

This blog posting, Safe Handling and Storage of Dry Ice is sourced from: <https://www.safetymanualosha.com/safe-handling-and-storage-of-dry-ice/>. Posted on September 5, 2020 1:02 pm

Safe Handling and Storage of Dry Ice

Dry Ice is frozen Carbon Dioxide. Unlike most solids, it does not melt into a liquid, but instead changes directly into a gas.

Handling Instructions:

- The temperature of Dry Ice is extremely cold at 78° C.
- Do not allow Dry Ice to touch bare skin. Dry Ice in contact with skin may result in frostbite. Prolonged exposure will cause severe frostbite.
- Always wear protective gloves whenever handling Dry Ice.
- Children must not handle Dry Ice. Adults only.

Storage Instructions:

- Dry Ice will sublimate into Carbon Dioxide (CO₂) gas.
- Store Dry Ice in an insulated container. The better the insulation, the slower the Dry Ice sublimation. Do not store Dry Ice in a refrigerator or a freezer (unless the Dry Ice is being used to maintain the proper holding temperature).
- Do not store Dry Ice in an airtight container; never store in a glass container. The sublimation of Dry Ice into Carbon Dioxide gas will cause an airtight container to expand, rupture, or burst.
- Always store Dry Ice in a well ventilated area. Avoid storing Dry Ice in an unventilated room, cellar, or automobile. The sublimated Carbon Dioxide gas will sink to low areas and replace oxygenated air. Carbon Dioxide gas at elevated concentrations may be fatal when breathed.
- Some surfaces left in direct contact with Dry Ice may be damaged by the extreme cold. Adhesives may become brittle and break.
- When placing Dry Ice in super cold freezers to maintain temperature, you must limit your time in the freezer. Remove the Dry Ice from the plastic and place free standing in the freezer.

Ventilation Requirements:

- Air is composed of 78% Nitrogen, 21% Oxygen and only 0.035% Carbon Dioxide. If the concentration of CO₂ in the air rises above 0.5%, it becomes dangerous.
- Carbon Dioxide is heavier than air and will accumulate in low spaces. Do not enter closed Dry Ice storage areas without first ventilating the space.
- Limit your exposure to Dry Ice in the freezer and only enter as needed.

Pick Up and Transportation Instructions:

- Plan to pick up Dry Ice as close as possible to the time it is needed.
- Bring a well insulated container such as a camping cooler, ice chest, or cold storage box.
- If it is transported inside a car or van, make sure there is a constant supply of fresh air.
- Try to transport outside of main cab of vehicle if possible