MATERIAL SAFETY DATA SHEET
Carbon Dioxide, Refrigerated Liquid

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Carbon Dioxide, Refrigerated Liquid
SYNONYMS: Carbonic Acid Gas

MANUFACTURER: EPCO Carbon Dioxide Products, Inc.
ADDRESS: 1811 Auburn Avenue, Suite K, Monroe, LA 71201

EMERGENCY PHONE: 1-800-259-8095
CHEMTREC PHONE: 1-800-424-9300
OTHER CALLS: 1-800-259-3726

CHEMICAL NAME: Carbon Dioxide
CHEMICAL FAMILY: Oxide of Carbon
CHEMICAL FORMULA: CO2

PRODUCT USE: Various

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Carbon Dioxide

<table>
<thead>
<tr>
<th>CAS NO.</th>
<th>% WT</th>
<th>% VOL</th>
<th>SARA 313 REPORTABLE</th>
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</thead>
<tbody>
<tr>
<td>124-38-9</td>
<td>100%</td>
<td>100%</td>
<td>NO</td>
</tr>
</tbody>
</table>

OSHA PEL-TWA: 5,000 ppm
OSHA PEL STEL: N/A
OSHA PEL CEILING: N/A

ACGIH TLV-TWA: 5,000 ppm
ACGIH TLV STEL: 30,000 ppm
ACGIH TLV CEILING: N/A

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Caution! High-pressure liquid and gas. Can cause rapid suffocation. May cause frostbite. Can increase respiration and heart rate. May cause nervous system damage. May cause dizziness and drowsiness. Self-contained breathing apparatus may be required by rescue workers. This product is a colorless, odorless gas at normal temperature and pressure. The gas is slightly acidic and may be felt to have a slight, pungent odor and biting taste.

ROUTES OF ENTRY: Skin contact, Inhalation, Eye contact, and Ingestion

POTENTIAL ACUTE HEALTH EFFECTS

EYES: Escaping liquid transforms to very cold solid and gas (-78 degrees C/-109 degrees F) which may cause frostbite. Solid sublimes and can cool materials it is in contact with to -78 degrees C (-109 degrees F) which can cause frostbite if touched.

SKIN: Escaping liquid transforms to very cold solid and gas (-78 degrees C/-109 degrees F) which may cause frostbite

INHALATION: Carbon dioxide is present in air at 0.03% and, at the higher levels in exhaled breath. Low concentrations (3-5%) increase the respiration rate and can cause headache. Levels of 8% to 15% cause headache, nausea, vomiting, and may lead to unconsciousness. Higher concentrations can cause coma and death.

INGESTION: Swallowing of solids will cause severe burns. Keep out of reach of children.

CHRONIC HEALTH HAZARDS: No harm expected

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Unlikely to aggravate existing medical conditions

CARCINOGENICITY
Carbon dioxide is not listed by NTP, OSHA, or IARC.
SECTION 4: FIRST AID MEASURES

EYES: For frostbite, rinse with warm water for 15 minutes. Obtain medical attention.

SKIN: For frostbite, allow affected body part to thaw. Obtain medical attention.

INGESTION: Maintain breathing. Obtain medical attention immediately.

INHALATION: Move victim to fresh air. Give oxygen, if breathing is difficult. Give artificial respiration, if breathing has stopped.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES: Nonflammable

FLASH POINT: None

AUTOIGNITION TEMPERATURE: None

NFPA HAZARD CLASSIFICATION
HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0
OTHER: SA (CGA recommends this to designate Simple Asphyxiant)

HMIS HAZARD CLASSIFICATION
HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0
PROTECTION: 3

EXTINGUISHING MEDIA: N/A

SPECIAL FIRE FIGHTING PROCEDURES: Use extinguishing media appropriate for surrounding fire

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

HAZARDOUS DECOMPOSITION PRODUCTS: N/A

SECTION 5 NOTES: Do not direct water at source of leak or venting safety device, as icing may occur

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: CAUTION! High pressure liquid and gas.

Personal Precautions: 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 you can do so without risk. Ventilate area or move cylinder to a well-ventilated area. Test for sufficient oxygen, especially in confined spaces, before allowing reentry.

