TEMPERATURES. STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

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

Conditions to Avoid Polymerization: WILL NOT OCCUR.

===== Toxicological Information =====

Toxicological Information: FOR DETAILED TOXICOLOGICAL DATA, CALL THE ADDRESS OR NON-EMERGENCY NUMBER 800-258-2436. SKIN: THE DERMAL LD50 HAS NOT BEEN DETERMINED. INGESTION: THE LETHAL DOSE IN HUMANS IS ESTIMATED TO

BE 3 OZ. OR 1 00 ML. THE ORAL LD50 FOR RATS IS BETWEEN 6000-13000 MG/KG. MUTAGENICITY (THE EFFECTS ON GENETIC MATERIAL): IN VITRO MUTAGENICITY STUDIES WERE NEGATIVE. STUDIES WERE NEGATIVE. ANIMAL MUTAGENICITY STUDI ES WERE NEGATIVE.

===== Ecological Information =====

Ecological:(FOR DETAILED ECOLOGICAL DATA, WRITE OR CALL DOW CHEMICAL CO, MIDLAND, MI 48674, 800-258-2436. ENVIRONMENTAL FATE: MOVEMENT & PARTITIONING: BIOCONCENTRATION POTENTI AL IS LOW (BCF LESS THAN 100 OR LOG KOW LESS THAN 3). LOG OCTANOL/WATER PARTITION COEFFICIENT (LOG KOW) IS -1.36. HENREY'S LAW CONSTANT (H) IS 6.0E-08 ATM-M3/MOL. BIOCONC. FACTER (BCF) IS 10 IN GOLDEN ORFE. DEGRADATION & TRANSFORMATION : BIDEGRAD. UNDER AEROBIC STATIC LAB CONDITIONS IS HIGH (BOD20 OR BOD2S/THOD GREATER THAN 40%). THEORETIC OXYGEN DEMAND (THEOD) IS CALCULATED TO BE 1.29 P/P. DEGRADATION IS EXPECTED IN ATMOS. ENVIRONM ENT WITHIN DAYS TO WEEKS.

===== Disposal Considerations =====

Waste Disposal Methods: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. FOR UNUSED & UNCON TAMINATED PRODUCT, THE PERFERRED OPTIONS INCLUDE SENDING TO A LICENSED, PERMITTED: INCINERATOR OR OT HER THERMAL DESTRUCTIVE DEVICE.

===== MSDS Transport Information =====

Transport Information:CANADIAN TDG INFORMATION: FOR TDG REGULATORY INFORMATION, IF REQUIRED, CONSULT TRANSPORTATION REGULATIONS, PRODUCT SHIPPING PAPERS OR YOUR DOW REPRESENTSTIVE. FOR DOT REGULATORY INFORMATION, IF REQUIR ED, CONSULT TRANSPORTATION REGULATIONS, PRODUCT SHIPPING PAPERS, OR YOUR DOW REPRESENTATIVE.

===== Regulatory Information =====

SARA Title III Information:SARA 313 INFORMATION: THIS PRODUCT CONTAINS THE FOLLOW

ING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372: ETHYLENE GLYCOL, CAS# 000107-21-1, CONCENTRATION = 99%. SARA HAZARD CATEGORY: SECTIONS 311 AND 312. PRODUCT MEETS THE FOLLOWING CATEGORIES: AN IMMEDIATE HEALTH HAZARD AND A DELAYED HEALTH HAZARD.

Federal Regulatory Information: TOXIC SUBSTANCES CONTROL ACT (TSCA):

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

LISTED ON THE TSCA INVENTORY. OSHA HAZARD COMMUNICATION STANDARD: THIS PRODUCT IS A "HAZARDOUS CHEMICAL" AS DEFINED BY THE OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. CERCLA, OR SUPERFUND: ETHYLENE GLYCOL, CAS# 000170-21-1 MAY REQUIRE REPORTING OF RELEASES (RQ) 5000 LBS, > 99%. CANADIAN REGULATIONS: WHMIS CLASSIFICATION: D2A- MATERIAL IS TERATOGENIC, EMBRYOTOXIC, OR FETOTOXIC. CPR STATEMENT: MSDS CONTAINS ALL THE INFORMATION

REQUIRED BY THE CANADIAN CONTROLLED PRODUCTS REGULATIONS (CPR).

State Regulatory Information: STATE RIGHT-TO-KNOW: THE FOLLOWING PRODUCT

COMPONENTS ARE CITED ON CERTAIN STATE LISTS AS MENTIONED: ETHYLENE GLYCOL, CAS# 000107-21-1; LISTS: NJ2, NJ3, PA1, PA3. NJ2=NEW JERSEY ENVIRONMENTAL HAZARDOUS SUBSTANCE (PRESENT AT GREATER THAN OR EQUAL TO 1.0%). NJ3=NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE (PRESENT AT GREATER THAN OR EQUAL TO 1.0%). PA1= PENNSYLVANIA HAZARDOUS SUBSTANCE (P

PRESENT AT GREATER THAN OR EQUAL TO 1.0%). PA3=

PENNSYLVANIA ENVIRONMENTAL HAZARDOUS SUBSTANCE (PRESENT AT GREATER THAN OR EQUAL TO 1.0%).

===== Other Information =====

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