

2838 LIQUID

MSDS Number

CJWSX

National Stock Number

6850-00N093074

Product Name

2838 LIQUID

Manufacturer

NALCO CHEMICAL COMPANY

Product Identification

Product ID:2838 LIQUID

MSDS Date:03/06/1998

FSC:6850

NIIN:00N093074

Status Code:A

MSDS Number: CJWSX

Responsible Party

NALCO CHEMICAL COMPANY

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US

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NAPERVILLE, IL 60563-1198

US

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Ingredients

GLUTARALDEHYDE

CAS: 111-30-8

RTECS: MA2450000

OSHA PELN/K

ACGIH TLV: N/K

Hazards

LD50 LC50 Mixture:SEE TOXICOLOGICAL INFORMATION.

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

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

Health Hazards Acute and Chronic:EYES: CORROSIVE TO THE EYES WITH POSSIBLE PERMANENT DAMAGE DEPENDING ON THE LENGTH OF EXPOSURE AND ON THE FIRST AID ACTION GIVEN. SKIN: CAN CAUSE MODERATE TO SEVERE SKIN IRRITATION. DEPENDING ON THE LENGTH OF EXPOSURE AND ON THE FIRST AID ACTION GIVEN, PROLONGED CONTACT MAY BE CORROSIVE TO SKIN.

CAN CAUSE ALLERGIC CONTACT DERMATITIS IN SUSCEPTIBLE INDIVIDUALS.
CAN BE HARMFUL IF ABSORBED. INGESTION : CAN BE HARMFUL OR FATAL.
INHALATION: CAN CAUSE SEVERE RESPIRATORY TRACT IRRITATION.
Effects of Overexposure:REVIEW OF AVAIL DATA DOES NOT IDENTIFY ANY
SYMPS FROM EXPOS NOT PREVIOUSLY MENTIONED. TOX INFO: CONC.
CUMULATIVE TOX IS ALSO POSS BY RPTD DERMAL CONT W/25-50% SOLN OF
GLUTARALDEHYDE. PRIMARY SKIN IRRIT TEST (ALBINO RABBITS): AT
10%/GREATER, GLUTARALDEHYDE SOLNS MAY CAUSE MOD TO SEV IRRIT, W/POSS
NECROSIS AFTER PRLNG CONT. DOT CORR TEST: AQUEOUS SOLNS UP TO, &
INCL, 45% DO NOT PRDCE CORR LESIONS WHE N TESTED UNDER DOT CNDTNS,
BUT AT 50% 2 OF 6 ANIMALS DEVELOPED LOC NECROSIS IN 4 HRS/LESS.
SKIN SENSIT: AT LEVELS OF 0.2% & LOWER NO SENSIT OCCURRED IN HUMAN
STUDIES. HIGHER LEVELS PRDCE ALLERGIC CON T DERM. (OTHER PREC)
Medical Cond Aggravated by Exposure:A REVIEW OF AVAILABLE DATA DOES NOT
IDENTIFY ANY WORSENING OF EXISTING CONDITIONS.

First Aid

First Aid:EYES: IMMED FLUSH FOR AT LEAST 15 MINS, HOLDING EYELIDS OPEN.
CALL MD IMMED. SKIN: IMMED FLUSH W/WATER FOR AT LEAST 15 MINS. LGE
SPLASH: FLOOD BODY UNDER SHOWER. CALL MD IMMED. INGEST: DO NOT
INDUCE V OMIT. DO NOT GIVE ANYTHING TO DRINK. SEEK MED ADVICE
IMMED. INHAL: REMOVE TO FRESH AIR. TREAT SYMPS. CALL MD. NOTE TO
MD: BASED ON INDIVIDUAL RXNS OF PATIENT, MD'S JUDGMENT SHOULD BE
USED TO CTL SYMPS & CLINICAL CNDTNS. CAUTION: IF UNCON, DFCLT
BRTHG/CONVLS, DO NOT INDUCE VOMIT/GIVE WATER. NOTE TO MD: PROBABLE
MUCOSAL DMG MAY CONTRAINDICATE USE OF GASTRIC LAVAGE. MEASURES
AGAINST CIRCULATORY SHOCK , RESP DEPRESS & CONVLS MAY BE NEEDED.

