

FISHER SCIENTIFIC -- ETHYLENE GLYCOL, E-178 -- 6810-00-890-2091

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Product Identification
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Product ID:ETHYLENE GLYCOL, E-178

MSDS Date:07/14/1993

FSC:6810

NIIN:00-890-2091

MSDS Number: CDXBJ

=== Responsible Party ===

Company Name:FISHER SCIENTIFIC

Address:1 REAGENT LANE

City:FAIR LAWN

State:NJ

ZIP:07410

Country:US

Info Phone Num:201-796-7100

Emergency Phone Num:201-796-7100

CAGE:1B464

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Contractor Identification ===

Company Name:FISHER SCIENTIFIC CO. CHEMICAL MFG DIV

Address:1 REAGENT LANE

Box:City:FAIRLAWN

State:NJ

ZIP:07410-2802

Country:US

Phone:201-796-7100

CAGE:1B464

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Composition/Information on Ingredients
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Ingred Name:ETHYLENE GLYCOL (SARA 313) (CERCLA). LD50:(ORAL,RAT) 4700
MG/KG.

CAS:107-21-1

RTECS #:KW2975000

Fraction by Wt: 99.9%

OSHA PEL:50 PPM (MFR)

ACGIH TLV:50 PPM, VAPOR, C

EPA Rpt Qty:1 LB

DOT Rpt Qty:1 LB

Ingred Name:1,4-DIOXA

NE; (DIETHYLENE DIOXIDE) (SARA 313) (CERCLA)

CAS:123-91-1

RTECS #:JG8225000

Fraction by Wt: 0.0026%

OSHA PEL:100 PPM, S

ACGIH TLV:25 PPM, S

EPA Rpt Qty:100 LBS

DOT Rpt Qty:100 LBS

Ingred Name:SUPDAT:ACUTE RENAL FAILURE W/UREMIA, PERIPHERAL EDEMA,
ASCITES, PULM EDEMA, DROW, CYANOSIS, COMA & DEATH IN 7-10 (ING 4)

RTECS #:9999999ZZ

Ingred Name:ING 3:DAYS IS POSS. PERM CEREBRAL DMG MAY OCCUR IN
SURVIVORS OF PRLNG COMA/CONVLS. CHRONIC:INHAL:HUMANS EXPOS TO (ING
5)

RTECS #:9999999ZZ

Ing

red Name:ING 4:AEROSOLS FROM 3-67 MG/M3 CONTINUOUSLY FOR 1 MONTH
REPORTED IRRIT OF RESP TRACT, OCCAS SLIGHT HDCH & LOW (ING 6)

RTECS #:9999999ZZ

Ingred Name:ING 5:BACKACHE. RPTD EXPOS TO SATURATED ING 1 VAPS PRDCD
SLIGHT NARCOS IN RATS. EFTS ON FETUS HAVE BEEN REPORTED (ING 7)

RTECS #:9999999ZZ

Ingred Name:ING 6:IN RATS & MICE FOLLOWING EXPOS DURING GESTATION.
SKIN:SLIGHT MACERATING ACTION MAY RSLT FROM VERY SEV, (ING 8)

RTECS #:9999999ZZ

Ingred Name:ING 7:PRLNG EXPOS. RPTD/PRLNG

CONT MAY RSLT IN SENSIT &

DERM. EYE:RATS EXPOS CONTINUOUSLY TO 12 MG/M3 FOR SEVERAL(ING 9)

RTECS #:9999999ZZ

Ingred Name:ING 8:DAYS SOMETIMES SHOWED SEV EYE IRRIT, EDEMA OF
EYELIDS, CORNEAL OPACITY & APPARENT BLINDNESS, W/OUT SIGNS (ING 10)

RTECS #:9999999ZZ

Ingred Name:ING 9:OF SYSTEMIC INTOX. INGEST:RPTD DAILY INGEST OF 15-30
ML MAY CAUSE OLIGURIA W/IN 24-72 HRS, WHICH MAY (ING 11)

RTECS #:9999999ZZ

Ingred Name:ING 10:PROGRESS RAPIDLY TO ANURIA & UREMIA. RPTD ADMIN TO
ANIMAL

S RSLTD IN SHORTENED LIFE SPAN, CALCIUM OXALATE (ING 12)
RTECS #:9999999ZZ

Ingred Name:ING 11:BLADDER STONES, SEV RENAL INJURY, PARTICULARLY OF
TUBULES & CENTRILOBULAR DEGENERATION OF THE LIVER.
RTECS #:9999999ZZ

