

FISHER SCIENTIFIC -- BUTANOL, A-399 -- 6810-00-939-5390

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Product Identification
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Product ID: BUTANOL, A-399

MSDS Date: 01/30/1989

FSC: 6810

NIIN: 00-939-5390

MSDS Number: BLWCJ

=== 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: 201-796-7523; 800-424-9300 (CHEMTREC)

CAGE: 1B

464

=== 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-BUTANOL; (N-BUTYL ALCOHOL)

CAS: 71-36-3

RTECS #: EO1400000

Fraction by Wt: 100%

OSHA PEL: 100 PPM

ACGIH TLV: S, C 50 PPM; 9293

EPA Rpt Qty: 5000 LBS

DOT Rpt Qty: 5000 LBS

Ingred Name: SUPP DATA: FLOW CAN BE STOPPED. USE WATER

IN FLOODING AMTS
AS FOG. SOLID STREAMS MAY NOT BE EFTIVE. COOL CNTNRS (ING 3)
RTECS #:9999999ZZ

Ingred Name:ING 2:W/FLOODING AMTS OF WATER. APPLY FROM AS FAR A
DISTANCE AS POSSIBLE. AVOID BREATHING TOXIC VAPORS. KEEP UPWIND.
RTECS #:9999999ZZ

Ingred Name:EXPLO HAZ:MIXTURES ARE EXPLOSIVE ABOVE FLASH POINT.
RTECS #:9999999ZZ

Ingred Name:EFTS OF OVEREXP:AUDITORY NERVE & VESTIBULAR INJURY IN
WORKERS RESULTING IN SEVERE VERTIGO & HEARING LOSS. LUNG (ING 6)
RTECS #:9999999ZZ

Ingred Na
me:ING 5:HEMORRHAGE, REDUCED ERYTHROCYTE COUNT, LYMPHOCYTOSIS,
ALBUMINURIA, EARLY DEGENERATIVE CHANGES OF LIVER, & (ING 7)
RTECS #:9999999ZZ

Ingred Name:ING 6:CORTICAL & TUBULAR DEGENERATION IN KIDNEYS WERE
REPORTED IN ANIMALS FOLLOWING PRLNGD EXPOS TO 100PPM. (ING 8)
RTECS #:9999999ZZ

Ingred Name:ING 7:SKIN:IRRITANT. ACUTE:LIQ CNTCT MAY CAUSE IRRIT
W/REDNESS & DRYNESS. SUBSTANCE MAY BE ABSORBED THRU INTACT (ING 9)
RTECS #:9999999ZZ

Ingred Name:ING 8:SKIN. SINGLE APPLICATIONS TO S
KIN OF RABBITS RESULTED
IN SLIGHT-MOD IRRIT. CHRONIC:RPTD/PRLNGD CNTCT HAS (ING 10)
RTECS #:9999999ZZ

Ingred Name:ING 9:BEEN REPORTED TO CAUSE DRYING,CRACKING & ECZEMATOID
DERM OF FINGERS & HANDS DUE TO DEFATTING ACTION OF (ING 11)
RTECS #:9999999ZZ

Ingred Name:ING 10:LIQ. APPLICATION OF 42-55 ML/KG/DAY FOR 1-4
CONSECUTIVE DAYS TO RABBITS RESULTED IN 100% MORTALITY. (ING 12)
RTECS #:9999999ZZ

Ingred Name:ING 11:EYE:IRRITANT. ACUTE:VAP CONCS OF 25PPM MAY CAUSE
SLIGHT IRRIT. APP

LICATION OF 1 DROP OF LIQ TO RABBIT (ING 13)

RTECS #:9999999ZZ

Inged Name:ING 12:EYES CAUSED MOD TEMPORARY INJURY WHICH WAS RATED 7
ON SCALE OF 10. CHRONIC:RPTD/PRLNGD EXPOS TO VAPS MAY (ING 14)

RTECS #:9999999ZZ

Inged Name:ING 13:RESULT IN CONJUNCT.VACUOLAR KERATITIS, CHARACT BY
VERY FINE TRANSPARENT VACUOLES RESEMBLING TINY BUBBLES (ING 15)

RTECS #:9999999ZZ

Inged Name:ING 14:OF GAS IN EPITHELIAL LAYERS OF CORNEA HAS BEEN
REPORTED IN WORKERS EXPSD TO BUTYL ALCOHOL & OTHER SOL
VS. (ING 16)

RTECS #:9999999ZZ

Inged Name:ING 15:EXPOS TO >200PPM FOR 10 YRS CAUSED CONJUNCTIVAL &
CORNEAL EDEMA RESULTING IN LACRIMATION, BLURRING OF (ING 17)

