

FISHER SCIENTIFIC CHEMICAL -- 1,4-DIOXANE, DIII -- 6810-00-050-3430

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Product Identification
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Product ID:1,4-DIOXANE, DIII

MSDS Date:07/12/1990

FSC:6810

NIIN:00-050-3430

MSDS Number: CDWZF

=== Responsible Party ===

Company Name:FISHER SCIENTIFIC CHEMICAL

Address:1 REAGENT LANE

City:FAIR LAWN

State:NJ

ZIP:07410

Country:US

Info Phone Num:201-796-7100

Emergency Phone Num:201-796-7100,800-42

4-9300(CHEMTREC)

Preparer's Name:DIOXANE, ACS

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:1,4-DIOXANE (DIETHYLENE DIOXIDE) (SARA 313) (CERCLA)

CAS:123-91-1

RTECS #:JG8225000

Fraction by Wt: 100.0%

OSHA PEL:S, 100 PPM

ACGIH TLV:S, 25 PPM; 9495

EPA Rpt Qty:10

0 LBS
DOT Rpt Qty:100 LBS

Ingred Name:INHIVITORS
Fraction by Wt: 100.0%
OSHA PEL:N/K
ACGIH TLV:N/K

Ingred Name:EFTS OF OVEREXP:SIGNS OF UNSTEADINESS, INCOORDINATION,
NARCOSIS, ERYTHEMA, & LIVER & KIDNEY DMG IN ANIMALS. (ING 4)
RTECS #:9999999ZZ

Ingred Name:ING 3:EYE:VAPS MAY CAUSE IRRIT AT CONCS ABOVE 220 PPM.
APPLICTN TO RABBIT EYES CAUSE TRANSIENT CORNEAL INJURY. (ING 5)
RTECS #:9999999ZZ

Ingred Name:ING 4:INGEST:MAY CAUSE LIGHT BURNING SENSATION ON CNTCT
W/ORAL MUC MEMB. LRG
DOSES RSLTD IN WEAK, INCOORD, (ING 6)
RTECS #:9999999ZZ

Ingred Name:ING 5:DEPRESS, COMA & DEATH IN ANIMALS. AUTOPSY REVEALED
HEMORRHAGIC AREAS IN THE PYLORIC REGION OF STOMACH, (ING 7)
RTECS #:9999999ZZ

Ingred Name:ING 6:BLADDERS DISTENDED W/URINE, SLIGHT PROTEINURIA &
ENLARGED KIDNEYS. ASPIR MAY RSLT IN PNEUMONIA. CHRONIC: (ING 8)
RTECS #:9999999ZZ

Ingred Name:ING 7:INHAL:RPTD EXPOS CAUSE MUC MEMB IRRIT, DYSPNEA, HDCH,
VERTIGO, LOSS OF APPETITE, NAUS & VOMIT, PAIN & (ING 9)
RTEC
S #:9999999ZZ

Ingred Name:ING 8:TENDERNESS IN THE ABDOMEN & LUMBAR REGION, DROW,
MALAISE, LIVER ENLARGEMENT & DMG, OLIGURIA, ANURIA, (ING 10)
RTECS #:9999999ZZ

Ingred Name:ING 9:UREMIA, COMA, & DEATH FROM ACUTE RENAL FAILURE.
AUTOPSIES REVEALED LUNG & BRAIN CONGESTION, CNS DMG, LIVER(ING 11)
RTECS #:9999999ZZ

Ingred Name:ING 10:NECROSIS, HEMORRHAGIC NEPHRITIS & NECROSIS,
LEUKOCYTOSIS, & BRONCHOPNEUMONIA. SKIN:PRLNG/RPTD CNTCT (ING 12)
RTECS #:9999999ZZ

Ingred Name:ING 11:MAY CAUS

E DRYING & CRACKING OF THE SKIN, DERM, &
ECZEMA. SKIN ABSORPTION MAY HAVE CONTRIBUTED TO THE (ING 13)
RTECS #:9999999ZZ

Ingred Name:ING 12:DEATH OF A WORKER FOLLOWING SKIN & INHAL EXPOS FOR
ONE WEEK. ANIMAL STUDIES INDICATE RPTD SKIN APPLICATN (ING 14)
RTECS #:9999999ZZ

