

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.P

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.

Disclaimer (provided with this information by the compiling agencies):  
This information is formulated for use by elements of the Department  
of Defense. The United States of America in no manner whatsoever,  
expressly or implied, warrants this information to be accurate and  
dis  
claims all liability for its use. Any person utilizing this  
document should seek competent professional advice to verify and  
assume responsibility for the suitability of this information to their  
particular situation.