

# FAQ

Q: What is dry ice?

A: Dry ice is a name that is applied to compressed carbon dioxide, “snow.”

Q: What temperature is the surface of dry ice?

A: Dry ice has a surface temperature between -78 and -110 degrees Celsius

Q: Does it melt?

A: No. Dry ice goes through a process called “sublimation” in which a solid substance skips the liquid state and changes directly into a gaseous state.

Q: How is dry ice created?

A: Under normal conditions, carbon dioxide is a colourless and odorless gas. To make carbon dioxide snow (dry ice) the gas is cooled at high pressure which liquefies the gas. Further cooling takes the carbon dioxide to the, “triple point.” The highly pressured liquid is then suddenly expanded by spraying, and turns it into snow. The snow is then pressed into blocks weighing between 50-250 lbs.

Q: How much of the liquid carbon dioxide turns to snow?

A: About 30% of the liquid which is sprayed turns to snow. The rest is turned back into gas and is returned to the compression and cooling process.

Q: What will prevent the dry ice from turning into a gas again?

A: Nothing will prevent the dry ice from “subliming.” Once it is out of the high pressure it must be insulated to reduce the rate of sublimation.

Q: What should dry ice be put into, to insulate it?

A: a “kraft” paper bag will reduce the sublimation rate on its own. The ice wrapped in the paper should be put into a container which is insulated as much as possible, but NEVER seal the ice into an air tight container due to the pressure.

Q: what is the “triple point?”

A: When carbon dioxide is subject to a temperature of 69-degrees Celsius and also to a pressure of 60.4 psi, carbon dioxide can exist as a solid, a liquid and a gas at the same time. The ability to be in three states simultaneously is known as the triple point effect.

Q: Does The Iceman Provide containers to ship the dry ice in?

A: Yes. We offer Styrofoam containers called styro-shippers which can hold capacities of 9.5L to 8L. These range in price from \$9.13 up to \$19.40.

Q: How heavy is dry ice?

A: A block measuring 10” x 10” x 10” is 50lbs. A slab measuring 10” x 10” x 2” is 10lbs. A slab measuring 10” x 10” x 1” is 5lbs.

Q: At what rate can I expect the dry ice to sublimate?

A: Customers will find that with good insulated shipping similar to those styro-shippers which we sell, there will be a loss of 1% per hour.

Q: What type of clientele do you find would require the use of dry ice?

A: There are many types of clients we cater to including:

- Laboratories
- Universities & Schools
- Caterers
- Drug manufactures
- Hospitals
- Specialty food processors
- Special effects companies for TV and Film
- Baked product producers
- Meat processors, shippers etc.
- Refineries
- Transport companies
- Hunters/campers
- Metallurgy/cold grinding/de-flashing

Q: what are some benefits to using dry ice?

A: It is an alternative method to heat displacement refrigeration. (i.e. electric refrigerators) It is inexpensive & simple. It consumes no fuel or electricity. It can be cut, wrapped & delivered to predetermined specifications and limiting waste.