

FISHER SCIENTIFIC -- TOLUENE -- 6810-01-368-6710

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Product Identification  
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Product ID:TOLUENE  
MSDS Date:07/15/1995  
FSC:6810  
NIIN:01-368-6710  
MSDS Number: CFQZD  
=== 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  
=== 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:TOLUENE (SARA 313) (CERCLA)  
CAS:108-88-3  
RTECS #:XS5250000  
Fraction by Wt: 100.0%  
OSHA PEL:200 PPM; Z-2  
ACGIH TLV:S, 50 PPM; 9495  
EPA Rpt Qty:1000 LBS  
DOT Rpt Qty:1000 LBS

Ingred Name:SUPDAT:OF TANK DUE TO FIRE. INSOLATE FOR 1/2 MILE IN ALL  
DIRECTIONS

IF TANK RAIL CAR/TANK TRUCK IS INVOLVED IN (ING 3)  
RTECS #:9999999ZZ

Inged Name:ING 2:FIRE. EXTING ONLY IF FLOW CAN BE STOPPED; USE H\*2O IN  
FLOODING QTIES AS FOG, SOLID STREAMS MAY SPREAD (ING 4)  
RTECS #:9999999ZZ

Inged Name:ING 3:FIRE. COOL CNTNRS W/FLOODING AMTS OF H\*2O, APPLY FROM  
AS FAR A DISTANCE AS POSS. AVOID BRTHG TOX VAPORS, (ING 5)  
RTECS #:9999999ZZ

Inged Name:ING 4:KEEP UPWIND. H\*2O MAY BE INEFTIVE (NFPA 325M. FIRE  
HAZ PROPERTIES OF FLAMM LIQS GASSES, & VOLATILE SOLI  
DS, 1991).  
RTECS #:9999999ZZ

Inged Name:EXPLO HAZ:ARE EXPLOSIVE. DUE TO ELECTROCONDUCTIVITY OF  
SUBSTANCE, FLOW/AGITATION MAY GENERATE ELECTROSTATIC (ING 7)  
RTECS #:9999999ZZ

Inged Name:ING 6:CHARGES RESULTING IN SAPRKS WITH POSSIBLE IGNITION.  
RTECS #:9999999ZZ

Inged Name:EFTS OF OVEREXP:WORKER FOUND UNCON AFTER HIGH VAP EXPOS FOR  
18 HRS DEVELOPED HEPATIC & RENAL DMG W/MYOGLOBINURIA.(ING 9)  
RTECS #:9999999ZZ

Inged Name:ING 8:RECOVERY WAS COMPLETE W/IN 6 MONTHS. DEATH MAY BE DUE  
TO RESP FAILURE/VENTRICULAR FIBRILLATION. SKIN:LIQ (ING 10)  
RTECS #:9999999ZZ

Inged Name:ING 9:CNTCT MAY CAUSE IRRIT. VAPS MAY CAUSE DRYING.  
ABSORPTION DOES OCCUR, BUT IS GENERALLY TOO SLOW TO PRDCE (ING 11)  
RTECS #:9999999ZZ

Inged Name:ING 10:SIGNS OF ACUTE SYS TOX. EYE:LIQUID MAY CAUSE IRRIT &  
CORNEAL BURNS IF NOT PROMPTLY REMOVED. CONCS AROUND (ING 12)  
RTECS #:9999999ZZ

Inged Name:ING 11:300-800 PPM MAY CAUSE NOTICEABLE IRRIT &  
LACRIMATION. CORNEAL LESIONS & VERY FINE VACU

OLEES HAVE BEEN (ING  
13)

RTECS #:9999999ZZ

Ingred Name:ING 12:REPORTED IN WORKERS EXPOSED TO A SOLV CNTNG TOLUENE.  
LESIONS SUBSIDED FOLLOWING SEVERAL DAYS OF (ING 14)

RTECS #:9999999ZZ

Ingred Name:ING 13:NON-EXPOS. INGEST:MAY CAUSE BURNING SENSATION IN  
EPIGASTRIUM & ABDOM SPASMS. SYSTEMIC EFTS MAY OCCUR AS (ING 15)

RTECS #:9999999ZZ

Ingred Name:ING 14:DESCRIBED IN ACUTE INHAL. ASPIR OF LIQ INTO LUNGS  
MAY CAUSE COUGHING, GAGGING, DISTRESS, ACUTE (ING 16)