Fire Fighting

Flash Point Method:TCC
Flash Point:NONE
Extinguishing Media:THIS PRODUCT WOULD NOT BE EXPECTED TO BURN UNLESS
ALL THE WATER IS BOILED AWAY. THE REMAINING ORGANICS MAY BE
IGNITABLE. USE WATER TO COOL CONTAINERS EXPOSED TO FIRE.
Fire Fighting Procedures:WEAR NIOSH APPROVED SELF-CONTAINED BREATHING
APPARATUS AND FULL PROTECTIVE EQUIPMENT .

Accidental Release

Spill Release Procedures:SML LIQ SPILL: CONTAIN W/ABSORB MATL, SUCH AS
CLAY, SOIL/ANY COMMERCIALY AVAIL ABSORB. SHOVEL RECLAIMED LIQ &
ABSORB INTO RECOVERY/SALVAGE DRUMS FOR DISP. REFER TO CERCLA REGS.
LGE LIQ SPILL: DIKE TO PVNT FURTHER MOVEMENT & RECLAIM INTO
RECOVERY/SALVAGE DRUMS/TANK TRUCK FOR DISP. REFER TO CERCLA REGS.
LGE INDOOR SPILL: EVACUATE EMPLOYEES & VENT AREA. (SUP DAT)

Handling

Handling and Storage Precautions:KEEP CNTNR CLSD WHEN NOT IN USE. OTHER
PREC: ACUTE INHAL TOXICITY(ALBINO RATS):LC=>2.5 L/MIN(SATURATED
VAPOR FOR 6-8 HRS PRDCE IRRIT EFTS, BUT RSLTD IN NO DEATHS).
COMMENTS: EXAMINATION OF ALL SACR IFICED ANIMALS AT THE END OF THE
STUDY SHOWED NO ABNORM. CONT NEHC FOR MORE SPECIFIC INFO .
Other Precautions:EFTS OF OVEREXP: CROSS RXN W/FORMALDEHYDE/FROM LOWER
CONC GLUTARALDEHYDE DOES NOT OCCUR. PRIMARY EYE IRRIT TEST (ALBINO
RABBITS): SEV IRRIT. COMMENTS: AT LEVELS OF 0.2% & BELOW OF
GLUTARALDEHYDE NO EYE IRRIT WAS NOTED. LEVELS ABOVE 0.2% OF
GLUTARALDEHYDE PRDCE MOD TO SEV IRRIT & CORNEAL INJURY. (HNDLG &
STOR PREC)

Exposure Controls

Respiratory Protection:RESPIRATORY PROT IS NOT NORMALLY NEEDED SINCE
VOLATILITY & TOXICITY ARE LOW. IF SIGNIFICANT MISTS ARE GENERATED,
USE EITHER NIOSH APPROVED CHEMICAL CARTRIDGE RESPIRATOR W/A
DUST/MIST PREFILTER/SUPPLIE D AIR. FOR LARGE SPILLS, ENTRY INTO
LARGE TANKS, VESSELS/ENCLOSED SMALL SPACES W/INADEQUATE VENT, A
NIOSH APPROVED POSITIVE PRESSURE, SCBA IS RECOMMENDED.
Ventilation:GENERAL VENTILATION IS RECOMMENDED. ADDITIONALLY, LOCAL
EXHAUST VENTILATION IS RECOMMENDED WHERE VAPORS, OR MISTS MAY BE

RELEASED.

Protective Gloves:WEAR IMPERMEABLE GLOVES (NEOPRENE, NITRILE, PVC, NATURAL RUBB, VITON & BUTYL).

Eye Protection:ANSI APPROVED CHEMICAL WORKERS GOGGLES AND FULL LENGTH FACESHIELD .

Other Protective Equipment:ANSI APPROVED EMERGENCY EYEWASH AND DELUGE SHOWER . WEAR BOOTS AND APRON. A FULL SLICKER SUIT IS RECOMMENDED IF GROSS EXPOSURE IS POSSIBLE.

Work Hygienic Practices:REMOVE CONTAM CLTHG & THORO WASH AFFECTED AREA.

LAUNDER CONTAM CLTHG BEFORE REUSE. HUMAN EXPOS CHARACT: BASED ON NALCO'S REC PROD APPLICATION & MFR'S REC PERS PROT EQUIP, POTENTIAL HUMAN EXPOS IS: LOW.

