

CELANESE LTD -- 216311, N-BUTANOL -- 6810-00-281-6928

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

Product ID:216311, N-BUTANOL  
MSDS Date:07/03/1997  
FSC:6810  
NIIN:00-281-6928  
Status Code:A  
MSDS Number: CLMMS  
=== Responsible Party ===  
Company Name:CELANESE LTD  
Address:1601 W LBJ FREEWAY  
Box:819005  
City:DALLAS  
State:TX  
ZIP:75381-9005  
Country:US  
Info Phone Num:972-443-4000  
Emergency Phone Num:800-835-5235  
Resp

. Party Other MSDS Num.:18  
Preparer's Name:NOT PROVIDED  
Chemtrec Ind/Phone:(800)424-9300  
CAGE:1EEP4

=== Contractor Identification ===

Company Name:CELANESE LTD  
Address:1601 W LBJ FREEWAY  
Box:819005  
City:DALLAS  
State:TX  
ZIP:75381-9005  
Country:US  
Phone:972-443-4000  
CAGE:1EEP4  
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:SP0450-01-M-ZG19  
CAGE:4N760

===== Composition/Informa

tion on Ingredients =====

Ingred Name:N-BUTANOL

CAS:71-36-3

RTECS #:EO1400000

= Wt:99.8

Other REC Limits:NOT PROVIDED

OSHA PEL:300 MG/M3;100 PPM

ACGIH STEL:C152 MG/M3;C50 PPM

EPA Rpt Qty:5000 LBS

DOT Rpt Qty:5000 LBS

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

LD50 LC50 Mixture:LD50 (ORAL, RAT) 2.5 G/KG

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

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

Health Hazards Acute and Chronic:IMMEDIATE EFFEC

TS: SKIN: CAN CAUSE

MODERATE INJURY (REDDENING AND SWELLING). EYES: CAN CAUSE SEVERE INJURY. DAMAGE REVERSIBLE. INHALATION: CAUSES IRRITATION OF NASAL PASSAGES. CAUSES NAUSEA, DIZZINESS , HEADACHE AND STUPOR. PROLONGED EXPOSURE CAN CAUSE HEARING IMPAIRMENT. INGESTION: CAUSES MOUTH AND THROAT IRRITATION. CAN CAUSE NAUSEA, DIZZINESS, HEADACHE AND STUPOR.

Explanation of Carcinogenicity:NONE

Effects of Overexposure:SKIN: CAN CAUSE REDDENING AND SWELLING.

INHALATION: CAUSE

S IRRITATION OF NASAL PASSAGES. CAUSES NAUSEA,

DIZZINESS, HEADACHE AND STUPOR. PROLONGED EXPOSURE CAN CAUSE HEARING IMPAIRMENT. INGESTION: CAUS ES MOUTH AND THROAT IRRITATION. CAN CAUSE NAUSEA, DIZZINESS, HEADACHE AND STUPOR.

Medical Cond Aggravated by Exposure:PERSONS WITH PRE-EXISTING SKIN

DISORDERS, EYE PROBLEMS OR IMPAIRED RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS PRODUCT.

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

Fir

st Aid:SKIN: REMOVE CONTAMINATED CLOTHING AND WASH CONTAMINATED SKIN WITH LARGE AMOUNT OF SOAP AND WATER. IF IRRITATION PERSISTS CONTACT A PHYSICIAN. EYES: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. CONTACT A PHYSICIAN IMMEDIATELY. INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, THEN OXYGEN, IF NEEDED. CONTACT A PHYSICIAN IMMEDIATELY. INGESTION: INDUCE VOMITING OF CONSCIOUS PATIENT IMMEDIATELY BY GIVING TWO GLASSES OF WATER AND PRESSIN

G FINGER DOWN THROAT. CONTACT A PHYSICIAN IMMEDIATELY.

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

Flash Point Method:CC

Flash Point:=36.7C, 98.F

Lower Limits:1.4

Upper Limits:11.2

Extinguishing Media:USE CARBON DIOXIDE OR DRY CHEMICAL FOR SMALL FIRES;  
ALCOHOL-TYPE AQUEOUS FILM-FORMING FOAM OR WATER SPRAY FOR LARGE  
FIRES. WATER MAY BE INEFFECTIVE.

Fire Fighting Procedures:IN THE EVENT OF FIRE, WEAR FULL PROTECTIVE  
CLOTHING AND NIOSH-APPROVED SELF-CONTAINED  
BREATHING APPARATUS WITH  
FULL FACEPIECE OPERATED IN POSITIVE PRESSURE MODE. WATER SHOULD BE  
USED TO COOL FIRE EXPOSED STRUCTURES AND VESSELS.

Unusual Fire/Explosion Hazard:VAPOR IS HEAVIER THAN AIR AND CAN TRAVEL  
CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK.  
CONTAINERS MAY RUPTURE DUE TO VAPOR PRESSURE BUILDUP. MATERIAL  
CREATES A SPECIAL HAZARD BECAUSE IT FLOATS ON WATER.

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

Spill Release Pro

cedures:WEAR PROTECTIVE EQUIPMENT. ELIMINATE SOURCES  
OF IGNITION. VENTILATE AREA. USE NON-SPARKING TOOLS AND EQUIPMENT.  
COLLECT LIQUID IN AN APPROPRIATE CONTAINER OR ABSORB WITH AN INERT  
MATERIAL (VERMICULITE, DRY SAND OR EARTH) FOR REUSE/RECYCLING OR  
DISPOSAL. PREVENT LIQUID FROM ENTERING SEWERS, WATERWAYS OR LOW  
AREAS. CALL 800-424-8802 IF RQ=5000 LBS ARE SPILLED.

