

CARBON DIOXIDE/DRY ICE

MSDS Number

BBKVVW

National Stock Number

6850-00F002383

Product Name

CARBON DIOXIDE/DRY ICE

Manufacturer

AIR PRODUCTS AND CHEMICALS INC

Product Identification

Product ID: CARBON DIOXIDE/DRY ICE

MSDS Date: 06/01/1990

FSC: 6850

NIIN: 00F002383

MSDS Number: BBKVVW

Responsible Party

AIR PRODUCTS AND CHEMICALS INC

7201 HAMILTON BLVD

ALLENTOWN , PA 18195-1501

US

Emergency Phone: 215-481-8257/6311/4911

Info Phone: 800-752-1597/215-481-4911

Cage: 00742

Contractor

BYRNE SPECIALTY GASES INC

SEATTLE, WA 98108

US

206-621-8400

Cage: 0BTY0

Ingredients

CARBON DIOXIDE

CAS: 124-38-9

RTECS: FF6400000

Fraction By Weight: 100%

OSHA PEL5000 PPM

ACGIH TLV: 9000 MG/CUM

Hazards

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

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

Health Hazards Acute and Chronic: CONCENTRATION IN EXCESS OF 1.5% CARBON DIOXIDE MAY CAUSE DEATH. AT HIGHER CONCENTRATIONS, DISPLACES OXYGEN IN AIR BELOW LEVELS NECESSARY TO SUPPORT LIFE.

Explanation of Carcinogenicity: NONE

Effects of Overexposure: AT CONCENTRATIONS > 1.5%:

HYPERVENTILATION/HEADACHES/VISUAL DISTURBANCES/TREMOR/LOSS OF

CONSCIOUSNESS/DEATH. AT 3-6%: HEADACHES/DYSPNEA/PERSPIRATION. AT

6-10%: HEADACHES/DYSPNEA/PERSPIRATION/TREMORS/VISUAL DISTURBANCES.
>10%: UNCONSCIOUSNESS W/OUT WARNING. CRYOGENIC BURNS.

First Aid

First Aid: INHALATION: REMOVE TO FRESH AIR. ASSISTED RESPIRANT & SUPPLEMENTAL OXYGEN SHOULD BE GIVEN IF NOT BREATHING. FROZEN TISSUES SHOULD BE FLOODED/SOAKED W/TEPID WATER. DON'T USE HOT WATER. OBTAIN MEDICAL ATTENTION IN ALL CASES.

Accidental Release

Spill Release Procedures: VENTILATE INDOOR AREAS WELL TO AVOID HAZARDOUS CO₂ CONCENTRATIONS. VENTILATE AREA WELL & AVOID CONTACT W/COLD VAPORS/DRY ICE. CO₂ IS HEAVY GAS & WILL REMAIN IN LOW SPOTS W/OUT ASSISTED VENTILATION.

Handling

Handling and Storage Precautions: COMPRESS GAS CYLINDERS CONTAIN GASEOUS/LIQUID CO₂ AT EXTREMELY HIGH PRESSURE/SHOULD BE HANDLED W/CARE. KEEP CYLINDERS AWAY FROM HEAT.
Other Precautions: PREVENT CONTACT OF CO₂ ON SKIN. USE PRESSURE-REDUCING REGULATOR WHEN CONNECTING TO LOWER PRESSURE PIPING SYSTEMS. SECURE CYLINDERS WHEN IN USE. KEEP FROM COMBUSTIBLES. AVOID EXPOSURE TO AREAS WHERE SOLID/OTHER CORROSIVE MATERIALS ARE PRESENT

Exposure Controls

Respiratory Protection: SCBA IN OXYGEN DEFICIENT ATMOSPHERES/WHERE CO₂ >1.5%. DON'T USE AIR PURIFYING RESPIRATORS.
Ventilation: LOCAL EXHAUST: AT POINT SOURCES OF CO₂ VAPORS. MECHANICAL (GENERAL): LOW Lying AREA ARE NOT NATURALLY VENTILATED.
Protective Gloves: IMPERMEABLE/LOOSE FITTING (LEATHER)
Eye Protection: SAFETY GLASSES
Supplemental Safety and Health
CO₂ IS STORED IN CONTAINERS UNDER ITS OWN VAPOR PRESSURE. IF THE PRESSURE IS SUDDENLY RELIEVED, THE LIQUID RAPIDLY COOLS AS IT EVAPORATES & SUBLIMES, FORMING DRY ICE AT -109.3F.

Chemical Properties

Boiling Pt: B.P. Text: -109.3F
Melt/Freeze Pt: M.P/F.P Text: -69.9F
Vapor Pres: 831 PSIA
Vapor Density: 0.115
Spec Gravity: 1.56
Solubility in Water: APPRECIABLE
Appearance and Odor: COLORLESS, ODORLESS

Stability

Stability Indicator/Materials to Avoid: YES
CARBONIC ACID/SALT/CORROSIVE CHEMICALS
Stability Condition to Avoid: MOISTURE

Disposal

Waste Disposal Methods: DON'T ATTEMPT TO DISPOSE OF RESIDUAL CO₂ IN COMPRESSED GAS CYLINDERS. RETURN CYLINDERS TO AIR PRODUCTS W/RESIDUAL PRESSURE, CYLINDER VALVE TIGHTLY CLOSED/THE VALVE CAP IN PLACE. DISPOSE OF IAW/LOCAL/STATE/FEDERAL REGULATIONS. NONFLAMMABLE GAS. UN1013.

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