



DEEPAK FERTILISERS
AND PETROCHEMICALS
CORPORATION LIMITED

MSDS - Liquid CO2

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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| Chemical Name | : Carbon dioxide |
| Chemical Formula | : CO ₂ |
| CAS Number | : 124 – 38 -9 |
| Synonyms | : Carbon dioxide(cryogenic liquid) liquefied CO ₂ |
| General Use | : Industrial chemical |
| Manufacturer's Name | : Deepak Fertilisers And Petrochemicals Corporation. Ltd. |
| Address : | : Plot K-1, MIDC Indl Area, Talaja A.V., Dist: Raigad – 410 208 |
| Telephone no. for info. | : +91 - 022 - 50684000 |

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

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| Composition | : Carbon dioxide 99 -100 |
| Hazardous components | : Carbon dioxide |
| ACGIH TLV | : 5000 ppm |

SECTION 3 - HAZARDS IDENTIFICATION

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| Primary Entry Routes | :Inhalation , Skin Contact ,Eyes and ingestion(swallowing) |
| Acute Effects | :Carbon dioxide is an asphyxiant. Moderate concentrations may cause headache,drowsiness,dizziness,stinging of the nose and throat,excitation,rapid breathing and heart rate,excess salivation,vomiting,and unconsciousness. |
| Carcinogenicity | :Not listed as carcinogenic. |
| Chronic Effects | :No harm expected to healthy individuals |
| NFPA rating | :Fire – 0, Health -3,Reactivity – 0 Special Hazard - Nil |

SECTION 4 - FIRST AID MESURES

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| Eyes | : Cold gas or liquid or solid carbon dioxide may cause severe frostbite. Immediately flush eyes thoroughly with warm water for at least 15 minutes Get medical attention immediately. |
| Skin | Prolonged contact with carbon dioxide crystals (snow) Cold gas ,or liquid or solid carbon dioxide frostbite,immediately warm frostbite area with warm water not to exceed 410C.Incase of massive exposure,remove contaminated clothing while showering with warm water. |
| Inhalation | :Immediately remove to fresh air. If not breathing,give artificial respiration,If breathing is difficult,Get medical attention. |
| Swallowing | :An unlikely rout of exposure. This product is a gas at normal temperature and pressure,but severe frostbite of lip and mouth may result from contact with the liquid or solid. Get medical attention |

SECTION 5 - FIRE FIGHTING MEASURES

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| Flash point | : Not applicable |
| Flash point method | : Not applicable |
| Auto ignition temp. | : Non-flammable |
| L E L | : Not applicable |
| U E L | : Not applicable |
| Flammability classifn. | : Not applicable |
| Extinguishing media | :Carbon dioxide is non-flammable and does not support combustion. Use extinguishing media appropriate for surrounding fire. Pressure in a container can build up due to heat and it may rupture if pressure relief devices fail to function. |
| Unusual fire or explosion Hazard | :Pressure in a container can build up due to heat and it may rupture if pressure relief devices fail to function. |
| Hazardous combustion products | :None. |
| Fire fighting instructions | :Carbon dioxide is non-flammable. Firefighter should wear appropriate gear for surrounding fire. Evacuate personnel from danger area. SCBA may be required for rescue workers. |

SECTION 6 - ACCIDENTAL RELEASE MEASURES

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| Small Spills | : Shut off sources of release without risk, ventilate the area . |
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SECTION 7 - HANDLING AND STORAGE

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| Handling Precautions | : Never allow any unprotected part of your body to touch uninsulated pipes or vessel containing refrigerated liquids. |
| Storage Requirements | : Store and use with adequate ventilation. |

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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| Engineering Controls | : Provide natural /mechanical ventilation to prevent accumulation in working zone beyond exposure limits. |
| Respiratory Protection | : None required in general use. |
| Protective Clothing / Equipment | : Safety shoes, safety goggles and insulated neoprene gloves. |

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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| Physical State | : Refrigerated Liquid |
| Appearance & Odour | : Colorless, Slight pungent |
| Vapor Pressure | : 838 psig at 21.10C |
| Specific Gravity | : 1.5223 at 70 0 F (21.10 C) |
| Water Solubility | : 0.90 vol/vol at at 20 0C |
| Liquid density | : 762 kg/m3 |

SECTION 10 - STABILITY AND REACTIVITY

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| Stability | :Stable. |
| Chemical incompatibilities | :Contact with incompatible materials (Alkali metals,alkaline earth metals),exposures to electrical discharges and or high temperatures Oxidizing Agents. |
| Conditions to Avoid hazards Hazardous Decomposition product | :Avoid from Electrical discharges and high temperature |

SECTION 11 - TOXICOLOGICAL INFORMATION

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| TLV as per ACIGH | :5000 ppm |
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| Acute-Inhalation | :It initially stimulates respiration and then cause respiration |
| SECTION 12 - ECOLOGICAL INFORMATION | |
| Environmental toxicity | No adverse ecological effects expected. |
| SECTION 13 - DISPOSAL CONSIDERATIONS | |
| Disposal | :Do not attempt to dispose. |
| SECTION - 14 - TRANSPORT INFORMATION | |
| Shipping Name | :Carbon dioxide refrigerated liquid |
| Shipping Lables | :Non Flammable Gas |
| SECTION 15 - REGULATORY INFORMATION | |
| Product are solely responsible for compliance with all applicable state and local reg | |
| SECTION 16 - OTHER INFORMATION | |
| Prepared by | Deepak Fertilisers and Petrochemicals Corporation Ltd. |
| Disclaimer | This MSDS and the information it contains is offered to you in good faith as accurate. We believe that information to be correct but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individual and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents |
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