

CHEMICAL SPECIALISTS AND DEVELOPMENT -- BUTANOL NORMAL, 3680000 -- 6810-00-281-6928

===== Product Identification =====

Product ID:BUTANOL NORMAL, 3680000
MSDS Date:01/26/1998
FSC:6810
NIIN:00-281-6928
Status Code:A
MSDS Number: CJMVJ
=== Responsible Party ===
Company Name:CHEMICAL SPECIALISTS AND DEVELOPMENT
Address:5 HACKBERRY LANE
Box:3087
City:CONROE
State:TX
ZIP:77305
Country:US
Info Phone Num
:409-756-1065/1083 FAX DAVID /SHANAN
Emergency Phone Num:614-276-6143
CAGE:4N760
=== Contractor Identification ===
Company Name:CHEMICAL SPECIALISTS AND DEVELOPMENT INC
Address:2210 HACKBERRY LN
Box:687
City:CONROE
State:TX
ZIP:77305
Country:US
Phone:409-756-1065
Contract Num:SP0450-99-MNJ18
CAGE:4N760

===== Composition/Information on Ingredients =====

Ingred Name:N-BUTYL ALCOHOL (SARA III)
CAS:71-36-3
RTECS #:EO1400000
Fraction by Wt: 100%
Other REC Limits:NONE RECOMMENDED

OSHA PEL:100 PPM
ACGIH TLV:S, C 50 PPM; 9394
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

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

LD50 LC50 Mixture:ORAL LD50 (RAT) IS 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:TARGET ORGANS:BLOOD SYSTEM, KIDNEY AND LUNGS. ACUTE: CAUSES IRRITATION OF SKIN, EYES. INHALATION OR INGESTION OF SMALL AMOUNTS WILL NOT CAUSE ANY HARM. INHALATION ABOVE THRESHOLD MAY BE HARMFUL. SWALLOWING LARGE AMOUNTS MAY BE HARMFUL. CHRONIC: PROLONGED/REPEATED EXPOSURE MAY CAUSE ANEMIA, KIDNEY AND LUNG DAMAGE.
Explanation of Carcinogenicity:NORMAL BUTANOL IS NOT LISTED AS A CARCINOGEN BY NTP, IARC OR REGULATED BY OSHA AS A CARCINOGEN.
Effects of Overexposure:CNS EFFECTS: DIZZINESS, HEADACHE, NAUSEA, VOMITING, WEAKNESS, FATIGUE, UNCONSCIOUSNESS, POSSIBLE DEATH. INHALED: COUGHING, WHEEZING, SHORTNESS OF BREATH
. EYES: REDNESS, TEARING, BLURRED VISION. SKIN: DRY SKIN, IRRITATION.
Medical Cond Aggravated by Exposure:PRE-EXISTING SKIN, BLOOD, KIDNEY AND LUNG DISORDERS, KIDNEY DISEASE.

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

First Aid:INHALED: REMOVE TO FRESH AIR. RESTORE BREATHING IF NEEDED. GET MEDICAL ATTENTION. EYES: FLUSH WITH LOTS OF WATER 15 MINUTES. SEE DOCTOR. SKIN: REMOVE CONTAMINATED CLOTHES. WASH WITH SOAP AND WATER. INGESTED: IF CONSCIOUS, IMMEDIATELY GIVE 2 GLASSES OF WATER FOLLOWED BY INDUCING VOMITING BY GIVING IPECAC SYRUP OR STICKING FINGER DOWN THROAT. GET IMMEDIATE MEDICAL ATTENTION.

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

Flash Point Method:TCC
Flash Point:=35.C, 95.F
Autoignition Temp:=354.4C, 670.F
Lower Limits:1.4%
Upper Limits:11.2%
Extinguishing Media:ALCOHOL FOAM, WATER FOG, CARBON DIOXIDE, DRY CHEMICAL
Fire Fighting Procedures:WEAR SELF-CONTAINED BREATHING APPARATUS AND

FULL PROTECTIVE CLOTHING.
Unusual Fire/Explosion Hazard:VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG GROUND TO A DISTANT IGNITION SOURCE, IGNITE AND FLASH BACK.

