

# MATERIAL SAFETY DATA SHEET (MSDS)

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## Product and Company Identification

Product Name: Dry Ice

Product Use: Cooling agent, refrigeration, and industrial applications

Company Name: Indo-Ghana Industries Ltd

Address: B-6158 Dadeban Rd. North Industrial Area, Accra, Ghana

Telephone Number: 054 431 3876

Emergency Contact: 054 431 3876

Date of Preparation: 12/9/2023

## Section 1: Product Identification

Product Name: Dry Ice

Product Code: Not applicable

Synonyms: Solid Carbon Dioxide, Cardice

Chemical Family: Inorganic compound

## Section 2: Hazard Identification

Emergency Overview: Dry Ice is a solid form of carbon dioxide and is generally non-toxic. However, it poses certain hazards associated with extreme cold temperatures (-78.5°C or -109.3°F). Exposure to Dry Ice may cause frostbite or cold burns. Inhalation of high concentrations of carbon dioxide gas released from sublimating Dry Ice may lead to asphyxiation in confined spaces.

### **Potential Health Effects:**

- Skin Contact: May cause frostbite or cold burns on contact with skin.
- Eye Contact: May cause frostbite or cold burns on contact with eyes.
- Inhalation: High concentrations of carbon dioxide gas can displace oxygen, leading to asphyxiation in confined spaces.
- Ingestion: Ingestion is not applicable as Dry Ice is a solid.

### **Section 3: Composition/Information on Ingredients**

Ingredient: Carbon Dioxide (CO<sub>2</sub>)

CAS Number: 124-38-9

Percentage: 100%

Exposure Limits:

- OSHA PEL: 5,000 ppm (8-hour TWA)
- ACGIH TLV: 5,000 ppm (8-hour TWA)

### **Section 4: First Aid Measures**

#### **Inhalation:**

- Move to an area with fresh air.
- Seek medical attention if breathing difficulties persist.

#### **Skin Contact:**

- Remove contaminated clothing.
- Wash affected area with lukewarm water for at least 15 minutes.

- Seek medical attention if irritation or frostbite occurs.

### **Eye Contact:**

- Rinse eyes gently with lukewarm water for at least 15 minutes, holding eyelids open.
- Seek medical attention if irritation or frostbite occurs.

### **Ingestion:**

- Dry Ice is not intended for ingestion.

## **Section 5: Fire-Fighting Measures**

Dry Ice is non-flammable and does not support combustion. However, it may displace oxygen in the air, potentially creating an oxygen-deficient environment.

Firefighters should use self-contained breathing apparatus (SCBA) in case of fire involving Dry Ice.

## **Section 6: Accidental Release Measures**

### **In the event of a spill:**

- Evacuate the area if carbon dioxide gas concentration is a concern.
- Wear appropriate protective equipment, including gloves and safety goggles.
- Ventilate the area to disperse carbon dioxide gas.
- Dispose of Dry Ice properly in well-ventilated areas or in accordance with local regulations.

## Section 7: Handling and Storage

### Handling:

- Use insulated gloves or tongs when handling Dry Ice to prevent frostbite.
- Avoid prolonged skin contact and inhalation of carbon dioxide gas.

### Storage:

- Store Dry Ice in well-ventilated areas, preferably in insulated containers.
- Keep containers tightly closed.
- Do not store Dry Ice in airtight containers.

## Section 8: Exposure Controls/Personal Protection

### Exposure Limits:

- Carbon Dioxide (CO<sub>2</sub>): OSHA PEL: 5,000 ppm (8-hour TWA), ACGIH TLV: 5,000 ppm (8-hour TWA)

### Personal Protective Equipment:

- Eye/Face Protection: Safety goggles or face shield.
- Skin Protection: Insulated gloves and protective clothing as needed.
- Respiratory Protection: Use in well-ventilated areas. Use self-contained breathing apparatus (SCBA) if necessary.

## Section 9: Physical and Chemical Properties

Physical State: Solid

Color: White

Odor: None

Melting Point: -78.5°C (-109.3°F)

Boiling Point: Not applicable

Density: 1.562 g/cm<sup>3</sup> (at -78.5°C)

Solubility in Water: Negligible

## **Section 10: Stability and Reactivity**

Stability: Stable under normal conditions.

Incompatibilities: Avoid contact with strong oxidizers and open flames.

Hazardous Decomposition Products: None under normal conditions.

## **Section 11: Toxicological Information**

Dry Ice is generally non-toxic; however, exposure to extremely cold temperatures and high concentrations of carbon dioxide gas can cause frostbite, cold burns, and asphyxiation. Refer to Section 2 for potential health effects.

## **Section 12: Ecological Information**

Dry Ice does not pose significant ecological hazards.

## **Section 13: Disposal Considerations**

Dispose of Dry Ice in accordance with local regulations. Do not dispose of Dry Ice in airtight containers.

## **Section 14: Transport Information**

Not regulated as a hazardous material for transportation.

## **Section 15: Regulatory Information**

This product is not classified as hazardous according to OSHA Hazard Communication Standard (29 CFR 1910.1200).

## **Section 16: Other Information**

This Material Safety Data Sheet (MSDS) is provided as a guideline for the safe use and handling of Dry Ice. It is not intended to be a comprehensive reference. Users should exercise caution and consult relevant authorities and regulations for specific information and requirements.

End of MSDS