

ANSUL FIRE PROTECTION, WORMALD U.S.INC. -- CARBON DIOXIDE -- 4810-01-286-9764  
===== Product Identification =====

Product ID:CARBON DIOXIDE  
MSDS Date:01/12/1996  
FSC:4810  
NIIN:01-286-9764  
MSDS Number: CDGYC  
=== 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...FAX 715-7  
32-3477  
Emergency Phone Num:715-735-7411...TOM LAWSON EXT 580  
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:NINETECH INTL INC  
Address:1064 ROSELLE PL  
Box:City:WOODMERE  
State:NY  
ZIP:11598  
Country:US  
Phone:516-887-7943  
CAGE:0GKF8

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

Ingred Name:CARBON DIOXIDE  
CAS:124-38-9  
RTECS #:FF64000

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Fraction by Wt: 100%

Other REC Limits:NONE SPECIFIED

OSHA PEL:5000 PPM

ACGIH TLV:5000PPM/30000STEL;96

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

LD50 LC50 Mixture:PRODUCT'S LD50 (ORAL RAT) WAS NOT STATED

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO

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

Health Hazards Acute and Chronic:ACUTE-CONTACT WITH COLD VAPOR/SOLID  
CARBON DIOXIDE CAN CAUSE EYE/SKIN FROSTBITE AND FREEZE BURNS.  
ASPHYXIAN BY INHA

LATION & HEAVIER THAN AIR. CAN CAUSE SUFFOCATION

BY REDUCING OXYGEN AVAILABLE. BREATHING HIGH CONCENTRATIONS WILL  
CAUSE LIGHTEADEDNESS, SHORTNESS OF BREATH. INGESTION IS UNLIKELY.  
CHRONIC-UNKNOWN.

Explanation of Carcinogenicity:MFR GAVE THE ABOVE LISTINGS ON THE MSDS  
BUT NO OTHER COMMENTS WERE RECORDED.

Effects of Overexposure:DIZZINESS, IMPAIRED COORDINATION, REDUCED  
MENTAL ACUITY, HEADACHES, TINNITUS, DIFFICULTY BREATHING, AND/OR  
DROWSINESS DEPENDING ON LENGTH OF EXPO  
SURE & CONCENTRATIONS.

Medical Cond Aggravated by Exposure:RESPIRATORY PROBLEMS

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

First Aid:IF ANY IRRITATION PERSISTS OR SEVERE, GET MEDICAL ATTENTION.

TREAT FOR FROSTBITE IF NECESSARY. EYE-FLUSH W/WATER FOR 15 MIN.

SKIN-WASH W/SOAP & WATER. INHALED-REMOVE FROM CONTAMINATED AREA. IF  
SYMPTOMS OCCUR, CONSULT MEDICAL PERSONNEL. AIDOR RESTORE BREATHING  
AS NEEDED. INGESTED-MFR GAVE NO INFORMATION ON MSDS.

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

Flash Point:NONE

Extinguishing Media:THIS IS AN EXTINGUISHING AGENT. HMIS:USE  
EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

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 PERSONNEL. VENTILATE TO OUTSIDE ATMOSPHERE. COOL OR REMOVE HOT, METAL SURFACES OR SOURCE OF NON-EXTINGUISHED FLAMES.

Neutralizing Agent:MFR GAVE NO INFORMATION ON MSDS.

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

Handling and Storage Precautions:STORE IN A CEAN, DRY, WELL-VENTILATED AREA AWWAY FROM HEAT ABOVE 120F. STORE AS A COMPRESSED GAS IN DOT APPROVED VESSELS.

Other Precautions:IF NOT ATTACHED TO A SYSTEM, CYLINDER/CARTRIDGE MUST BE SAFETY CAPPED TO PROTECT AGAINST VIOLENT VELLEL MOVEMENT OR FORCE OF EXCAPING GAS IF VALVE IS ACTUATED OR SEAL IS PUNCTURED. NOTE INCOMPATIBILIT Y INFORMATION.

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

Respiratory Protection:NOT NORMALLY NECESSARY IF CONTROLS ARE ADEQUATE. IF TLV IS EXCEEDED OR IF EXPOSURE IS PROLONGED, A SELF-CONTAINED BREATHING APPARATUS IS RECOMMENDED.

Ventilation:MECHANICAL (GENE RAL) VENTILATION IS RECOMMENDED W/LOCAL EXHAUST RECOMMENDED FOR CONFINED SPACES.

Protective Gloves:FOR CONTACT W/DRY ICE

Eye Protection:CHEMICAL GOGGLES + FACE SHIELD

Other Protective Equipment:PROTECTIVE CLOTHING FOR CONTACT W/DRY ICE.

Work Hygienic Practices:MFR:?. HMIS:USE GOOD CHEMICAL HYGIENE PRACTICES. AVOID CONTACT IF AT ALL POSSIBLE. WASH THOROUGHLY AFTER HANDLING.

Supplemental Safety and Health

P/N ON CTFD: 17284; P/N GIVEN BY DDRV ON TECH SUPPORT SHEET: 17492.

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

HCC:G3

Boiling Pt:B.P. Text:SUBLIMES

Vapor Pres:42928 MMHG

Vapor Density:1.5

Spec Gravity:1.98

Evaporation Rate & Reference:GAS AT ROOM TEMPERATURE

Solubility in Water:APPRECIABLE

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 W/(AL+NA2O2), CS2O, LI, K, MG(C2H5) 2, (MG+NA2O

),

KHC2, NA, NA2C2, NAK, TI

Hazardous Decomposition Products:NONE

Conditions to Avoid Polymerization:WILL NOT OCCUR.

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

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

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