



# Material Safety Data Sheet

## Kanex- CO2 TYPE FIRE EXTINGUISHER

### 1. PRODUCT AND COMPANY IDENTIFICATION

|                              |   |  |
|------------------------------|---|--|
| <b>Product Name</b>          | : | CO2 type Fire Extinguisher   |
| <b>Other Trade Names</b>     | : | Compressed Liquid CO2  |
| <b>Model Nos.</b>            | : | KFC-2, KFC-3, KFC-4.5, KFA-6.5, KFC-9 and KFC-22.5   |
| <b>Manufacturer/Supplier</b> | : | M/s. Kanadia Fyr Fyter Pvt. Ltd.   |
| <b>Address</b>               | : | A-110, Kanara Business Center, Laxminagar,<br>B/H. Everest Garden Apartment. Ghatkopar (E) Mumbai-75 |
| <b>Phone Number</b>          | : | 022- 67250729  |

### 2. COMPOSITION/INFORMATION ON THE EXTINGUISHING MEDIUM

#### LIQUID CO2 (Non Beverage)

|                            |   |                         |
|----------------------------|---|-------------------------|
| <b>Requirement</b>         | : | Specification Limit     |
| <b>Purity</b>              | : | 99.90% (above)          |
| <b>Moisture</b>            | : | Not more than 20ppm v/v |
| <b>Odour</b>               | : | Odorless                |
| <b>Appearance in water</b> | : | No color or turbidity   |
| <b>Taste</b>               | : | None                    |

### 3. HAZARD IDENTIFICATION

#### THRESHOLD LIMIT VALUE

TLV = 5000 ppm [TLV-STEL (Short Term Exposure Limit) = 15000 ppm (1.5% by vol.)]

SYMPTOMS IF INGESTED, CONTACTED WITH SKIN, OR VAPOR INHALED

Carbon dioxide does not support life and may produce immediately hazardous atmospheres. At a concentration in excess of 1.5%, carbon dioxide may produce hyperventilation, headaches, visual disturbances, tremor, loss of consciousness and, death. Symptoms of exposure

In the concentration ranges of 1.5-5% may be highly variable, but typical symptoms of carbon dioxide intoxication include the following:

|                                     |   |  |
|-------------------------------------|---|--|
| <b>CO<sub>2</sub> concentration</b> | : | <b>Symptoms</b>  |
| <b>3-6%</b>                         | : | <b>Headaches, dyspnea, perspiration</b>  |
| <b>6-10%</b>                        | : | <b>Headache, dyspnea, perspiration, tremors,<br/>visual disturbance, unconsciousness</b> |
| <b>Over 10%</b>                     | : | <b>Unconsciousness</b>   |

If the concentration of carbon dioxide exceeds 10%, unconsciousness can occur without warning, preventing self-rescue.

At much higher concentrations, carbon dioxide displaces the oxygen in air below levels necessary to support life.



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### 4. FIRST AID MEASURES

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Persons suffering from the toxic effect of carbon dioxide should be moved to areas with normal atmosphere. SELF CONTAINED BREATHING APPARATUS MAY BE NECESSARY TO PREVENT TOXIC EXPOSURE OR ASPHYXIATION OF RESCUE WORKERS. Assisted respiration and supplemental oxygen should be given if the victim is not breathing. Frozen tissues should be flooded or soaked with tepid water (105-115F; 41-46C). Do not use hot water. Cryogenic burns, which result in blistering or deeper tissue freezing, should be seen promptly by a physician

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### 5. FIRE FIGHTING MEASURES

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#### **Extinguishing Media**

This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a blaze. Use extinguishing agent appropriate to other materials involved. Keep pressurized extinguishers and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

#### **Unusual Fire and Explosion Hazards**

Pressurized containers may explode in heat of fire.

#### **Protective Equipment for Fire-Fighting**

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions

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### 6. ACCIDENTAL RELEASE MEASURES

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Carbon dioxide in small quantities will vaporize leaving behind carbon dioxide "snow" (a combination of dry ice and water ice where atmospheric moisture is present). Ventilate indoor areas well to avoid hazardous carbon dioxide concentrations.