RTECS #:9999999ZZ

Ingre  
d Name:ING 15:HEMORRHAGIC PNEUMONITIS, & RAPIDLY DEVELOPING PULM  
EDEMA. APPROX LETHAL DOSE IN HUMANS IS 15-30 ML. (ING 17)

RTECS #:9999999ZZ

Ingred Name:ING 16:CHRONIC:INHAL:MAY CAUSE MUC MEMB IRRIT, VOMIT,  
INSOMNIA, NOSEBLEEDS, CHEST PAINS, EUPHORIA, HEADACHE, (ING 18)

RTECS #:9999999ZZ

Ingred Name:ING 17:VERTIGO, NAUSEA, ANOREXIA, OF MEMORY LOSS,  
INCOORDINATION, IMPAIRMENT OF RXN TIME & SPEECH, VISION, & OR (ING  
19)

RTECS #:9999999ZZ

Ingred Name:ING 18:HEARING, ALCOHOL INTOL  
ERANCE, & ABNORMAL BLEEDING.

SKIN:RPTD CNTCT MAY CAUSE DEFAT W/DRY FISSURED DERM. (ING 20)

RTECS #:9999999ZZ

Ingred Name:ING 19:EYE:RPTD CNTCT MAY CAUSE CONJ. INGEST:ABMIN TO  
ANIMALS DURING GESTATION PRODUCED SIGNIFICANT (ING 21)

RTECS #:9999999ZZ

Ingred Name:ING 20:EMBRYOLETHALITY & INCREASE IN CLEFT PALATE. FOR MORE  
DETAILED INFORMATION CONTACT NEHC .

RTECS #:9999999ZZ

Ingred Name:FIRST AID PROC:(AT LEAST 15-20 MIN). GET MED ATTN IMMED.  
INGEST: GASTRIC LAVAGE W/A CUFFED END

OTRACHEAL TUBE (ING 23)  
RTECS #:9999999ZZ

Ingred Name:ING 22:IN PLACE TO PREVENT ASPIRATION. FOR MORE SPECIFIC  
INFORMATION CONTACT NEHC .  
RTECS #:9999999ZZ

Ingred Name:SPILL PROC:LATER DISP. NO SMOKING, FLAMES/FLARES IN HAZ  
AREA. ISOLATE HAZ AREA & RESTRICT ENTRY.  
RTECS #:9999999ZZ

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

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.

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

Reports of Carcinogenicity:NT

P:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:TOLUENE APPEARS ON THE NAVY LISTING OF  
OCCUP CHEM REPRO HAZ. SEEK CONSULTATION FROM APPROP HLTH  
PROFESSIONALS CONCERNING LATEST HAZ LIST INFO & SAFE HNDLG & EXPOS  
INFO . ACUTE:INHAL:500 PPM IDLH . ODOR DETECTION MAY BE  
INSUFFICIENT FOR WARNING DUE TO OLFACTORY FATIGUE. 100 PPM: MAY  
CAUSE IRRIT. (EFTS OF OVEREXP)

Explanation of Carcinogenicity:NOT RELEVANT.

Effects of Overexposure:HLTH HAZ:200-600 PPM FOR UP TO 8 HRS: FA  
TIGUE,

WEAK, CONFUSN, HDCH, NAUS, IMPAIRED COORDINATION & RXN TIME,  
PARESTHESIAS OF SKIN, EUPHORIA, DIZZ, & DILATED PUPILS. 800  
PPM:RAPID IRRIT, NASAL MUCOUS SE CRETION, METALLIC TASTE, DROW, &  
IMPAIRED BALANCE. AFTER EFTS INCL NERVOUSNESS, MUSCULAR FATIGUE, &  
INSOMNIA. (ING 8)

Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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

First Aid:INHAL:REMOVE TO FRESH AIR. PERFORM ARTF RESP IF NEC.  
KEEP

WARM & AT REST. TREAT SYMPTOMATICALLY & SUPPORTIVELY. GET MED ATTN  
IMMED. SKIN:REMOVE CONTAMD CLTHG & SHOES IMMED. WASH W/SOAP & H\*2O  
UNTIL NO EVID OF CHEM REMAINS (AT LEAST 15-20 MIN). GET MED ATTN  
IMMED. EYE:WASH IMMED W/LRG AMTS OF H\*2O/NORMAL SALINE, OCCAS  
LIFTING UPPER & LOWER LIDS, UNTIL NO EVID OF CHEM REMAINS (ING 22)

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

Flash Point Method:CC

Flash Point:40.0F,4.4C

Lower Limits:1.2%

Upper Limit

s:7.1%

Extinguishing Media: DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR REGULAR FOAM. FOR LARGER FIRES, USE WATER SPRAY, FOG OR REGULAR FOAM.

