

AIR PRODUCTS AND CHEMICALS, INC. -- CARBON DIOXIDE(GAS),DRY ICE(SOILD ONLY) --
6830-00-292-0142

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

Product ID:CARBON DIOXIDE(GAS),DRY ICE(SOILD ONLY)

MSDS Date:11/18/1987

FSC:6830

NIIN:00-292-0142

MSDS Number: BHDKC

=== Responsible Party ===

Company Name:AIR PRODUCTS AND CHEMICALS, INC.

Address:2043 S 35TH ST

Box:11393

City:TACOMA

State:WA

ZIP:98411-0393

Country:US

CAGE:00742

=== Contractor Identification ===

Company Name:AIR PRODUCTS AND CHEMICALS INC

Address:7201 HAMILTON BLVD

Box:City:ALLENTOWN

State:PA

ZIP:18195-1501

Country:US

Phone:800-345-3148/ 800-752-1597

CAGE:00742

Company Name:OXYGEN SALES AND SERVICE INC

Address:2043 S 35TH ST

Box:11393

City:TACOMA

State:WA

ZIP:98411-0393

Country:US

CAGE:5H199

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

Ingred Name:CARBON DIOXIDE

CAS:124-38-9

RTECS #:FF6400000

OSHA PEL:5000 PPM

ACGIH

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Hazards Identification
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Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:EXPOSURE IN THE CONCENTRATION RANGES
OF 1.5-10% MAYBE HIGHLY VARIABLE,SYMPTOMS INCLUDE THE FOLLOWING:
3-6%:HDACHES,DYSPNEA,PERSPIRATION;
6-10%:HDACHES,DYSPNEA,PERSPIRATION,TREMORS,VISUAL DISTURBANCE,
UNCONSCIOUSNESS;OVER 10%: UNCONSCIOUSNESSUNCON
SCIOUSNESS CAN OCCUR
W/O WARNING PREVENTING SELF RESCUE
Effects of Overexposure:CARBON DIOXIDE DOES NOT SUPPORT LIFE & MAY
PRODUCE IMMEDIATELY HAZARDOUS ATMOSP HERES. AT A CONCENTRATION IN
EXCESS OF 1.5% MAY PRODUCE HYPERVENTILATION,HDACHESVISUAL
DISTURBANCES,TREMOR, LOSS OF CONS CIOUSNESS & DEATH.

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First Aid Measures
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First Aid:PERSONS SUFFERING FROM THE TOXIC EFFECT OF CARBON DIOXIDE
SHOULD BE MOVED TO AREAS W/NORMAL ATMOS
PHERE. ASSISTED
RESPIRATION & SUPPLEMENTAL OXYGEN SHOULD BE GIVEN IF THE VICTIM IS
NOT BREATHING. FR OZEN TISSUES SHOULD BE FLOODED OR SOAKEDW/TEPID
WATER (105-115F;41-46C). DO NOT USE HOT WATER!! CRYOGENIC BURNS
WHICH RESULT IN BLISTERING/DEEPER TISSUE FREEZING SHOULD BE SEEN
PROMPTLY BY PHYSICIAN

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Fire Fighting Measures
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Flash Point:NA
Lower Limits:NA
Upper Limits:NA
Extinguishing Media:CARBON DIOXIDE IS AN EXTINGUISHING AGENT
FOR CLASS
B & C FIRES.
Fire Fighting Procedures:NA
Unusual Fire/Explosion Hazard:NA

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Accidental Release Measures
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Spill Release Procedures:VENTILATE INDOOR AREAS WELL TO AVOID HAZARDOUS
CARBON DIOXIDE CONCENTRATIONS. VENTILATE WELL AND AVOID CONTACT
W/COLD VAPORS OR DRY ICE. CARBON DIOXIDE IS A HEAVY GAS & WILL
REMIAN IN LOW SPOTS WITHOUT ASSISTED VENTILATION.

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Handling and Storage
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Handling and Storage Precautions:USE SUITABLE HANDTRUCK FOR MOVEMENT.STORE IN WELL VENTILATED AREAS. SEGREGATE FULL/EMPTY CYLINDERS. KEEP CYLINDERS AWAY FROM SOURCES OF HEAT.
Other Precautions:AVOID DRAGGING, ROLLING, OR SLIDING CYLINDERS. DONOT STORE IN HEAVY TRAFFIC AREAS TO PREVENT DAMAGE. AVOID EXPOSURE TO AREAS WHERE SALT OR OTHER CORROSIVE CHEMICALS ARE PRESENT.

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

Respiratory Protection:USE S.C.B.A. IN OXYGEN DEFICIENT ATMOSPHERES OR WHERE CARBON DIOXIDE EXCEEDS 1.5%. CAUTION!! AIR PURIFYING RESPIRATORS WILL NOT FUNCTION. THEIR USE MAY RESULT IN ASPHYXIATION.

Ventilation:LOCAL EXHAUST MAY BE USEFUL AT POINT SOURCES OF CO2 VAPORS. MECHANICAL WHERE LOW LYING AREAS ARE NOT NATURALLY VENTILATED

Protective Gloves:LOOSE FITTING GLOVES/IMPERMEABLE (LEATHER)

Eye Protection:SAFETY GLASSES

Other Protective Equipment:NONE

Supplemental Safety and Health
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===== Physical/Chemical Properties =====

Boiling Pt:B.P. Text:*SEE BELOW

Vapor Pres:831 PSIA

Vapor Density:1ATM 0.115

Spec Gravity:**SEE BELOW

Solubility in Water:1 ATM 87.8% B/VOLUME

Appearance and Odor:CARBON DIOXIDE IS COLORLESS/ODORLESS.

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

Stability Indicator/Materials to Avoid:YES

IF MOISTURE IS PRESENT, MATERIALS MUST RESIST CARBONIC ACID.

Stability Condition to Avoid:NONE

Hazardous Decomposition Products:NONE

Conditions to Avoid Polymerization

Polymerization:*BOIL PT: -109.3F/-78.5C

*SPEC.GRVTY:1 ATM 1.53(GAS);*SPEC GRVTY:1 ATM 1.56 (SOLID)

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

Waste Disposal Methods:DONOT ATTEMPT TO DISPOSE OF RESIDUAL CARBON DIOXIDE IN COMPRESSED GAS CYLINDERS. VENT TO THE ATMOSPHERE SLOWLY SINCE RAPID DEPRESSURIZATION OF THE CONTAINER WILL CAUSE THE FORMATION OF SOLID CARBON DIOXIDE (DRY ICE) INTERNALLY, REQ LONGER PERIOD TO EVAPOR.

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