Environmental Precautions: Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposal container, or liner in an environmentally acceptable manner, in full compliance with federal, state, and local regulations.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: When withdrawing gaseous CO2, use only regulating equipment designed for CO2 service and source pressure. Use only in well ventilated areas. Do not move container without its caps in place, if applicable. Secure container when in use. Use a backflow preventive device to prevent suck-back. Keep container away from heat, flames, and sparks. Close valve after each use and when empty. Provide safety relief device between any 2 valves.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Provide good ventilation to maintain more than 18% oxygen and less than 0.5% CO2 (TWA). Air monitoring device recommended.

RESPIRATORY PROTECTION: SCBA in case of suspected leak of unknown concentration or oxygen deficient atmosphere.

EYE PROTECTION: Goggles or full face shield with safety glasses.

SKIN PROTECTION: Long sleeves and trousers recommended.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Insulated gloves, safety shoes for container handling if applicable.

EXPOSURE GUIDELINES:

<table>
<thead>
<tr>
<th></th>
<th>ppm</th>
<th>mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA PEL-TWA:</td>
<td>5000</td>
<td>N/A</td>
</tr>
<tr>
<td>OSHA PEL STEL:</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>OSHA PEL CEILING:</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>ACGIH TLV-TWA:</td>
<td>5000</td>
<td>N/A</td>
</tr>
<tr>
<td>ACGIH TLV STEL:</td>
<td>30000</td>
<td>N/A</td>
</tr>
<tr>
<td>ACGIH TLV CEILING:</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless

ODOR: Odorless

PHYSICAL STATE at NTP: Gas

pH AS SUPPLIED: Not applicable

BOILING POINT: Not applicable

FREEZING POINT: Sublimates at 1 atm at -78.5 degrees C/-109.3 degrees F

VAPOR PRESSURE: 5778 kPa, 838 psig (@21.1 degrees C / 70 degrees F)

VAPOR DENSITY (AIR = 1): 0.00197 (@ 0 degrees C / 32 degrees F)

SPECIFIC GRAVITY (Air = 1): 1.52 (@21 degrees C / 70 degrees F)

EVAPORATION RATE: Not applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (con't)

SOLUBILITY IN WATER: 0.9 (@20 degrees C / 68 degrees F)

PERCENT VOLATILE BY VOL: 100

MOLECULAR WEIGHT: 44.01

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures

CONDITIONS TO AVOID (STABILITY): Contact with incompatible materials, exposure to electrical discharges, and/or high temperatures as stated below.

INCOMPATIBILITY (MATERIAL TO AVOID): Alkali metals, alkaline earth metals, metal acetylides, chromium, titanium above 1022 degrees F (550 degrees C), uranium above 1382 degrees F (750 degrees C), magnesium above 1427 degrees F (775 degrees C)

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Electrical discharges and high temperatures decompose carbon dioxide into carbon monoxide and oxygen.
SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE EXPOSURE: LC50 = 90,000 ppm, 5 min., human
Carbon dioxide is an asphyxiant. It initially stimulates respiration and then causes respiratory depression. High concentrations result in narcosis.

CHRONIC EXPOSURE: No known chronic effects to repeated exposures of low concentrations.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL TOXICITY: No known effects

SECTION 12 NOTES: Carbon dioxide does not contain any Class I or Class II ozone-depleting chemicals.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: No residual waste

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
PROPER SHIPPING NAME: Carbon Dioxide
HAZARD CLASS: 2.2
ID NUMBER: UN1013
PACKING GROUP: N/A
LABEL STATEMENT: NONFLAMMABLE GAS

MARINE POLLUTANTS: Carbon dioxide is not listed as a marine pollutant by DOT.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
TSCA (TOXIC SUBSTANCE CONTROL ACT): Carbon dioxide is listed on the TSCA inventory.
CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Reportable Quantity (RQ) = none
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):
311/312 HAZARD CATEGORIES: IMMEDIATE = Yes, DELAYED = No, PRESSURE = Yes, Reactivity = No, FIRE = No
313 REPORTABLE INGREDIENTS: Carbon dioxide is not subject to reporting under Section 313

STATE REGULATIONS:
California: Carbon dioxide is not listed by California under the SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (Proposition 65)
Pennsylvania: Carbon dioxide is subject to the Pennsylvania Worker and Community Right to Know Act (35 P.S. Sections 7301-7320)

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: Use, handling, or storage of the product described in the MSDS is at the user's sole risk.

PREPARED BY: EPCO Production Department, phone number 1-800-259-3726

DISCLAIMER: EPCO Carbon Dioxide Products, Inc. shall not be liable for any loss or damage of any nature whatsoever, however arising, relating to the use, handling or storage of the product, of the statements and information contained in or omitted from this MSDS.