

Safety Data Sheet

Dry Ice — Solid Carbon Dioxide (CO₂) · Prepared per OSHA Hazard Communication Standard (29 CFR 1910.1200) / GHS format · Issued by Sub-Zero Dry Ice · Revision: 2026

Section 1: Identification

Product name: Dry Ice (Solid Carbon Dioxide)

Product forms: Blocks, pellets, and rice/powder

Recommended use: Refrigerant / cold-chain packaging, food and pharmaceutical cooling, blasting media, fog effects

Manufacturer / Supplier: Sub-Zero Dry Ice · 5065 NW 74th Ave Ste 4, Miami, FL 33166

Phone: (305) 593-5303 · **Email:** operations@subzeroiceservices.com

Emergency information: Chemtrec (US): 1-800-424-9300

Section 2: Hazard(s) Identification

GHS Classification: Gases under pressure – Refrigerated liquefied gas (solid form). Simple asphyxiant.

Signal word: Warning

Hazard statements: May displace oxygen and cause rapid suffocation in enclosed, poorly ventilated spaces. Contact with skin or eyes may cause severe cryogenic burns/frostbite.

Precautionary statements: Use and store only in well-ventilated areas. Wear insulated/cryogenic gloves and eye protection when handling. Do not touch with bare skin. Do not place in a sealed container (pressure buildup as it sublimates).

Section 3: Composition / Information on Ingredients

Substance: Carbon Dioxide, solid · **CAS No.:** 124-38-9 · **Formula:** CO₂ · **Concentration:** ≥99% · No other hazardous ingredients.

Section 4: First-Aid Measures

Skin/frostbite contact: Do not rub affected area. Immerse or flush with lukewarm (not hot) water. Remove constrictive clothing/jewelry. Seek medical attention for blistering or persistent numbness.

Eye contact: Flush immediately with lukewarm water for at least 15 minutes, lifting eyelids. Seek medical attention.

Inhalation: Move to fresh air immediately. If breathing is difficult, administer oxygen. Seek medical attention if symptoms (dizziness, headache, confusion) persist.

Ingestion: Not applicable under normal use.

Section 5: Fire-Fighting Measures

Dry ice is non-flammable and non-combustible. It is not a fire hazard on its own and is itself used as a fire-suppression agent (CO₂). In a fire involving other materials, sublimating CO₂ can displace oxygen — ventilate the area and use self-contained breathing apparatus in enclosed spaces.

Section 6: Accidental Release Measures

Ventilate the area. Allow dry ice to sublime in a well-ventilated space away from building air intakes, drains, and enclosed spaces (elevators, walk-in coolers, vehicle cabins). Wear insulated gloves for cleanup; do not handle with bare

skin. No special environmental precautions are required — it sublimates directly to atmospheric CO₂.

Section 7: Handling and Storage

Handle only with insulated/cryogenic gloves and safety glasses. Use in well-ventilated areas — never in a closed room, walk-in cooler, or vehicle with occupants for extended periods. Never store in an airtight or sealed container: sublimation builds pressure and can rupture the container explosively. Store in an insulated (not airtight) cooler in a well-ventilated area.

Section 8: Exposure Controls / Personal Protection

Occupational exposure limits (CO₂ gas): OSHA PEL 5,000 ppm (TWA) · ACGIH TLV 5,000 ppm (TWA) / 30,000 ppm (STEL).

Engineering controls: General/mechanical ventilation adequate to keep CO₂ concentration below exposure limits, especially in enclosed or below-grade spaces.

PPE: Insulated or cryogenic-rated gloves, safety glasses or face shield. Loose-fitting gloves recommended so they can be removed quickly if dry ice contacts the skin underneath.

Section 9: Physical and Chemical Properties

Appearance: White solid (blocks, pellets, or rice) · **Odor:** Odorless

Sublimation point: −78.5 °C / −109.3 °F (transitions directly from solid to gas at atmospheric pressure) · **Density (solid):** ~1.4–1.6 g/cm³

Solubility: Not applicable (sublimates before melting) · **pH:** Not applicable

Section 10: Stability and Reactivity

Stable under normal conditions. Non-reactive with common storage materials. Avoid sealed/airtight containment (pressure hazard from sublimation). No hazardous decomposition products — sublimates directly to CO₂ gas.

Section 11: Toxicological Information

Not classified as toxic. CO₂ is a normal constituent of exhaled air and the atmosphere. At high concentrations in enclosed spaces it acts as a simple asphyxiant by displacing oxygen; elevated levels can also directly affect breathing rate and cause headache, dizziness, or confusion before oxygen displacement becomes critical.

Section 12: Ecological Information

No adverse ecological effects expected from sublimated CO₂ released to a well-ventilated outdoor area in the quantities used for commercial cooling and shipping.

Section 13: Disposal Considerations

Allow to fully sublime in a well-ventilated area away from enclosed spaces, drains, and building air intakes. Do not dispose of in sealed containers, garbage chutes, or confined spaces.

Section 14: Transport Information

UN Number: UN1845 · **Proper shipping name:** Carbon Dioxide, Solid (Dry Ice) · **Hazard class:** 9 (Miscellaneous) ·

Packing group: None

Shipments by air, ground, or sea must follow applicable IATA/DOT/IMDG dry ice quantity, marking, and ventilation requirements for the carrier and mode used.

Section 15: Regulatory Information

Classified as a simple asphyxiant and refrigerated gas under OSHA Hazard Communication Standard (29 CFR 1910.1200) / GHS. Not listed as a hazardous air pollutant. Consult local, state, and federal regulations for facility-specific requirements.

Section 16: Other Information

This Safety Data Sheet reflects standard, widely published safety information for solid carbon dioxide (dry ice), the same substance regardless of supplier. It is provided for general guidance; it is not a substitute for site-specific risk assessment or applicable local regulations. Sub-Zero Dry Ice believes this information to be accurate as of the revision date but makes no warranty, expressed or implied, regarding its completeness.

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