

ANSUL FIRE PROTECTION,WORMALD U.S.INC. -- CARNONIC ACID;CARBON DIOXIDE --  
4210-00-413-4528

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

Product ID:CARNONIC ACID;CARBON DIOXIDE

MSDS Date:02/01/1999

FSC:4210

NIIN:00-413-4528

MSDS Number: BJJDY

=== Responsible Party ===

Company Name:ANSUL FIRE PROTECTION,WORMALD U.S.INC.

Address:ONE STANTON STREET

City:MARINETTE

State:WI

ZIP:54143-2542

Country:US

Info Phone N

um:715-735-7411

Emergency Phone Num:715-735-7411

Preparer's Name:SAFETY & HEALTH DEPT

Chemtec Ind/Phone:(800)424-9300

CAGE:03670

=== Contractor Identification ===

Company Name:ALL-SAFE INC

Address:4767 LANGTON RD

Box:116

City:HILLIARD

State:OH

ZIP:43026

Country:US

Phone:614-876-4041

CAGE:2X264

Company Name:ANSUL INC

Address:ONE STANTON STREET

Box:City:MARINETTE

State:WI

ZIP:54143-2542

Country:US

Phone:715-735-7411

CAGE:03670

Company Name:FIRE AND TECHNICAL EQUIPMENT COPR

CAGE:59920

Company Name

:KEYSTONE FIRE PROTECTION CO.  
Address:108 PARK DRIVE, SUITE 3  
Box:City:MONTGOMERYVILLE  
State:PA  
ZIP:18936  
Country:US  
Phone:215-641-0100/ FAX 215-641-9638  
Contract Num:SP0560-99-M-H044  
CAGE:1U693

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Composition/Information on Ingredients  
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Ingred Name:CARBON DIOXIDE  
CAS:124-38-9  
RTECS #:FF6400000  
Fraction by Wt: 100.0%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:5000 PPM  
ACGIH TLV:5000PPM/30000STEL;93

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Hazards Identification  
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D50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.  
Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic:EYES:CONTACT W/CO\*2 SNOW(DRY ICE) CAN  
PRODUCE CHILLING SENSATIONS & DISCOMFORT, FROSTBITE. SKIN: EVAP OF  
LIQ FROM SKIN CAN PRODUCE CHILLING SENSATIONS. FROSTBITE. AVOID  
CO\*2 SNOW(DRY ICE).INHAL: VAPOR S HEAVIER THAN AIR CAN CAUSE  
SUFFOCATIONBY REDUCING OXYG AVAIL FOR BRTHG. BRTHG HIGH CONC VAP  
OR  
CAN CAUSE(SEE SUPP DATA)  
Explanation of Carcinogenicity:NOT RELEVANT  
Effects of Overexposure:ACUTE: DIZZINESS, IMPAIRED COORDINATION,  
REDUCED MENTAL ACUIY, HEADACHES, TINNITUS, DIFFICULTY BREATHING,  
DROWSINESS, DEPENDING ON LENGTH OF EXPOSURE AND CONCENTRATIONS.  
CHRONIC: NONE KNOWN WHEN OCC UPATIONAL EXPOSURES ARE BELOW THE TLV.  
Medical Cond Aggravated by Exposure:RESPIRATORY PROBLEMS

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First Aid Measures  
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First Aid:EYES: IMMED

FLUSH W/PLENTY WATER 15 MIN WHILE HOLDING LIDS  
OPEN. IF REDNESS, ITCHING, OR A BURNING SENSATION DEVELOPS, GET  
MED ATTN. TREAT FOR FROSTBITE IF NEC. SKIN: WASH MATL OFF W/COPIOUS  
AMTS OF SOAP & WATER AT LEAST 15 MIN. IF REDNESS, ITCHING, OR  
BURNING SENSATION DEVELOPS, GET MED ATTN. TREAT FOR FROSTBITE IF  
NEC. INHAL: REMOVE TO FRESH AIR. IF COUGH/RESPIRARY SYMPTOMS (SEE  
SUPP DATA)

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

Flash Point:NONE  
Fire Fighting Procedures:NONE THIS IS AN EXTINGUISHING AGENT  
Unusual Fire/Explosion Hazard:THOUGH GAS CYLINDERS ARE EQUIPPED WITH  
PRESSURE AND TEMPERATURE RELIEF DEVICES, THEY SHOULD BE REMOVED  
FROM HIGH TEMPERATURES OR FIRE TO AVOID RISK OF RUPTURE.

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

Spill Release Procedures:EVACUATE AREA; VENTILATE TO OUTSIDE  
ATMOSPHERE. COOL OR REMOVE HOT, METAL SURFACES OR SOURCE OF  
NON-EXTINGUISHED FLAMES.  
Neutralizing Age  
nt:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:STORE CONTAINERS IN A CLEAN, DRY WELL  
VENTILATED AREA, AWAY FROM HEAT ABOVE 120F. STORE AS A COMPRESSED  
GAS IN DOT APPROVED VESSELS.  
Other Precautions:IF CYLINDER OR CARTRIDGE IS NOT ATTACHED TO A SYSTEM,  
IT MUST BE SAFETY CAPPED TO PROTECT AGAINST VIOLENT VESSEL MOVEMENT  
OR FORCE OF ESCAPING GAS IF VALVE IS ACTUATED OR SEAL IS PUNCTURED.

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

Respiratory Protection:NOT NORMALLY NECESSARY IF CONTROLS ARE ADEQUATE.  
IF TLV IS EXCEEDED OR EXPOSURE IS PROLONGED, ASELF-CONTAINED  
EATHING APPARATUS IS RECOMMENDED.  
Ventilation:LOCAL EXHAUST RECOMMENDED IN CONFINED SPACES. MECHANICAL  
RECOMMENDED.  
Protective Gloves:FOR CONTACT WITH DRY ICE  
Eye Protection:CHEM ICAL GOGGLES,FULL FACESHLD  
Other Protective Equipment:PROTECTIVE CLOTHING FOR CONTACT WITH DRY  
ICE.  
Work

Hygienic Practices:NONE SPECIFIED BY MANUFACTURER

Supplemental Safety and Health

HEALTH HAZARD: LGHT HEAD, GIDD, SHORTNESS OF BREATH, MUSCULAR TREMORS & WEAKNESS, ACROCYANOSIS. ALSO UNCON/EVEN DEATH. EMERGENCY FIRST AID PROCEDURES: OCCUR, CONSULT MD. IF NOT BRTHING, GIVE ARTIFICIA L RESPIRATION,PREFERABLY MOUTH-TO-MOUTH.IF BRTHING DFCLT GIVE OXYG. CONSULT MD. INGEST:GET MD IMMED .

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

HCC:G3

Vapor Pres:830PSI@20C

Vapor Density:1.5

Spec Gravity:1.98

Evaporation Rate & Reference:N/A GAS @ ROOM TEMP

Solubility in Water:88ML CO\*2/100ML H\*2O

Appearance and Odor:COLORLESS GAS WITH NO ODOR

Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES

REACTS VIGOROUSLY WITH (AL + NA\*20\*2), CS\*20, LI, K, MG(C\*2H\*5)\*2, (MG + NA\*20), KHC\*2, NA, NA\*2C\*2, NAK, TI.

Hazardous Decomposition Products:NONE

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sposal Considerations =====

Waste Disposal Methods:DISPOSE OF IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

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