

Dry Ice Safety Quick Guide

Dry ice (Carbon Dioxide – Solid) is classified by both the Transportation of Dangerous Goods (TDG) and the International Air Transport Association (IATA) as a dangerous good Class 9, Packaging Group III. The main hazards of dry ice include burns and asphyxiation. Per the Code of Federal Regulations (49 CFR 171.8), it is important that the safety requirements and regulations below are followed when transporting, handling and storing dry ice.

TRANSPORTING

- Plan to pick up the dry ice as close to the time it is needed as possible. It sublimates at 10%, or 5 to 10 pounds every 24 hours, whichever is greater.
- **IMPORTANT!! For safety protection, the maximum permissible quantity for individual purchase and transport is 25 pounds of dry ice.**
- Do not remove the dry ice from the manufacturer plastic bags.
- Place the dry ice in thermally insulated container for transport, and keep it at the lowest possible temperature to maintain the solid and avoid generation of Carbon Dioxide gas.
- Ensure the transport packaging is marked with a common name or proper shipping name to identify the material it contains.
- If the dry ice is transported inside a car or van for more than 15 minutes, make sure there is an adequate amount of fresh air.
- Ensure driver(s) and passenger(s) are made aware of the dry ice and associated symptoms of exposure - After 15 minutes with dry ice only in a plastic bag in the passenger seat and without circulating fresh air, users may start to feel symptoms such as increased respiration and headaches.

STORAGE AND HANDLING

- Do not handle dry ice with bare hands – If burned, see a doctor if the skin blisters or comes off. Otherwise, if only red it will heal in time as any other burn. Apply antibiotic ointment to prevent infection and bandage only if the burned skin area needs to be protected.
- Use heavy cryogenic gloves or dry ice tongs and handle carefully to prevent dropping
- Do not store dry ice in a standard refrigerator, cooler, or freezer designed for food storage
- Containers should be stored upright and be firmly secured to prevent against physical damage
- Isolate from other non-compatible chemicals
- Containers should be vented, to prevent the build-up of Carbon Dioxide gas
- Containers should be stored in dry, well-ventilated areas away from sources of heat, ignition and direct sunlight, away from heavily trafficked areas and emergency exits, elevators, building and room exits or main aisles leading to exits
- If dry ice has been in an enclosed area for more than 10 minutes, open doors and allow adequate ventilation before entering. Leave the area containing dry ice if you start to experience symptoms such as headache or panting.
- If stored in closed areas, engineering controls in order to maintain concentration of Carbon Dioxide below the TLV of 5000 ppm in the event of a release is required

DISPOSAL

When finished with the dry ice, unwrap and leave it at room temperature in a well-ventilated area. It will sublime from a solid to a gas. **DO NOT leave dry ice unattended.**

For more information or if you have any questions, please refer to the EH&S Guidelines for the Safe Usage, Storage and Handling of Dry Ice on the EH&S Webpage, call **FIU EH&S at (305) 348-2621** or email at ehs@fiu.edu.