Fire Fighting Procedures: USE NIOSH APPRVD SCBA & FULL PROT EQUIP . MOVE CNTNR FROM FIRE AREA IF YOU CAN DO IT W/OUT RISK. APPLY COOLING H\*2O TO SIDES OF CNTNRS THAT ARE (SUPDAT)

Unusual Fire/Explosion Hazard: DANGEROUS FIRE HAZ WHEN EXPOSED TO HEAT/FLAME. VAPS ARE HVR/AIR & MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNIT & FL  
ASH BACK. VAP-AIR MIX (ING 6)

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

Spill Release Procedures: SHUT OFF IGNIT SOURCES. STOP LEAK IF CAN W/OUT RISK. USE WATER SPRAY TO REDUCE VAP. SMALL SPILLS-TAKE UP W/SAND/OTHER ABSORB MATL & PLACE CNTNRS FOR LATER DISP. LRGR SPILLS-DIKE MATL & PLACE IN CNTNRS FOR LATER DISP. NO SMOKING, FLAMES/FLARES(ING 24)

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

===== Handling and Storage =====  
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Handling and Storage Precautions: STORE I/A/W/29 CFR 1910.106. PROT AGAINST PHYSICAL DMG. OUTSIDE/DETACHED STOR IS PREF. INSIDE STOR SHOULD BE IN A STANDARD FLAM LIQ STOR ROOM/CABINET.

Other Precautions: KEEP CONTAINER CLOSED, COOL AND AWAY FROM INCOMPATIBLE SUBSTANCES.

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

Respiratory Protection: NIOSH APPROVED RESPIRATORS: 500 PPM: ANY CHEM CARTRIDGE RESP W/ORG VAP CARTRIDGE. ANY SCBA W/FULL FACEPIECE. FOR

A MORE DETAILED LIST CONTACT NEHC .

Ventilation: PROVIDE EXPLOSION-PROOF LOC EXHST/GEN DILUTION VENT TO MEET PUBLISHED EXPOS LIMS.

Protective Gloves: IMPERVIOUS GLOVES .

Eye Protection: ANSI APPROVED CHEM WORKERS GOGGS .

Other Protective Equipment: ANSI APPRVD EMER EYE WASH & DELUGE SHOWER . APPROPRIATE PROT CLTHG & EQUIP TO PVNT SKIN CONTACT.

Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

FIRE FIGHT PROC: EXPOSED TO FLAMES UNTIL WELL AFTER FIRE

IS OUT. STAY

AWAY FROM ENDS OF TANKS. FOR MASSIVE FIRE IN CARGO AREA, USE UNMANNED HOSE HOLDER/MONITOR NOZZLES; IF THIS IS IMPOSSIBLE, WITHDRAW FROM AREA & LET FIRE BURN. WITHDRAW IMMEDIATELY IN CASE OF RISING SOUND FROM VENTING SAFETY DEVICE/ANY DISCOLORATION (ING 2)

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

Boiling Pt:B.P. Text:231F,111C

Melt/Freeze Pt:M.P/F.P Text:-139F,-95C

Vapor Pres:22 @ 20C

Vapor Density:3.14

Spec Gravity:0.8669

Evaporation Rate &

mp; Reference:2.24 (BUTYL ACETATE = 1)

Solubility in Water:0.05% @ 20C

Appearance and Odor:CLEAR, COLORLESS LIQUID WITH AN AROMATIC ODOR.

Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES

STRONG MINERAL ACIDS, NITRIC ACID, STRONG OXIDIZERS. FOR MORE SPECIFIC INFORMATION CONTACT NEHC .

Stability Condition to Avoid:AVOID CONTACT W/HEAT, SPARKS, FLAMES/OTHER SOURCES OF IGNIT. VAPORS MAY BE EXPLOSIVE.

AVOID OVERHEATING OF CONTAINERS.

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

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

Waste Disposal Methods:OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS WHEN DISPOSING OF THIS SUBSTANCE. DISPOSAL MUST BE IN ACCORDANCE W/STDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 40CFR.262. EPPA HAZ WASTE #U220.

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