

PRAXAIR INC -- CARBON DIOXIDE -- 4220-00-920-3651

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Product Identification
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Product ID:CARBON DIOXIDE

MSDS Date:01/01/1997

FSC:4220

NIIN:00-920-3651

Status Code:A

MSDS Number: CKKLF

=== Responsible Party ===

Company Name:PRAXAIR INC

Address:39 OLD RIDGEBURY RD

City:DANBURY

State:CT

ZIP:06817-0001

Country:US

Info Phone Num:203-794-5782

Emergency Phone Num:800-645-4633

Resp. Party Other MS

DS Num.:P-4574-G

Chemtec Ind/Phone:(800)424-9300

CAGE:0LV01

=== Contractor Identification ===

Company Name:INFLATION SYSTEMS

Box:City:MAMARONICK

State:NY

ZIP:10543

Country:US

Phone:914-381-8070

Contract Num:SP0560-99-M-H023

CAGE:62882

Company Name:PRAXAIR, INC.

Address:39 OLD RIDGEBURY RD

Box:City:DANBURY

State:CT

ZIP:06810-5113

Country:US

Phone:800-772-9247; 800-PRAXAIR

CAGE:0LV01

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Composition/Information on Ingredients
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Ingred Name:CARBON DIOXIDE

CAS:124-38-9

RTE

CS #:FF6400000

> Wt:99.

Other REC Limits:NONE RECOMMENDED

OSHA PEL:5000 PPM

ACGIH TLV:5000PPM/30000STEL;96

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===== 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:INHALATION: IS AN ASPHYXIAN WITH EFFECTS DUE TO LACK OF OXYGEN. IS ALSO PHYSIOLOGICALLY ACTIVE AFFECTING CIRCULATION & BREATHING. MODE

RATE CONCENTRATIONS MAY

CAUSE HEADACHE, DROWSINESS, STINGING OF NOSE & THROAT, EXCITATION, RAPID BREATHING & HEART RATE, EXCESS SALIVATION, VOMITING & UNCONSCIOUSNESS. LACK OF OXYGEN CAN KILL. SKIN: NO HARM EXPECTED FROM VAPOR. COLD GAS, LIQUID OR SOLID CARBON DIOXIDE MAY CAUSE SEVERE FROSTBITE. INGESTION: UNLIKELY ROUTE OF EXPOSURE. GAS AT NORMAL TEMPERATURE/PRESSURE. EYES: NO HARM EXPECTED FROM VAPOR. COLD GAS, LIQUID OR SOLID CARBON DIOXIDE MAY CAUSE SEVERE F

ROSTBITE.

Effects of Overexposure:EYES AND/OR SKIN FROSTBITE, 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). DAMAGE TO RETINAL OR GANGLION CELLS AND CENTRAL NERVOUS SYSTEM MAY OCCUR.

Medical Cond Aggravated by Exposure:UNLIKELY TO AGGREGATE

EXISTING

CONDITIONS BUT PERSONNEL WITH PRE-EXISTING CHRONIC RESPIRATORY DISEASES OR HEART DISORDERS SHOULD REFRAIN FROM BREATHING EXCESSIVE CARBON DIOXIDE.

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

First Aid:INHALATION: MOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT GIVE OXYGEN. CALL PHYSICIAN. SKIN: IF EXPOSED TO COLD VAPOR OR SOLID IMMEDIATELY WARM FROSTBITE AREA WITH WARM WATER NOT TO EXCEED 105F

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EXPOSURE, REMOVE CLOTHING WHILE SHOWERING WITH WARM WATER. CALL PHYSICIAN. EYES: FOR EXPOSURE TO COLD VAPOR OR SOLID IMMEDIATELY FLUSH THOROUGHLY WITH WARM WATER FOR AT LEAST 15 MINUTES. HOLD EYELIDS OPEN. SEE PHYSICIAN, PREFERABLY AN OPHTHALMOLOGIST, IMMEDIATELY. INGESTION: UNLIKELY ROUTE OF EXPOSURE AS PRODUCT IS GAS AT NORMAL TEMPERATURE & PRES SURE.

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

Flash Point:NONE

Lower Limits:NOT R

ELEVANT

Upper Limits:NOT RELEVANT

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

Fire Fighting Procedures:CAUTION. HIGH-PRESSURE. EVACUATE ALL PERSONNEL FROM DANGER AREA. IMMEDIATELY SPRAY CYLINDERS WITH WATER FROM MAXIMUM DISTANCE UNTIL COOL, THEN MOVE FROM FIRE AREA IF POSSIBLE WITHOUT RISK. SELF-CONTAINER BREATHING APPARATUS MAY BE REQUIRED BY RESCUE WORKERS. ON-SITE FIRE BRIGADES MUST COMPL

Y WITH OSHA 29

CFR 1910.156.

Unusual Fire/Explosion Hazard:HEAT OF FIRE CAN BUILD PRESSURE IN CYLINDER & CAUSE IT TO RUPTURE. CARBON DIOXIDE CYLINDERS ARE EQUIPPED WITH PRESSURE RELIEF DEVICE. (EXCEPTIONS MAY EXIST WHERE AUTHORIZED BY DOT.) NO PART OF CYLINDER SHOULD BE SUBJECTED TO TEMPERATURE GREATER THAN 125F.