RTECS #:9999999ZZ

Inged Name:ING 16: VISION, CORNEAL INFLAMM, PHOTOPHOBIA & BURNING
SENSATION W/INFLAMMATION CLEARING W/I A FEW DAYS W/NO (ING 18)

RTECS #:9999999ZZ

Inged Name:ING 17:RESIDUAL DMG. INGEST:NARCOTIC. ACUTE:MAY CAUSE ABDOM
PAIN,NAUSEA,VOMIT & DIARRHEA. INGEST OF HIGH DOSES (ING 19)

RTECS #:9999999ZZ

Inged

Name:ING 18:OF BUTYL ALCOHOL CAUSED COMPLETE
PARALYSIS,CONSTRICTION OF PUPILS,REDUCTION IN CORNEAL,PUPILLARY &
(ING 20)

RTECS #:9999999ZZ

Inged Name:ING 19:CILIARY REFLEXES,NYSTAGMUS,SALIVATION, REDUCTION OF
BODY TEMP & RESP, DEEP NARCOSIS, MARKED HEPATIC (ING 21)

RTECS #:9999999ZZ

Inged Name:ING 20:HYPEREMIA, DEGENERATION OF LIVER & KIDNEYS & DEATH
IN ANIMALS. CHRONIC:PRLNGD INGEST OF N-BUTYL ALCOHOL (ING 22)

RTECS #:9999999ZZ

Inged Name:ING 21:IN DRINKING WATER RESULTED I

N LIVER DAMAGE IN RATS.
RTECS #:9999999ZZ

Ingred Name:FIRST AID PROC:INGEST:REMOVE INGESTED MATL BY GASTRIC
LAVAGE OR EMESIS. GIVE ARTF RESP W/O*2 IF RESP DEPRESSED. (ING 24)
RTECS #:9999999ZZ

Ingred Name:ING 23:GET MD IMMED. NO SPECIFIC ANTIDOTE. TREAT
SYMPTOMATICALLY AND SUPPORTIVELY.
RTECS #:9999999ZZ

Ingred Name:SPILL PROC:AREA! KEEP UNNECESSARY PEOPLE AWAY; ISOLATE
HAZARD AREA AND DENY ENTRY.
RTECS #:9999999ZZ

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Hazards Identification
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LD50 LC50 Mixture:LD50:(ORAL,RAT)790 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:INHAL:IRRITANT/NARCOTIC. 8000PPM IDLH.
ACUTE:VAP CONCS OF 25PPM MAY CAUSE MILD IRRIT TO RESP TRACT & NOSE.
SUBSTANCE QUITE ODOROUS WHICH USUALLY PROVIDES ADEQ WARNING BUT
OLFACTORY SENSES READILY BECOME FATIGUED. EXPOS TO 50PPM MAY CAUSE
HDCH & VERTIGO; HIGHER CONCS MAY CAUSE MARKED IRRIT,
SORE
THROAT,(EFTS OF OVEREXP)
Explanation of Carcinogenicity:NOT RELEVANT
Effects of Overexposure:HLTH HAZ:NERVOUS SYS DEPRESS W/HDCH, DIZZ, DULL
& DROWS. EXPOS TO 6600PPM PRODUCED GIDDINESS,
PROSTRATION,NARCOSIS,ATAXIA & DEATH IN SOME ANIMALS.
CHRONIC:LONG-TERM STUDY ON HUMANS EXPSD TO BUTYL ALCO HOL REVEALED
LITTLE/NO IRRIT/COMPLICATIONS OCCURRED AT 100PPM/BELOW. HOWEVER,
PRLNGD INHAL AT THIS LEVEL CAUSED (ING 5)
Medical Cond Aggravated by Exposure:PERSONS W/A HISTORY O
F CHRONIC
RESPIRATORY, SKIN, OR EYE DISEASE MAY BE AT AN INCREASED RISK FROM
EXPOSURE.

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First Aid Measures
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First Aid:INHAL:REMOVE TO FRESH AIR IMMED.IF BRTHG STOPPED, GIVE ARTF
RESP.KEEP WARM/AT REST.GET MD IMMED. SKIN:REMOVE CONTAMD
CLTHG/SHOES IMMED. WASH AFFECTED AREA W/SOAP/MILD DETERGENT & LG
AMTS OF WATER UNTI L NO EVID OF CHEM REMAINS (APPROX 15-20MIN). GET
MD IMMED. EYE:WASH IMMED W/LG AMTS OF WATER/NORMAL SALINE,

OCCASNL

LIFTING LIDS UNTIL NO EVID OF CHEM REMAINS(APPROX 15-20 MIN).GET MD IMMED. (ING 23)

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

Flash Point Method:CC

Flash Point:84.0F,28.9C

Lower Limits:1.4%

Upper Limits:11.2%

Extinguishing Media:DRY CHEMICAL, CARBON DIOXIDE, HALON, WATER SPRAY/ALCOHOL FOAM. LG FIRE:WATER SPRAY, FOG/ALCOHOL FOAM.