Ingred Name:ING 13:MAY RSLT IN LIVER & KIDNEY DMG. TUMOR PROMOTER
ACTIVITY HAS BEEN RPRTD IN MICE. EYE:RPTD/PRLNG EXPOS MAY (ING 15)
RTECS #:9999999ZZ

Ingred Name:ING 14:RSLT IN CONJ. INGEST:IN ANIMAL FEEDING STUDI
ES, THIS
CMPD PRDCE LIVER & KIDNEY DEGENERATION & NECROSIS, (ING 16)
RTECS #:9999999ZZ

Ingred Name:ING 15:ULCERATION OF THE STOMACH, HEPATOMAS, CARCINOMA OF
THE NASAL CAVITY, CARCINOMA OF THE KIDNEY PELVIS, (ING 17)
RTECS #:9999999ZZ

Ingred Name:ING 16:LEUKEMIA, LYMPHOSARCOMA, CHOLANGIOMAS, GALL BLADDER
CARCINOMAS, AND TUMORS OF THE LUNG. REPRODUCTIVE (ING 18)
RTECS #:9999999ZZ

Ingred Name:ING 17:EFFECTS HAVE BEEN REPORTED IN ANIMALS.
RTECS #:9999999ZZ

Ingred Name:SPILL PROC:NO S
MOKING, FLAMES OR FLARES IN HAZARD AREA.
KEEP UNNECESSARY PEOPLE AWAY; ISOLATE HAZ AREA & RESTRICT ENTRY.
RTECS #:9999999ZZ

Ingred Name:OTHER PROT EQUIP:TO PREVENT REPEATED OR PROLONGED SKIN
CONTACT WITH THIS SUBSTANCE.
RTECS #:9999999ZZ

Ingred Name:EYE PROT:AND FULL LENGTH FACESHIELD .
RTECS #:9999999ZZ

Ingred Name:EXPLO HAZ:ARE EXPLOSIVE. DUE TO LOW ELECTROCONDUCTIVITY OF
THE SUBSTANCE, FLOW OR AGITATION MAY GENERATE (ING 23)
RTECS #:9999999ZZ

Ingred Name:ING 22:ELECTROSTATIC C

HARGES RESULTING IN SPARKS WITH
POSSIBLE IGNITION.
RTECS #:9999999ZZ

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

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.

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: MAY BE IRRITATING TO
NOSE, THROAT & RESP TRACT AT 220 PPM. THIS CMPD HAS POOR WARNING
PROPERTIES & CAN BE INHALED IN AMTS THAT MAY CAUSE SERIO
US SYSTEMIC

INJURY. SYMPS OF SYSTEMIC TOX MAY INCL HDCH, VERTIGO, DROW,
DYS/PNEA, NAUS, & VOMIT. INHAL CAUSED INCRD SALIVATION, LACRIMATION,
(EFTS OF OVEREXP)

Explanation of Carcinogenicity:NOT RELEVANT.

Effects of Overexposure:HLTH HAZ:NARCOSIS, BEHAVIORAL CHANGES, & DEATH
IN ANIMALS. AUTOPSY REVEALED LUNG, LIVER & KIDNEY DMG, CONGESTION &
EDEMA OF THE LUNGS, & INCR BLOOD COUNTS. SKIN:MAY CAUSE IRRIT
W/REDNESS & PAIN. ALLER GIC CNTCT DERM HAS BEEN RPTD. SKIN
ABSORPTI

ON MAY OCCUR & CAUSE HDCH, NAUS & VOMIT. SKIN ABSORPTION
PRDCED (ING 3)

Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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

First Aid:INGEST: CALL MD IMMEDIATELY . INHAL: REMOVE TO FRESH AIR.
SUPPORT BREATHING (GIVE O*2/ARTF RESP) . EYES: IMMEDIATELY FLUSH
W/POTABLE WATER FOR A MINIMUM OF 15 MINUTES, SEEK ASSISTANCE FROM
MD . SKIN: FLUSH W/COPIOUS AMOUNTS OF WATER. CALL MD . FOR MORE
SPECI

FIC INFORMATION CONTACT NEHC .

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

Flash Point Method:CC

Flash Point:54.0F,12.2C

Lower Limits:2.0%

Upper Limits:22%

Extinguishing Media:EXTING ONLY IF FLOW CAN BE STOPPED; USE H*2O IN
FLOODING AMTS AS FOG, SOLID STREAMS MAY NOT BE EFTIVE. COOLS
(SUPDAT)

Fire Fighting Procedures:USE NIOSH APPROVED SCBA & FULL PROTECTIVE
EQUIPMENT . FOR MORE SPECIFIC INFORMATION CONTACT NEHC .