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

Spill Release Procedures:SMALL: ABSORB ON INERT MATERIAL AND PLACE IN A CONTAINER FOR LATER DISPOSAL. LARGE: ELIMINATE ALL SOURCES OF IGNITION. WEAR PROPER PROTECTIVE EQUIPMENT. ISOLATE AND DENY ENTRY. STOP LEAK, CONTAIN SPILL. PUMP TO SALVAGE TANK OR ABSORB W/INERT MATERIAL.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:STORE IN A COOL, DRY AREA AWAY FROM SOURCES OF IGNITION AND INCOMPATIBLE MATERIALS.
Other Precautions:CONTAINERS OF THIS PRODUCT MAY BE HAZARDOUS WHEN "EMPTY";THEY MAY CONTAIN PRODUCT RESIDUES,ALL HAZARD PRECAUTIONS GIVEN IN THIS MSDS MUST BE OBSERVED.DO NOT WELD,CUT,BRAZE EMPTY CONTAINERS.
PROPERLY BOND/GROUND CONTAINERS DURING TRANSFER OPS

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

Respiratory Protection:IF WORKPLACE EXPOSURE LIMITS EXCEED, USE NIOSH/MSHA APPROVED RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE OR SELF-CONTAINED BREATHING APPARATUS. USE IAW 29 CFR 19101.34.
Ventilation:USE ADEQUATE EXPLOSION-PROOF MECHANICAL VENTILATION OR LOCAL EXHAUST TO MAINTAIN EXPOSURE BELOW PEL/TLV.
Protective Gloves:NITRILE
Eye Protection:SAFETY GLASSES/CHEMICAL SPLASH GOGGLES
Other Protective Equipment:IMPERVIOUS CLOTHING TO PREVENT PROLONGED OR REPEATED SKIN CONTACT.
Work Hygienic Practices:WASH HANDS AFTER USE AND BEFORE EATING, DRINKING, OR SMOKING. LAUNDRY CONTAMINATED CLOTHES BEFORE REUSE.
Supplemental Safety and Health

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

HCC:F3
Boiling Pt:=117.2C, 243.F
Vapor Pres:4.4 MM HG @60F
Vapor Density:2.6(AIR=1)
Spec Gravity:>0.807(WATER=1)
VOC Pounds/Gallon:810
VOC Grams/Li

ter:6.75
Viscosity:N/3.0 CPS
Evaporation Rate & Reference:0.46 (N-BUTYL ACETATE=1)
Solubility in Water:SLIGHT (7.9%)
Appearance and Odor:COLORLESS LIQUID; ALCOHOL ODOR
Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES
STRONG OXIDIZING AGENTS, ALUMINUM, CHROMIUM TRIOXIDE
Stability Condition to Avoid:AVOID SOURCES OF IGNITION AND CONTACT WITH
STRONG OXIDIZING AGENTS, ALUMINUM, OR CHROMIUM TRIOXID
E.
Hazardous Decomposition Products:CARBON MONOXIDE AND CARBON DIOXIDE

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

Waste Disposal Methods:DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND
FEDERAL REGULATIONS. EPA WASTE D001 MAY APPLY.

===== MSDS Transport Information =====

Transport Information:REGULATED.

===== Regulatory Information =====

SARA Title III Information:SEC 302= NOT LISTED; CERCLA RQ=5000
LBS; SEC
311/312 HAZ CLASS: IMMEDIATE, DELAYED & FIRE=YES; SARA 313= LISTED.
Federal Regulatory Information:TASCA INVENTORY= LISTED.
State Regulatory Information:CA 65= NO; NJ AND PA= YES; CANADIAN DSL =
YES.

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