

ANSUL FIRE PROTECTION,WORMALD U.S.INC. -- CARBON DIOXIDE -- 4210-01-242-2287

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

Product ID:CARBON DIOXIDE

MSDS Date:05/15/1991

FSC:4210

NIIN:01-242-2287

MSDS Number: BMGZR

=== 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:715-735-7411/800-424-9300(CHEMTREC)

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:WORMALD CDN

Address:2421 HOLLY LN

Box:City:OTTAWA

State:ON

Country:CA

CAGE:37194

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

Ingred Name:CARBON DIOXIDE

CAS:124-38-9

RTECS #:FF6400000

Fraction by Wt: 100%

Other REC Limits:NONE SPECIFIED

OS

HA 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
Health Hazards Acute and Chronic:ACUTE:PHYSICAL CONTACT WITH
LIQUEFIED/SOLID CARBON DIOXIDE CAN CAUSE FROSTBITE OR FREEZE
BURNS.INHALATION OF VAPOR IN CONCENTRATION OF 3-5% BY VOLUME IN AIR
CAUSES INCREASED RESPIRAT
ION & HEADACHE;8-1 5% CAUSES
HEADACHE,NAUSEA,VOMITING & UNCONSCIOUSNESS.HIGHER CONCENTRATION MAY
LEAD TO COMA & DEATH.CHRONIC:UNKNOWN.
Effects of Overexposure:VAPOR IS HEAVIER THAN AIR AND CAN CAUSE
SUFFOCATION BY REDUCING AVAILABLE OXYGEN FOR BREATHING. MAY CAUSE
DIZZINESS, IMPAIRED COORDINATION, REDUCED MENTAL ACUITY, HEADACHE,
DIFFICULTY BREATHING, DROWS INESS, DEPENDING ON LENGTH OF EXPOSURE
AND CONCENTRATIONS.
Medical Cond Aggravated by Exposure:RESPIRATORY PROBLEMS

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

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

===== Fire Fighting Measures =
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Flash Point:NONE
Extinguishing Media:USE WATER FOG, CARBON DIOXIDE, FOAM, OR DRY
CHEMICAL FOR SURROUNDING FIRE.
Fire Fighting Procedures:WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A
FULL FACED SELF CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED
CONTAINERS WITH WATER SPRAY.
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 OR

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. DO NOT INSTALL STORAGE VESSELS IN SUB SURFACE, CLOSED AREA OR NEAR HEAT/FLAME.

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

Boiling Pt:B.P. Text:SUBLIMES

Decomp Temp:Decomp Text:SUBLIMES

Vapor Pres:42928 @20C

Vapor Density:1.5

Spec Gravity:1.98

Evaporation Rate & Reference:GAS AT ROOM TEMPERATURE

Solubility in Water:88% @ 20C

Appearance and Odor:COLORLESS GAS - NO ODOR

Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES

STRONG BASES, ALKALI MET

ALS
Stability Condition to Avoid: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 SUBLIMATE. DISPOSAL SHOULD BE IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

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