Material Safety Data Sheet



Date of Issue: 19/06/2020 Revision: 0



1. Product and Company identification:

Product : Carbon dioxide

Chemical Formula : CO₂

Chemical description : Solid Carbon dioxide, Dry ice Company name : Premier Carbonic Pvt Ltd

13/700, Coimbatore road, Kalmandapam,

Kerala, India - 678003

Emergency Contact number : +919962326026

2. Hazards Identification:

Hazard Warning : Not applicable Label Elements : Not applicable

Human : Solid carbon dioxide is freezing and can cause frostbite in contact with skin.

Carbon dioxide gas in high concentrations is an asphyxiate, which acts by excluding

O₂ from the lungs

Environment : Prevent waste from contaminating the surrounding environment. Prevent soil and

water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

3. First Aid Measures:

Inhalation : Immediately remove the person from the source of exposure to fresh air, keep warm

and at rest. If unconscious, loosen tight clothing and place in a stable position, lying on one side. If breathing is difficult, provide oxygen if possible. If the heart has

stopped, provide cardiac compression.

Eye : Immediately flush eyes thoroughly with water for 20 minutes. Check for and remove

any contact lenses. Seek medical assistance immediately if irritation doesn't

stop.

Skin : Do not rub frostbitten skin or break blisters. Remove all clothing from around the

affected area. Immerse frostbitten toes, fingers, feet, hands or limbs in lukewarm water (about 40°C) NEVER HOT. Do not use direct heat, hot water bottles, heat lamps, heating pads etc. on the frostbitten area. If possible, keep frostbitten fingers and toes separated with strips of gauze or clean cloth. Seek medical assistance immediately if color and feeling do not return to Frostbitten areas within 20 minutes.

Ingestion : Same as Inhalation.

4. Fire-Fighting Measures

Extinguishing Agents : None necessary; carbon dioxide is non-flammable and is itself used as an

extinguishing agent.

Hazards / Preventive Measures : Wear self-contained breathing apparatus in areas where large amounts of carbon

dioxide are involved.

Environmental Precautions : Carbon dioxide is heavier than air and could accumulate in low-lying areas. Care

should be taken when entering a potentially oxygen deficient environment. If

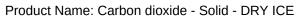
possible, ventilate the affected area.

5. Accidental Release Measures

Personal Precautions : Use protective clothing. Wear cold-insulating gloves/face shield/eye protection.

Chemical asphyxiate. Exposure to low concentrations for extended periods may result in dizziness or unconsciousness, and may lead to death. Wear self-contained breathing apparatus when entering area unless atmosphere is proven to be safe. NEVER HANDLE SOLID CARBON DIOXIDE WITH YOUR BARE HANDS. USE

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GLOVES OR DRY ICE TONGS OR A DRY SHOVEL OR SCOOP.

Clean up procedures : Solid carbon dioxide will evaporate at room temperature. If spillage occurs

indoors, provide adequate ventilation to minimize the danger of asphyxiation.

No other special procedures are necessary.

6. Handling And Storage

Handling : Avoid skin contact, Low temperatures can em brittle plastics, rubbers and some

steels.

Storage : Protect against direct sunlight and heat.

7. Exposure Controls / Personal Protection

Engineering Measures

: Provide adequate ventilation in areas where carbon dioxide is handled.

Control Parameters / Monitoring Procedures : ACGIH TLV TWA, DFG MAK: 5000 ppm (=0.5%)

Personal Protection Equipment

: Solid carbon dioxide is cold, wear protective clothing and footwear. Eye / face protection and heavy gloves to avoid skin contact. Leakage of Solid to an enclosed space with poor ventilation may dilute the oxygen concentration of the air sufficiently

to cause asphyxiation; wear self-contained breathing apparatus.

8. Physical And Chemical Properties

Appearance	While Opaque Solid
Form	Solid
Odor	Odorless
Molar Mass	44.0 g/mol
Triple Point	-56.6°C at 5.2 atm
Melting Point / Range °C	Sublimes at –78° (-56.6° C at 5.2 atm)
Burning Point	None flammable
Critical Temperature °C	31° C at 73.8 atm
Relative Gravity (g/cm3)	0.933 at 0° and 40 atm (liquid)
Relative density (air = 1)	1.98 (gas)
Water Solubility	3.42 g CO2/Liter H2O (0°, 1 atm)
Thermal Decomposition	Starts at 1200°C
Viscosity	137 10 -7 Pa at 20°C

9. Stability And Reactivity

General : Do not discharge into any place where its accumulation could be dangerous.

Discharge to atmosphere in large quantities should be avoided. Contact supplier if

guidance is required.

Conditions To Avoid : Cannot be used for extinguishing fires where metallic sodium, Potassium or

magnesium are involved.

10. Toxicological Information

Health Effects(General) : Solid carbon dioxide is very cold and can cause frost bite if in contact with the

skin. Carbon dioxide gas in high concentrations is an asphyxiant, which acts by

excluding O2 from the lungs

Inhalation : Concentrations of 4-5% by volume may cause headache and dizziness.

Concentrations of 6-8% may cause unconsciousness and paralysis of the

respiratory system.

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Skin : In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing.

Obtain medical assistance. Avoid skin contact.

11. Ecological Information

Ecological Effects (General) : When being discharged in large quantities may contribute to the greenhouse effect.

Can cause frost damage to vegetation.

Mobility : Solid carbon dioxide will evaporate at room temperature.

12. Disposal Considerations

General : Do not discharge into any place where its accumulation could be dangerous.

Discharge to atmosphere in large quantities should be avoided. Contact supplier if

guidance is required.

13. Transport Information

Road / Rail : ADR/(GGVS) RID/(GGVE) - Class 2

Prod. No. - 3 UN-No 1845

Sea: IMO IMDG : Class 2.2 Emergency Procedures (IMDG) : EmS No. 2-12 Medical First Aid Guide (IMDG) : MFAG No. 615

Air : ICAO/IATA-DGR - Class 9

UN-No. - 2187

Other Information - Packaging : White paper and polythene cover, Dry ice storage box

14. Regulatory Information

General : Not regulated

15. Other Information

Recommended Users : Used in freezing applications - airline catering, food freezing.