Ingred Name:FIRST AID PROC:REMAINS (FOR AT LST 15-20 MINS). GET MED
ATTN. INGEST:REMOVE BY GASTRIC LAVAGE/EMESIS. GIVE ARTF (ING 14)
RTECS #:9999999ZZ

Ingred Name:ING 13:RESP W/OXYG IF RESP IS DEPRESSED. GET MED ATTN
IMMED. ANTIDOTE:GIVE ETHANOL, 50% (100 PROOF), 1.5 ML/K
G (ING 15)
RTECS #:9999999ZZ

Ingred Name:ING 14:ORALLY INITIALLY, DILUTED TO NOT >5% SOLN, FOLLOWED
BY 0.5-1 ML/KG EVERY 2 HRS ORALLY/IV FOR 4 DAYS TO (ING 16)
RTECS #:9999999ZZ

Ingred Name:ING 15:PVNT METABOLISM OF INGESTED ING 1 TO OXALATE. BLOOD
ETHANOL LEVEL SHOULD BE IN RANGE 1-1.5 MG/ML. GIVE (ING 17)
RTECS #:9999999ZZ

Ingred Name:ING 16:CALCIUM GLUCONATE, 10 ML OF 10% SOLN DILUTED IN 1
LITER OF 5% GLUCOSE, IV AS NEC TO MAINTAIN NORMAL SERUM(ING 18)
RTECS #:9999999ZZ

Ingred
Name:ING 17:CALCIUM LEVELS. CALCIUM ADMIN MAY CAUSE ANURIA. IN
ABSENCE OF RENAL IMPAIRMENT, FORCE FLUIDS TO 4 LITERS (ING 19)
RTECS #:9999999ZZ

Ingred Name:ING 18:DAILY TO INCR EXCRETION/PERFORM HEMODIALYSIS.
ANTIDOTE SHOULD BE ADMINISTERED BY QUALIFIED MEDICAL PERSONNEL.
RTECS #:9999999ZZ

Ingred Name:RESP PROT:RESP W/FULL FACEPIECE OPERATED IN
PRESS-DEMAND/OTHER POS PRESS MODE OR W/FULL FACEPIECE, HELMET/HOOD
(ING 21)
RTECS #:9999999ZZ

Ingred Name:ING 20:OPERATED IN CONTINUO

US-FLOW MODE; ANY SCBA W/FULL

FACEPIECE OPERATED IN PRESS-DEMAND/OTHER POS PRESSURE MODE.

RTECS #:9999999ZZ

Ingred Name:MATLS TO AVOID:OF MATERIALS TO AVOID CONTACT NEHC .

RTECS #:9999999ZZ

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

LD50 LC50 Mixture:SEE INGREDIENT 1.

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:ACUTE:INHAL:UNLIKELY AT ROOM TEMP.

AEROSOLS AT 140

MG/M3 WERE IRRIT & 200 MG/M3 WERE INTOLERABLE

CAUSING BURNING SENSATION OF THROAT & COUGH. HIGH CONCS MAY RSLT IN EFTS ON HEMATOPOIETIC SYS & CNS W/H DCH, DIZZ & DROW. SKIN CONT:LIQ MAY DEFAT & CAUSE MINOR IRRIT. ANIMAL STUDIES INDICATE LETHAL AMTS MAY (EFTS OF OVEREXP)

Explanation of Carcinogenicity:NOT RELEVANT

Effects of Overexposure:HLTH HAZ:BE ABSORBED THRU INTACT SKIN. SENSIT RXNS MAY OCCUR IN PREVIOUSLY EXPOS PERS. EYE CONT:VAPS MAY CAUSE REDNESS & CONT W/LIQ MAY C

AUSE CONJ & IRIDOCYCLITIS, BUT NO PERM

DMG. INGEST:ESTIMATED LE THAL DOSE FOR ADULTS IS 100 ML. THERE ARE 3 STAGES OF INTOX FOLLOWING INGEST OF ING 1:CNS STIMULATION FOLLOWED (SUPDAT)

Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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

First Aid:INHAL:REMOVE TO FRESH AIR IMMED. IF BRTHG STOPPED, PERFORM ARTF RESP. KEEP WARM & AT REST. TREAT SYMPTOMATICALLY & SUPPORTIVELY. GET MED ATTN. SKIN

:REMOVE CONTAM CLTHG & SHOES IMMED.