Fire Fighting Procedures:WEAR NIOSH/MSHA APPRVD SCBA & FULL PROT EQUIP . WATER MAY BE INEFTIVE. MOVE CNTNR FROM FIR

E AREA IF POSS. COOL

FIRE-EXPSD CNTNRS W/WATER FROM (SUPP DATA)

Unusual Fire/Explosion Hazard:DANGEROUS FIRE HAZARD WHEN EXPOSED TO HEAT/FLAME. VAPORS HEAVIER THAN AIR & MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNIT & FLASH BACK. VAPOR-AIR (ING 4)

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

Spill Release Procedures:SHUT OFF IGNIT SOURCES. STOP LEAK IF CAN BE DONE W/O RISK. USE WATER SPRAY TO REDUCE VAPS. SML:TAKE UP W/SAND/OTHER ABSORB MATL & P

LACE INTO CNTNRS FOR LATER DISP.

LG:DIKE FAR AHEAD OF SPILL FOR LATER DISP. NO SMOKING, FLAMES/FLARES IN HAZ(ING 25)

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:STORE I/A/W 29 CFR 1910.106.

Other Precautions:SUBSTANCES W/LOW ELECTROCONDUCTIVITY WHICH MAY BE IGNITED BY ELECTROSTATIC SPARKS SHOULD BE STORED IN CNTNRS WHICH MEET BONDING & GROUNDING GUIDELINES SPECIFIED IN N

FPA 77-1983,

RECOMMENDED PRACTICE O N STATIC ELECTRICITY.

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

Respiratory Protection:REFER TO ORIGINAL MSDS .

Ventilation:PROVIDE LOCAL EXHAUST/GEN DILUTION VENT TO MEET PUBLISHED EXPOS LIMITS. VENT EQUIP MUST BE EXPLOSION-PROOF.

Protective Gloves:IMPERVIOUS GLOVES .

Eye Protection:CHEMICAL WORKERS GOGGLES .

Other Protective Equipment:IMPERVIOUS CLOTHING AND EQUIPMENT.

Work Hygienic Practices:CONTACT LENSES SHOULD NOT BE W

ORN.
Supplemental Safety and Health
FIRE FIGHT PROC:SIDE UNTIL WELL AFTER FIRE IS OUT. STAY AWAY FROM STOR
TANK ENDS.FOR MASSIVE FIRE IN STOR AREA,USE UNMANNED HOSE
HOLDER/MONITOR NOZZ, ELSE WITHDRAW FROM AREA & LET FIRE BURN.
WITHDRAW IMMED IN CASE OF RISING SOUND FROM VENTING SFTY
DEVICE/ANY DISCOLORATION OF STOR TANK DUE TO FIRE. EXTING ONLY
IF(ING 2)

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

Boiling Pt:B.P. Text:243F,117C
Melt/Freeze Pt:M.P/F
.P Text:-128F,-89C
Vapor Pres:6.5 @ 25C
Vapor Density:2.55
Spec Gravity:0.8098
Evaporation Rate & Reference:0.5 (BUTYL ACETATE = 1)
Solubility in Water:7.7%
Appearance and Odor:CLEAR,MOBILE,COLORLESS LIQ, W/STRONG, PUNGENT
CHARACT ODOR SIMILAR TO FUEL OIL.
Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES
ALKALI METALS, ALUMINUM, T-BUTANOL, CHROMIC ANHYDRIDE, STRONG
OXIDIZERS. SEE ORIGINAL
MSDS FOR ADDL INFO .
Stability Condition to Avoid:MAY BE IGNITED BY HEAT, SPARKS OR FLAMES.
Hazardous Decomposition Products:THERMAL DECOMPOSITION PRODUCTS MAY
INCLUDE TOXIC CO*X.

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

Waste Disposal Methods:DISPOSAL MUST BE I/A/W STANDARDS APPLICABLE TO
GENERATORS OF HAZ WASTE, 40 CFR 262. EPA HAZ WASTE NO U031. OBSERVE
ALL FEDERAL, STATE & LOCAL REGS WHEN STORING/DISPOSING SUBSTANCE.
FOR ASSISTANCE, CNT CT DISTRIC
T DIRECTOR OF EPA.

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