

ANSUL FIRE PROTECTION, WORMALD U.S.INC. -- CARBON DIOXIDE,AGF 0222,55022 --  
4210-01-120-2708

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

Product ID:CARBON DIOXIDE,AGF 0222,55022  
MSDS Date:01/25/1993  
FSC:4210  
NIIN:01-120-2708  
MSDS Number: BYCBF  
=== 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 Phon  
e Num:715-735-7411...FAX 715-732-3477  
Emergency Phone 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

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

Ingred Name:CARBON DIOXIDE  
CAS:124-38-9  
RTECS #:FF6400000  
Fraction by Wt: 100%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:5000 PPM  
ACGIH TLV:5000PPM/30000ST

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

LD50 LC50 Mixture:TLV IS 5000 PPM.

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

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

Health Hazards Acute and Chronic:TARGET ORGANS:LUNGS, HEART, CNS, EYES, SKIN. ACUTE- CONTACT WITH LIQUID CAN CAUSE SKIN FROSTBITE. GAS MAY CAUSE EYE IRRITATION. ASPHYXIA. INHALATION MAY CAUSE RESPIRATORY ACIDOSIS. HIGH CONCENTRATIONS MAY CAUSE RAPID CIRCULATORY

INSUFFICIENCY LEADING TO DEATH. INGESTION IS UNLIKELY TO OCCUR. CHRONIC- UNKNOWN.

Explanation of Carcinogenicity:NONE

Effects of Overexposure:EYE OR SKIN FROSTBITE AND FREEZE BURNS, HEADACHE, DROWSINESS, DIZZINESS, STINGING OF THE EYES, NOSE AND THROAT, EXCITATION, RAPID BREATHING AND HEART RATE, EXCESS SALIVATION, SHORTNESS OF BREATH, MUSCULAR WEAKNESS, RINGING IN THE EAR, UNCONSCIOUSNESS, COMA, NAUSEA, VOMITING, WATERY EYES (FORMATION OF WEAK CARBONIC ACID)

Medical Con

d Aggravated by Exposure:PERSONNEL WITH PRE-EXISTING CHRONIC RESPIRATORY DISEASES OR HEART DISORDERS SHOULD REFRAIN FROM BREATHING EXCESSIVE CARBON DIOXIDE.

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

First Aid:INHALATION:REMOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF NEEDED. EYES:IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES. SEE AN OPHTHALMOLOGIST, URGENTLY. SKIN:FLUSH WITH WARM WATER (NOT TO EXCEED 107 F). PROMPT MEDICAL ATTENTION IS MANDATORY

IN ALL CASES

OF OVEREXPOSURE TO CO<sub>2</sub>. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF CONTAINED BREATHING APPARATUS. ORAL:NOT LIKELY TO OCCUR.

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

Flash Point:NONE

Extinguishing Media:CARBON DIOXIDE CANNOT CATCH FIRE. USE WATER FOG, CARBON DIOXIDE, FOAM, OR DRY CHEMICAL FOR SURROUNDING FIRE.

Fire Fighting Procedures:WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A NIOSH-APPROVED SELF CONTAINED BREATHING APPARATUS. COOL

FIRE  
EXPOSED CONTAINERS WITH WATER SPRAY. EVACUATE AREA.  
Unusual Fire/Explosion Hazard:CONTAINER MAY RUPTURE DUE TO HEAT OF  
FIRE.

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

Spill Release Procedures:LIQUID CARBON DIOXIDE WILL FORM SOLID CO2 (DRY  
ICE) WHEN RELEASED TO ATMOSPHERIC PRESSURE. THE AREA SHOULD BE  
VENTILATED. CLEAN UP PERSONNEL SHOULD WEAR SELF-CONTAINED BREATHING  
APPARATUS WITH FULL FACE MASK AND HEAVY PROTECTIVE CLOTHING.  
Neutralizing Agent:NOT RELEVANT

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

Handling and Storage Precautions:STORE IN A COOL, VENTILATED AREA.  
PROTECT FROM PHYSICAL DAMAGE. KEEP OUT OF REACH OF CHILDREN. DO NOT  
STORE ABOVE 120F.  
Other Precautions:KEEP AWAY FROM SOURCES OF HEAT. CAUTION! CAN CAUSE  
RAPID SUFFOCATION DUE TO OXYGEN DEFICIENCY. USE WITH ADEQUATE  
VENTILATION. CO2 IS HEAVIER THAN AIR AND TENDS TO ACCUMULATE NEAR  
THE FLOOR IN CLOSED SPACES. READ ALL LABEL INSTRUCTIONS.

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

Respiratory Protection:NONE REQUIRED UNDER NORMAL USE. HOWEVER,  
NIOSH-APPROVED AIR-SUPPLIED RESPIRATORS ARE REQUIRED WHILE WORKING  
IN CONFINED SPACES WITH THIS PRODUCT. FOR EMERGENCIES, WEAR SELF  
CONTAINED BREATHING APPARATUS, OPERATED IN POSITIVE PRESSURE MODE.  
Ventilation:SUFFICIENT TO PREVENT ACCUMULATION ABOVE TLV. LOCAL EXHAUST  
LOCATED NEAR THE FLOOR.  
Protective Gloves:INSULATED AND COLD RESISTANT NEOPRENE  
Eye Protection:SAFETY GOGGLES  
Other Protective Equipment:EYE WASH STATION, SAFETY SHOWER,  
INDUSTRIAL-TYPE WORK CLOTHING, SAFETY SHOES AND APRON AS REQUIRED.  
Work Hygienic Practices:OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND  
RECOMMENDED PROCEDURES.  
Supplemental Safety and Health

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

HCC:G3  
NRC/State Lic Num:NOT RELEVANT  
Boiling Pt:B.P. Text:SUBLIMES  
Vapor Pres:42911 @68F  
Vapor Density:1.5  
Spec Gravity:1.

98  
pH:ACIDIC  
Viscosity:NOT RELEVANT  
Evaporation Rate & Reference:NOT RELEVANT  
Solubility in Water:88 ML/100ML @ 68F  
Appearance and Odor:COLORLESS, ODORLESS GAS  
Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES  
REACTIVE METALS (MAGNESIUM, ALUMINUM), MOIST CESIUM OXIDE, SODIUM  
PEROXIDE + REACTIVE METALS  
Stability Condition to Avoid:EXCESSIVE HEAT (ABOVE 120F)  
Hazardous Decomposition Products:CAN  
DECOMPOSE TO CARBON MONOXIDE AND  
OXYGEN ABOVE 3092F (1700C).

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

Waste Disposal Methods:SLOWLY RELEASE INTO ATMOSPHERE OUTDOORS IF  
PERMITTED. DISPOSAL SHOULD BE IN COMPLIANCE WITH ALL LOCAL, STATE  
AND FEDERAL REGULATIONS.

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