

University of Pittsburgh Safety Manual	EH&S Guideline Number: 04-036	
Subject: DRY ICE SAFETY	Effective Date 01/21/2021	Page 1 of 1

SAFE HANDLING AND DISPOSAL OF DRY ICE

Dry ice is carbon dioxide in solid form. At -109 °F (-79 °C), skin contact for more than a few seconds with dry ice can lead to severe frostbite. As dry ice warms, it changes from a solid to a gas (sublimation), releasing carbon dioxide gas. Carbon dioxide gas can replace oxygen in poorly ventilated areas. The resulting oxygen-deficient environment can lead to suffocation.

1. HANDLING

- 1.1. Do not handle dry ice with bare hands. Use loose-fitting, thermal-insulated gloves to manually handle dry ice. Loose-fitting insulated gloves can be readily removed if dry ice gets inside the gloves. Nitrile/latex gloves are not appropriate.
- 1.2. Wear appropriate eye protection (safety glasses, goggles, or face shield), laboratory coat, long pants, and closed-toed shoes.
- 1.3. If dry ice spills on counters, floors, or other surfaces, don the appropriate eye and hand protection before handling.
- 1.4. Use tongs or scoop to handle dry ice.
- 1.5. Always work with dry ice in well ventilated areas.

2. STORAGE

- 2.1. Store dry ice in a well-ventilated location.
- 2.2. Store dry ice in a container that allows for the release of gas, such as a vented cooler or Styrofoam cooler.
- 2.3. Do not store dry ice in a tightly sealed container. As dry ice changes from its frozen state to a gaseous state, it may cause an airtight container to expand and potentially explode.
- 2.4. If you receive a container that appears swollen or bulging, or if you suspect dry ice is improperly placed in a sealed container, secure the area and call Pitt EH&S (412-624-9505) for assistance. Do not try to release the pressure on your own; serious injury may result.

3. DISPOSAL

- 3.1. Dispose of dry ice in an open container placed in a well-ventilated area; the remainder of the dry ice will sublimate away
- 3.2. Do not dispose of dry ice in a sink, toilet or trash.

4. EMERGENCY PROCEDURES

4.1. Skin or Eye Exposure

4.1.1. Do not apply hot water or radiant heat. Bathe the affected area immediately in lukewarm water for 10 to 15 minutes, immersing if possible. Do not rub the exposed area. Remove any affected clothing. Seek medical attention.

4.1.2. Flush eyes thoroughly and seek medical attention

4.2. Inhalation

4.2.1. Move from the contaminated area and seek medical attention.