Supplemental Safety and Health

SPILL PROC: THOSE RESPONSIBLE FOR CTL & RECOVERY SHOULD WEAR PROT EQUIP SPECIFIED IN CTL MEASURES SECTION. THIS PROD IS TOX TO FISH. IT

SHOULD NOT BE DIRECTLY DISCHARGED INTO LAKES, PONDS, STREAMS, WATERWAYS/PUBLIC WATER SUPPLIES. WASTE DISP METH: NON-HAZ LIQ WASTE CAN ALSO BE INCINERATED I/A/W LOC, STATE & FED REGS.

Chemical Properties

Boiling Pt: =100.6C, 213.F

B.P. Text:@ 760 MM HG

Melt/Freeze Pt: =-6.5C, 20.3F

Vapor Pres:16 MM HG @ 68C

Spec Gravity:1.04 @ 68F

pH:3.1-4.5 (NEAT)

Solubility in Water:COMPLETE

Appearance and Odor:COLORLESS LIQUID WITH CHARACTERISTIC ALDEHYDE ODOR.

Stability

Stability Indicator/Materials to Avoid:YES

AVOID CONTAMINATION WITH STRONG ACIDS AND BASES. CONTACT WITH THESE MAY CAUSE A HEAT-GENERATING REACTION WHICH IS NOT EXPECTED TO BE VIOLENT.

Stability Condition to Avoid:AVOID STORAGE AT TEMPERATURES ABOVE 100C.

Hazardous Decomposition Products:IN THE EVENT OF COMBUSTION CARBON MONOXIDE, CARBON DIOXIDE MAY BE FORMED. DO NOT BREATHE SMOKE OR FUMES. WEAR SUITABLE PROTECTIVE EQUIPMENT.

Disposal

Waste Disposal Methods:IF PROD BECOMES WASTE, IT DOES NOT MEET CRITERIA OF HAZ WASTE AS DEFINED UNDER RCRA 40 CFR 261, SINCE IT DOES NOT HAVE CHARACTS OF SUBPART C, NOR IS IT LISTED UNDER SUBPART D. AS NON-HAZ LIQ WASTE, IT SHOULD BE SOLIDIFIED W/STABILIZING AGENTS (SUCH AS SAND, FLY ASH/CEMENT) SO THAT NO FREE LIQ REMAIN S BEFORE DISP TO INDUS WASTE LANDFILL. (SUP DAT)

Toxicology

Toxicological Information:ACUTE TOX STUDIES HAVE BEEN CONDUCTED ON VARIOUS CONCS OF GLUTARALDEHYDE. RSLTS ARE SHOWN BELOW (A.I. REFERS TO ACTIVE ING BASIS). ACUTE ORAL TOX (ALBINO RATS): LD50 50% SOLN=1.3 ML/KG (733 MG/KG A.I.); LD50 45% SOLN=1.2 ML/KG (605 MG/KG A.I.); LD50 25% SOLN=1.54-1.87 ML/KG (409-497 MG/KG A.I.); LD50 10% SOLN=1.07-1.62 ML/KG (111-168 MG/KG A.I.). ACUTE DERMAL TOX (ALBINO RABBITS): LD50 50% SOLN=1. 59-2.54 ML/KG (897-1432 MG/KG A.I.); LD50 45% SOLN=2.00-2.71 ML/KG (1004-1360 MG/KG A.I.); LD50 25% SOLN=8.0-12.80 ML/KG (2128-3045 MG/KG A.I.). A MAJOR DETERMINANT OF ACUTE PERCUTANEOUS TOX OF GLUTAR ALDEHYDE SOLN IS (EFTS OF OVEREXP)

Other Information

Disclaimer (provided with this information by the compiling agencies):

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assume responsibility for the suitability of this information to their particular situation.

Ecology

Ecological: BIOCHEM OXYGEN DEMAND (5-DAY BOD): 0. CHEM OXYGEN DEMAND (COD): 349,000 MG/L. AQUATIC DATA: AQUATIC TOX STUDIES HAVE BEEN PERFORMED ON VARIOUS CONCS OF GLUTARALDEHYDE SOLNS W/RLSTS AS FOLLOWS. BLUEGIL L SUNFISH: 96-HR STATIC ACUTE LC50 25% SOLN=37.6 PPM; 96-HR NOEL 25% SOLN=10 PPM. RAINBOW TROUT: 96-HR STATIC ACUTE LC50 25% SOLN=42.1 PPM; 96-HR NOEL 25% SOLN=32 PPM. DAPHNIA MAGNA: 48-HR STATIC ACUTE LC50 25% SOLN=16.9 PPM; 48-HR NOEL 25% SOLN=5 PPM. DATA FOR 25% SOLNS USING OTHER SPECIES: 48-HR STATIC ACUTE LC50 IN OYSTER LARVAE=2.1 PPM; 96-HR STATIC ACUTE LC50 IN GREEN CRABS=465 PPM. CONT NEHC FOR MORE COMPLETE INFO .