Ventilate well and avoid contact with cold vapors or dry ice. Carbon dioxide is a heavy gas and will remain in low spots without assisted ventilation

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### 7. HANDLING AND STORAGE

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Prevent contact of liquid CO<sub>2</sub>, cold vapors, or carbon dioxide "snow" with exposed skin. Prevent entrapment of liquid in closed systems. Never use direct flame to heat a compressed gas. Also avoid dragging, rolling, or sliding, even for a short distance. Use a suitable hand truck.

#### **SPECIAL STORAGE RECOMMENDATIONS**

Store liquid containers in well ventilated areas. Storage should not be in heavy traffic areas to prevent accidental knocking over or damage from passing or falling objects. Storage areas should be free of combustible material. Avoid exposure to areas where salt or other corrosive chemicals are present



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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Use self-contained breathing apparatus in oxygen-deficient atmospheres or where carbon dioxide exceeds 1.5%. CAUTION! Respirators will not function. Use may result in asphyxiation

#### VENTILATION (Natural or mechanical where gas is present)

|                                     |  |
|-------------------------------------|--|
| <b>Local exhaust - Special</b>      | :May be useful at point sources of Co <sub>2</sub> vapors  |
| <b>Mechanical - General - Other</b> | :Where low lying areas are not naturally ventilated. Vents should be situated to avoid higher than normal concentration of helium in work areas. |
| <b>Protective Gloves</b>            | :Loose fittings gloves of impermeable material such as leather when working with cold liquid, solid, or vapor.                                   |
| <b>Eye protection</b>               | :Safety glasses are recommended when handling high-pressure cylinders and in areas where vapors are discharged.                                  |
| <b>Other protective equipment</b>   | :None  |

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

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|                                  |   |
|----------------------------------|---|
| <b>Boiling point (°F.)</b>       | : @ 1 atm -109.3F (-78.5oC)   |
| <b>Triple point (°F.)</b>        | : @ 1 atm 76 (-56.66oC and 75.1 lbs/sqin.a)   |
| <b>Vapor pressure (psia)</b>     | : @ 68F (20C) 831 psia (56,5 atm)   |
| <b>Solubility in water</b>       | : @ 68F (20C), 1 atm 87.8% by volume  |
| <b>Vapor density (lb/cu ft)</b>  | : @ 68F (20C), 1 atm 0.115  |
| <b>Specific gravit (AIR=1)</b>   | : (20C), 1 atm 0.115  |
| <b>Liquid density (lb/cu ft)</b> | : @ -35 (-37oC) 11 atm 68.74  |
| <b>Specific gravit (H20=1)</b>   | : Solid @ -110F (-79C),1 atm 1.56   |
| <b>Appearance and odor</b>       | : Carbon dioxide is colorless and odorless as gas or liquid.It is stored in containers under its own vapor pressure. If the pressure is suddenly relieved, the liquid rapidly |

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### 10. STABILITY AND REACTIVITY

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|--|---|
| <b>Stability</b>                             | : Unstable (conditions to avoid)                              |
| <b>Incompatibility (Materials to avoid )</b> | : If moisture is present, materials must resist carbonic acid |
| <b>Hazardous polymerization</b>              | : may occur (Conditions to avoid)                             |

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### 11. TOXICOLOGICAL INFORMATION

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Carbon dioxide is a minor but important constituent of the atmosphere, averaging about 0.03% or 300 ppm by volume.

At higher concentrations it affects the respiratory rate. Additional symptoms are described above



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#### 12. DISPOSAL

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When disposing of bulk quantities of Carbon dioxide from refrigerated storage tanks, always dispose of Carbon dioxide outside in a well ventilated location away from work areas, where vapors can disperse, vent to the atmosphere slowly since rapid depressurization of the container will cause the formation of solid carbon dioxide (dry ice) internally, requiring longer periods to vaporize and risking to the vessel.

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#### 13. OTHER INFORMATION

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In applications where temperatures less than -20F (-29C) are expected, avoid the use of carbon steel and other materials which become brittle at low temperatures. Compressed gas should not be refilled except by qualified producers of compressed gases. Shipment of a compressed gas without the permission of the owner is a violation of DoE. The atmosphere in areas in which CO<sub>2</sub> gas may be vented and collected should be tested with a portable or continuous monitoring CO<sub>2</sub> gas analyzer.