Neutralizing Agent:NOT RELEVANT

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

Handling

and Storage Precautions:STORE IN A COOL, WELL VENTILATED AREA.  
KEEP AWAY FROM HEAT, SPARKS AND FLAME. KEEP CONTAINER TIGHTLY  
CAPPED WHEN NOT IN USE. ALWAYS OPEN CONTAINERS SLOWLY. WHEN  
TRANSFERRING, FOLLOW PROPER GROUNDING PROCEDURES. USE  
SPARK-RESISTANT TOOLS. USE WITH ADEQUATE VENTILATION.

Other Precautions:AVOID BREATHING VAPORS. AVOID CONTACT WITH EYES, SKIN  
AND CLOTHING. WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING.  
DECONTAMINATE SOILED CLOTHING THOROUGHLY. D

ISCARDED CONTAMINATED  
LEATHER CLOTHI NG.

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

Respiratory Protection:IF THE EXPOSURE LIMIT IS EXCEEDED, A FULL  
FACEPIECE RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE MAY BE WORN UPTO  
50 TIMES THE EXPOSURE LIMIT OR THE MAXIMUM LIMIT SUPPLIED BY THE  
RESPIRATOR SUPPLIER, WHIC HEVER IS LOWEST. IN EMERGENCY, WEAR A  
NIOSH-APPROVED POSITIVE-PRESSURE SELF-CONTAINED BREATHING  
APPARATUS.

Ventilation:A SYSTEM OF LOCAL AND/  
OR GENERAL EXHAUST IS RECOMMENDED TO  
KEEP EMPLOYEE EXPOSURE BELOW THE AIRBORNE EXPOSURE LIMITS.

Protective Gloves:RUBBER, NEOPRENE.

Eye Protection:SAFETY GLASSES/CHEMICAL SPLASH GOGGLES/FACE SHIELD.

Other Protective Equipment:MAINTAIN EYE WASH STATION & SAFETY SHOWERS  
IN WORK AREA. SKIN PROTECTION:IMPERVIOUS CLOTHING INCLUDING  
BOOTS,LAB COAT,APRON OR COVERALLS, AS APPROPRIATE

Work Hygienic Practices:DLA-HMIS STAFF: OBSERVE GOOD INDUSTRIAL HYGIENE  
PRACTICES AND RECOMMENDED PROCEDU  
RES.

Supplemental Safety and Health

WARNING: AIR PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN  
OXYGEN-DEFICIENT ATMOSPHERES.

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

HCC:F3

NRC/State Lic Num:NOT RELEVANT

Boiling Pt:=117.7C, 243.9F

Melt/Freeze Pt:=-89.7C, -129.8F

Decomp Temp:Decomp Text:NOT PROVIDED

Vapor Pres:4.4 @ 68F/20C

Vapor Density:2.57

Spec Gravity:0.81

Viscosity:NOT PROVIDED

Evaporation Rate & Reference:0.45 (BUTYL ACETATE=1)

Solubility in Water:7.8

% @ 20C/68F

Appearance and Odor:CLEAR, COLORLESS, MOBILE LIQUID - MILDL ALCOHOL  
ODOR

Percent Volatiles by Volume:100.0

Corrosion Rate:NOT PROVIDED

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

Stability Indicator/Materials to Avoid:YES

OXIDIZING AGENTS SUCH AS HYDROGEN PEROXIDE, NITRIC ACID, PERCHLORIC  
ACID OR CHROMIUM TRIOXIDE.

Stability Condition to Avoid:HEAT, SPARKS, FLAME

Hazardous Decomposition Products:CARBON MONOXIDE

===== Toxicological Inf

ormation =====

Toxicological Information:ORAL RAT LD50= 2,500 MG/KG, SLIGHTLY TOXIC.  
INHALATION RAT LC50= 8000 PPM/4H, PRACTICALLY NON-TOXIC. SKIN  
RABBIT LD50= 4,200 MG/K, SLIGHTLY TOXIC. NO MUTAGENICITY.

===== Ecological Information =====

Ecological:NOT AVAILABLE

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

Waste Disposal Methods:ALL NOTIFICATION, CLEAN-UP AND DISPOSAL SHOULD  
BE CARRIED OUT IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL  
REGULATIONS. PREFERRED METHODS OF WASTE DISPOSAL ARE INCINERATION  
OR BIOLOGICAL TREATMENT IN FEDERAL/STATE APPROVED FACILITY.  
HAZARDOUS WASTE (40 CFR 261): YES: U031.

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

Transport Information:PROPER SHIPPING NAME: BUTANOLS. HAZARD CLASS: 3.  
UN NO: UN1120. PACKING GROUP: III. RQ = 5000 LBS.

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

SARA Title III Information

:SARA 313: LISTED. CERCLA: N-BUTANOL 99.8%  
(71-36-3). SARA 304: N-BUTANOL 99.8% (71-36-3). SARA 311: ACUTE  
HEALTH: YES, CHRONIC HEALTH: YES. FIRE: YES, SUDDEN RELEASE OF  
PRESSURE: NO, REACTIVE: NO.

Federal Regulatory Information:ON TSCA OR QUALIFY FOR AN EXEMPTION  
State Regulatory Information:STATE REGULATIONS: THE FOLLOWING CHEMICAL  
IS SUBJECT TO THE RIGHT-TO-KNOW REGULATIONS IN THESE STATES:  
N-BUTANOL: CT, FL, LA, MA, NJ, NY, PA, RI.

===== Other Information =====

Disclaimer (provided with this information by the compiling agencies):  
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assume responsibility for the suitability of this information

n to their  
particular situation.