Transport

Transport Information: PROPER SHIPPING NAME/HAZ CLASS MAY VARY BY PACKAGING, PROPERTIES, & MODE OF TRANSPORTATION. TYPICAL PROPER SHIPPING NAMES FOR THIS PROD ARE: ALL TRANSPORTATION MODES: PROD IS NOT REGULATED; AIR TRANSPORTATION: OTHER REGULATED SUBSTANCES; MARINE TRANSPORTATION (IMDG/IMO): PROD IS NOT REGULATED; UN/ID #: NONE; HAZ CLASS-PRIMARY: 0-NOT REQUIRED; PACKING GROUP: N/A; IMDG PAGE #: NONE; IATA PACKING INSTRUCTION: CARGO: 906; IATA CARGO AIRCRAFT LIM: NO LIM (MAX NET QTY PER PACKAGE); FLASH POINT: NONE; TECHNICAL NAMES: GLUTARALDEHYDE; RQ LBS (PER PACKAGE): NONE; RQ COMPONENTS: NONE.

Regulatory

SARA Title III Information: SECTION 302: EXTREMELY HAZ SUBSTANCES (40 CFR 355): PROD CNTNS NO INGS LISTED IN APPENDIX A & B AS EXTREMELY HAZ SUBSTANCE. SECTIONS 311 & 312: MSDS REQS (40 CFR 370): MFR'S HAZ EVALUATION HAS FOUND PROD TO BE HAZ. PROD SHOULD BE RPTD UNDER THE FOLLOWING EPA HAZ CATEGORIES: XX IMMEDIATE (ACUTE) HLTH HAZ; XX DELAYED (CHRONIC) HLTH HAZ. UNDER SARA 311 & 312, EPA HAS ESTABLISHED THRESHOLD QTYS FOR RPTG OF HAZ CHEMS. CURRENT THRESHOLDS ARE: 500 LBS/TPQ, WHICHEVER IS LOWER, FOR EXTREMELY HAZ SUBSTANCES & 10,000 LBS FOR ALL OTHER HAZ CHEMS. PROD DOES NOT CONTAIN INGS LISTED IN SARA SEC 313 LIST OF TOXIC CHEM.

Federal Regulatory Information: OSHA'S HAZ COMMUNICATION RULE, 29 CFR 1910.1200: BASED ON MFR'S HAZ EVALUATION, THE FOLLOWING ING IN PROD IS HAZ & REASON IS SHOWN BELOW: GLUTARALDEHYDE: CORR; CEILING 0.5 PPM, 0.2 MG/M3 ACGIH/TLV; CEILING 0.2 PPM, 0.8 MG/M3 OSHA/PEL. CERCLA/SUPERFUND, 40 CFR 117, 302: NOTIFICATION OF SPILLS OF PROD IS NOT REQUIRED. TSCA: ACTIVE ING IS REGULATED UNDER FIFRA & EXEMPTED UNDER TSCA. ALL INERTS ARE ON INVENTORY LIST. FED INSECTICIDE, FUNGICIDE & RODENTICIDE ACT (FIFRA), 7 USC 135: EPA REG # 10352-23 -1706. PROD IS REGISTERED FOR USE AS MICROORGANISM CTL CHEM. IN ALL CASES FOLLOW INSTRUCTIONS ON PROD LABEL. CONT NEHC FOR MORE INFO .

State Regulatory Information: CALIFORNIA PROPOSITION 65: THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS WHICH REQUIRE WARNING UNDER CALIFORNIA PROPOSITION 65. MICHIGAN CRITICAL MATERIALS: THIS PRODUCT DOES NOT CONTAIN INGREDIENTS LISTED ON THE MICHIGAN CRITICAL MATERIALS REGISTER. STATE RIGHT TO KNOW LAWS: REGULATED IN THOSE STATES USING THE TLV FOR GLUTARALDEHYDE AS A CRITERIA FOR LISTING.