

ANSUL FIRE PROTECTION,WORMALD U.S.INC. -- CARBON DIOXIDE -- 4210-00-251-7491  
===== Product Identification =====

Product ID:CARBON DIOXIDE

MSDS Date:06/01/1989

FSC:4210

NIIN:00-251-7491

MSDS Number: BKCDL

=== 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 Num:715-735-7411

Emergency Pho

ne Num:715-735-7411

CAGE:03670

=== Contractor Identification ===

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:HILLER SYSTEMS INC

Address:833 PRINCIPAL LN

Box:City:CHESAPEAKE

State:VA

ZIP:23320

Country:US

Phone:757-549-9123

CAGE:1DA54

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

Ingred Name:CARBON DIOXIDE

CAS:124-38-9

RTECS #:FF6400000

Fraction by Wt: 100%

Other REC Limi

ts:NONE SPECIFIED  
OSHA PEL:5000 PPM  
ACGIH TLV:5000PPM/30000STEL;93

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

LD50 LC50 Mixture:ORAL LD50 (RAT) IS UNKNOWN.  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Effects of Overexposure:SEE HEALTH HAZARDS SECTION.  
Medical Cond Aggravated by Exposure:RESPIRATORY PROBLEMS

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

First Aid:GET MEDICAL ATTENTION.  
INHALATION:REMOVE TO FRESH AIR  
QUICKLY.GIVE CPR/OXYGEN IF NEEDED.EYES:IMMEDIATELY FLUSH WITH  
PLENTY OF TEPID WATER/STERILE SALINE.SKIN:FLUSH WITH LUKEWARM  
WATER.DO NOT USE HOT WA TER.PROMPT MEDICAL ATTENTION IS MANDATORY  
IN ALL CASES OF OVEREXPOSURE TO CO2.RESCUE PERSONNEL SHOULD BE  
EQUIPPED WITH SELF CONTAINED BREATHING APPARATUS.

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

Flash Point:NONE  
Extinguishing Media:MEDIA APPROPRIATE FOR SURROUNDING  
FIRE.  
Fire Fighting Procedures: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.

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

Spill Release Procedures:EVACUATE ALL PERSONNEL FROM AREA. USE  
APPROPRIATE PROTECTIVE EQUIPMENT. PROVIDE VENTILATION TO AREA AND  
AVOID CONTACT WITH SOLID OR LIQUID AND EXCESSIVE INHALATION OF  
VAPOR. VALVE OFF CARBON DIOXIDE SUPPLY FROM LEAKING OR BROKEN  
COMPONENTS.  
Neutralizing Agent:NOT APPLICABLE.

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

Handling and Storage Precautions:STORE IN A COOL,DRY,VENTILATED PLACE  
AWAY FROM HEAT ABOVE 120F.  
Other Precautions:AVOID PROLONGED OR REPEATED BREATHING OF VAPOR. AVOID  
CONTACT WITH EYES OR SKIN. USE WITH ADEQUATE VENTILATION. WASH  
THOROUGHLY AFTER HANDLING.

=====

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

Respiratory Protection: POSITIVE PRESSURE AIR LINE WITH FULL FACE PIECE AND ESCAPE AIR SUPPLY OR SELF CONTAINED BREATHING APPARATUS SHOULD BE AVAILABLE FOR EMERGENCY USE.

Ventilation: SUFFICIENT TO PREVENT ACCUMULATION ABOVE TLV. LOCAL EXHAUST SHOULD BE LOCATED NEAR THE FLOOR.

Protective Gloves: INSULATED AND COLD RESISTANT

Eye Protection: SAFETY GOGGLES WITH OPTIONAL FACE SHIELD

Other Protective Equipment: EYE WASH STATION AND SAFETY SHOWER.

INDUSTRIAL-TYPE WORK CLOTHING AND APRON AS REQUIRED.

Work Hygienic Practices: OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES.

Supplemental Safety and Health

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

HCC: G3

Vapor Pres: 42928

Vapor Density: 1.5

Spec Gravity: 1.98

Solubility in Water: 88 ML CO<sub>2</sub>/100 ML

Appearance and Odor: COLORLESS GAS WITH NO ODOR

Percent Volatiles by Volume: 100

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

Stability Indicator/Materials to Avoid: YES

SODIUM PEROXIDE+AL/MG, REACTIVE METALS (ALKALI METALS, MG, AL, TITANIUM/ZIRCONIUM), THEIR HYDRIDES, AND DIETHYL MAGNESIUM

Stability Condition to Avoid: EXCESSIVE HEAT AND FLAMES

Hazardous Decomposition Products: NONE

==== Disposal Considerations =====

Waste Disposal Methods: CONTAMINATED AREA SHOULD BE VENTILATED THOROUGHLY. SOLID CARBON DIOXIDE SHOULD BE REMOVED OUT OF DOORS AND ALLOWED TO SUBLIME

ATE.ALLOW GAS TO BLEED OFF AT A MODERATE  
RATE.DISPOSAL SHOULD BE IN ACCORDANCE WITH LOCAL, STATE AND  
FEDERAL REGULATIONS.

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