WASH AFFECTED ARE A W/SOAP & WATER UNTIL NO EVID OF CHEM REMAINS (APPROX 15-20 MINS). GET MED ATTN. EYES:WASH IMMED W/LG AMTS OF WATER/NORMAL SALINE, OCCAS LIFTING UPPER & LOWER LIDS, UNTIL NO EVID OF CHEM (ING 13)

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

Flash Point Method:CC

Flash Point:232F,111C

Lower Limits:3.2%

Upper Limits:15.3%

Extinguishing Media:DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR FOAM. FOR LA

RGER FIRES, USE WATER SPRAY, FOG OR ALCOHOL FOAM.

Fire Fighting Procedures:USE NIOSH APPRVD SCBA & FULL PROT EQUIP . MOVE CNTNR FROM AREA IF W/OUT RISK. DO NOT SCATTER SPILLED MATL W/HIGH-PRESS WATER STREAMS. DIKE FIRE- (SUPDAT)

Unusual Fire/Explosion Hazard:SLIGHT FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.

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

Spill Release Procedures:NO SPECIAL PRECAUTIONS INDICATED.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:NONE SPECIFIED BY MANUFACTURER.

Other Precautions:NONE SPECIFIED BY MANUFACTURER.

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

Respiratory Protection:ALL RESPS MUST BE NIOSH APPRVD : ANY CHEM CARTRIDGE RESP W/ORG VAP CARTRIDGE(S) & FULL FACEPIECE; ANY GAS MASK W/ORG VAP CANISTER (CHIN-STYLE OR FRONT- OR BACK-MOUNTED CANISTER), W/FULL FACEPIEC E; ANY TYPE 'C ' SUPPLIED-AIR (ING 20)

Ventilation:PROVIDE LOCAL EXHAUST VENTILATION SYSTEM TO MEET PELS.

Protective Gloves:IMPERVIOUS GLOVES .

Eye Protection:ANSI APPROVED CHEM WORKERS GOGGS .

Other Protective Equipment:ANSI APPRVD EYE WASH FOUNTAIN & DELUGE SHOWER . APPROP PROT (IMPERVIOUS) CLTHG & EQUIP TO PVNT CONT W/SUBSTANCE.

Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

FIRE FIGHT PROC:CONTROL WATER FOR LATER DISP. KEEP UPWIND. EFTS OF OVEREXP:BY DEPR

ESS, CARDIORESP FAILURE & RENAL FAILURE.

LIFE-THREATENING COMPLICATIONS WHICH MAY OCCUR INCL RESP FAILURE, SECONDARY T O CNS DEPRESS, CVS COLLAPSE, PULM EDEMA& SEV METABOLIC ACIDOSIS. W/OUT TREATMENT, DEATH MAY OCCUR IN 8-24 HRS. (ING 3)

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

Boiling Pt:B.P. Text:387F,197C

Melt/Freeze Pt:M.P/F.P Text:9F,-13C

Vapor Pres:0.05 @ 20C

Vapor Density:2.14

Spec Gravity:1.1

Solubility in Water:SOLUBLE

Appearance and Odor:HYGROS

COPIIC, CLEAR, COLORLESS, ODORLESS,
SWEET-TASTING, SYRUPY LIQUID.

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

Stability Indicator/Materials to Avoid: YES

STRONG OXIDIZERS, POTASSIUM PERMANGANATE, SODIUM HYDROXIDE, SODIUM PEROXIDE, SULFURIC ACID. FOR A COMPLETE LIST (ING 22)

Stability Condition to Avoid: NONE REPORTED.

Hazardous Decomposition Products: THERMAL DECOMPOSITION PRODUCTS MAY INCLUDE TOXIC OXIDES OF CARBON.

===== Disposal Consideration

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Waste Disposal Methods: DISPOSAL MUST BE I/A/W FEDERAL, STATE & LOCAL REGULATIONS .

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