Unusual Fire/Explosion Hazard:DANGEROUS FIR

E HAZ WHEN EXPOSED TO
HEAT/FLAME. VAPS ARE HVR/AIR & MAY TRAVEL A CONSIDERABLE DISTANCE
TO A SOURCE OF IGNIT & FLASH BACK. VAPOR-AIR MIX (ING 22)

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

Spill Release Procedures:SHUT OFF IGNIT SOURCES. STOP LEAK IF YOU CAN
DO IT W/OUT RISK. USE WATER SPRAY TO REDUCE VAPS. FOR SMALL SPILLS,
TAKE UP W/SAND/OTHER ABSORB MATL & PLACE INTO CNTNRS FOR LATER
DISP. FOR LRGR SPILLS, D IKE FAR AHEAD OF SPILL FOR LATER DISP.

(ING 19)

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:STORE I/A/W 29 CFR 1010 108. STORE
AWAY FROM INCOMPATIBLE SUBSTANCES.

Other Precautions:BONDING & GROUNDING: SUBSTANCES W/LOW
ELECTROCONDUCTIVITY, WHICH MAY BE IGNITED BY ELECTROSTATIC SPARKS,
SHOULD BE STORED IN CNTNR WHICH MEETS THE BONDING & GROUNDING
GUIDELINES SPECIFIED IN NFPA. FOR MORE SPECIFIC INFO CONTACT
NEHC

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

Respiratory Protection:NIOSH APPROVED RESPIRATOR APPROPRIATE FOR
EXPOSURE OF CONCERN . FOR MORE SPECIFIC INFORMATION CONTACT NEHC .

Ventilation:PROCESS ENCLOSURE VENTILATION RECOMMENDED TO MEET PUBLISHED
EXPOSURE LIMITS. VENTILATION EQUIP MUST BE EXPLOSION-PROOF.

Protective Gloves:IMPERVIOUS GLOVES .

Eye Protection:ANSI APPROVED CHEM WORKERS GOGGS(ING 21)

Other Protective Equipment:ANSI APPRVD EMER EYE WASH
& DELUGE SHOWER .

EMPLOYEE MUST WEAR APPROP PROT (IMPERVIOUS) CLTHG & EQUIP (ING 20)

Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

MATLS TO AVOID:FOR MORE SPECIFIC INFO CNTCT NEHC . EXTING MEDIA:CNTNRS
W/FLOODING QTIES OF H*2O, APPLY FROM AS FAR A DISTANCE AS POSS
AVOID BRTHG TOX VAPS, KEEP UPWIND. CNDTNS (STAB):MAY VIOLENT LY
RUPTURE IN HEAT/FIRE. AVOID CONTAM OF WATER SOURCES.

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

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Boiling Pt:B.P. Text:214F,101C

Melt/Freeze Pt:M.P/F.P Text:54.0F,12.2C

Vapor Pres:40 @ 25C

Vapor Density:3.0

Spec Gravity:1.0337

Evaporation Rate & Reference:2.7 (BUTYL ACETATE=1)

Solubility in Water:100%

Appearance and Odor:COLORLESS LIQUID WITH A FAINT, ETHEREAL ODOR.

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

Stability Indicator/Materials to Avoid:YES

DECABORANE, NICKEL (RANEY CATALYST), NITRIC ACID + PERCHLORIC ACID,
OXIDIZERS (STRONG), SILVER PE

RCHLORATE (SUPDAT)

Stability Condition to Avoid:AVOID CNTCT W/HEAT, SPARKS, FLAMES/OTHER
SOURCES OF IGNIT. VAPS MAY BE EXPLOSIVE & POISONOUS; DO NOT ALLOW
(SUPDAT)

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

Conditions to Avoid Polymerization:HAZARDOUS POLYMERIZATION HAS NOT
BEEN REPORTED TO OCCUR UNDER NORMAL TEMPERATURES AND PRESSURES.

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

Waste Disposal Met

hods:OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS

WHEN STORING OR DISPOSING OF THIS SUBSTANCE. DISPOSAL MUST BE IN
ACCORDANCE WITH STANDARD APPLICABLE TO GENERATORS OF HAZARDOUS
WASTE.

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