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

Spill Release Procedures:HIGH PRESSURE LIQUID & GAS. CARBON DIOXIDE IS AN ASPHYXIANT. LACK OF OXYGEN CAN KILL. EVACUATE ALL PERSONNEL FROM DANGER AREA. USE SELF-CONTAINED BREATHING APPARATUS WHERE NEEDED. SHUT OFF LEAK IF POSSIBLE WITHOUT RISK. VENTILATE AREA OR MOVE CYLINDER TO WELL VENTILATED AREA. TEST FOR SUFFICIENT OXYGEN, ESPECIALLY IN CONFINED SPACES, BEFORE ALLOWING REENTRY.

Neutralizing Agent:NOT RELEVANT

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

Handling and Storage Precautions:STORE & USE WITH ADEQUATE VENTILATION. FIRMLY SE

CURE CYLINDERS UPRIGHT TO KEEP FROM FALLING. SCREW VALVE PROTECTION CAP FIRMLY IN PLACE BY HAND. STORE ONLY WHERE TEMPERATURE IS LESS THAN 125F. STORE FULL & EMPTY CYLINDERS SEPARATELY. USE FIRST IN FIRST OUT INVENTORY SYSTEM.

Other Precautions:KEEP FROM HEAT. CAUSES SUFFOCATION DUE TO OXYGEN DEFICIENCY. USE WITH ADEQUATE VENTILATION. CO2 HEAVIER THAN AIR & ACCUMULATES NEAR FLOOR IN CLOSED SPACES. USE HAND TRUCK TO MOVE CYLINDERS. NEVER INSE RT OBJECT INTO CAP OPENINGS.

OPEN VALVE

SLOWLY. SEE CGA PAMPHLET P-1, "SAFE HANDLING OF COMPRESSED G AS IN CONTAINERS".

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

Respiratory Protection:NONE REQUIRED UNDER NORMAL USE. HOWEVER, AIR-SUPPLIED RESPIRATORS ARE REQUIRED WHILE WORKING IN CONFINED SPACES WITH THIS PRODUCT. THE RESPIRATORY PROTECTION USE MUST CONFORM WITH OSHA RULES AS SPECIF IED IN 29 CFR 1910.134.

Ventilation:SUFFICIENT TO PREVENT ACCUMULATION ABOVE TLV. LOCAL EXHAUST

LOCATED NEAR THE FLOOR.

Protective Gloves:INSULATED NEOPRENE

Eye Protection:SELECT IN ACCORDANCE WITH 29 CFR 1910.133

Other Protective Equipment:METATARSAL SHOES FOR CYLINDER HANDLING.

SELECT IN ACCORDANCE WITH OSHA 29 CFR 1910.132 & 1910.133.

REGARDLESS OF PROTECTIVE EQUIPMENT, NEVER TOUCH LIVE LECTRICAL PARTS.

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

Supplemental Safety and Health

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===== Physical/Chemical Pro
perties =====

HCC:G3

NRC/State Lic Num:NOT RELEVANT

Boiling Pt:B.P. Text:-109F,-78C

Vapor Pres:43671 @70F

Vapor Density:1.52

Spec Gravity:NOT RELEVANT

pH:ACIDIC

Viscosity:NOT RELEVANT

Evaporation Rate & Reference:NOT RELEVANT (GAS)

Solubility in Water:SLIGHT

Appearance and Odor:COLORLESS, ODORLESS COMPRESSED GAS. SOME PERSONS NOTICE SLIGHT PUNGENT ODOR.

Percent Volatiles by Volume:100

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

Stability Indicator

/Materials to Avoid: YES

ALKALI METALS, ALKALINE EARTH METALS, METAL ACETYLIDES, CHROMIUM, TITANIUM ABOVE 550C/1022F, URANIUM ABOVE 750C/1382F, MAGNESIUM ABOVE 1427F/775C.

Stability Condition to Avoid: OVERHEATING

Hazardous Decomposition Products: CARBON MONOXIDE

===== Toxicological Information =====

Toxicological Information: CARBON DIOXIDE IS AN ASPHYXIANT. IT INITIALLY STIMULATES RESPIRATION & THEN CAUSES RESPIRATORY DEPRESSION. HIGH CONCENTRATION RE

SULTS IN NARCOSIS. SYMPTOMS IN HUMANS AS FOLLOWS:

CONCENTRATIONS: 1%: SLIGHT INCREASE IN BREATHING RATE. 2%: BREATHING RATE 50% ABOVE NORMAL. PROLONGED EXPOSURE CAUSES HEADACHE DIZZINESS. 3%: BREATHING TO TWICE NORMAL RATE & IS LABORED. WEAK NARCOTIC, IMPAIRED HEARING, HEADACHE, INCREASED BP & PULSE. 4-5%: BREATHING TO 4X, INTOXICATION, CHOKING. 5-10%: SHARP ODOR, VERY LABORED BREATHING, HEADACHE, VISUAL IMPAIRMENT, RINGING IN EARS, JUDGEMENT IMPAIRED FOLLOWED BY LOSS OF CONSCIOUSNESS.

===== Ecological Information =====

Ecological: NO ADVERSE EFFECTS EXPECTED.

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

Waste Disposal Methods: PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. KEEP PERSONNEL AWAY. DISCARD ANY PRODUCT, RESIDUE, DISPOSAL OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER IN FULL COMPLIANCE WITH FEDERAL, STATE & LOCAL REGULATIONS. IF NECESSARY, CALL YOUR LOCAL SUPPLIER FOR ASSISTANCE.

===== MSDS Transport Information =====

Transport Information: CARBON DIOXIDE, CLASS 2.2, UN1013, LABEL: NONFLAMMABLE GAS LABEL & PLACARD.

===== Regulatory Information =====

Federal Regulatory Information: NOT PROVIDED

State Regulatory Information: NOT PROVIDED

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