How to Handle Dry Ice

Dry ice is the frozen from of carbon dioxide and has a very cold temperature of -109.3°F (-78.5°C).[1] It can be used in a variety of ways including keeping food cold during a power outage or during shipping and for making movie special effects. Because dry ice is so cold, it cannot be handled safely without proper protection and knowledge of the chemical itself.

1

Know the dangers of handling dry ice. Handling dry ice is dangerous due to its extremely cold temperatures that can lead to frostbite and tissue injury. The carbon dioxide vapors in an unventilated area are also toxic.

- If prolonged contact with dry ice occurs, do not rub the affected area. Remove clothing that is not frozen to the skin and place the affected area in a warm water bath. Avoid direct dry heat

2

Protect yourself by dressing in a long-sleeved shirt, long pants, and closed-toed shoes. Proper protection is essential while handling dry ice. The best protection is to cover all of the surfaces of your body that could be exposed. Gloves and goggles are extremely important to protect your hands and eyes from injury.

3

Pick up the dry ice with tongs. Never handle dry ice directly with your bare hands. If possible, use metal tongs when transferring chunks of dry ice to new locations. If you do not have tongs available, wear an oven mitt or towel while handling the dry ice.

- Metal tongs with serrated edges work best.

4

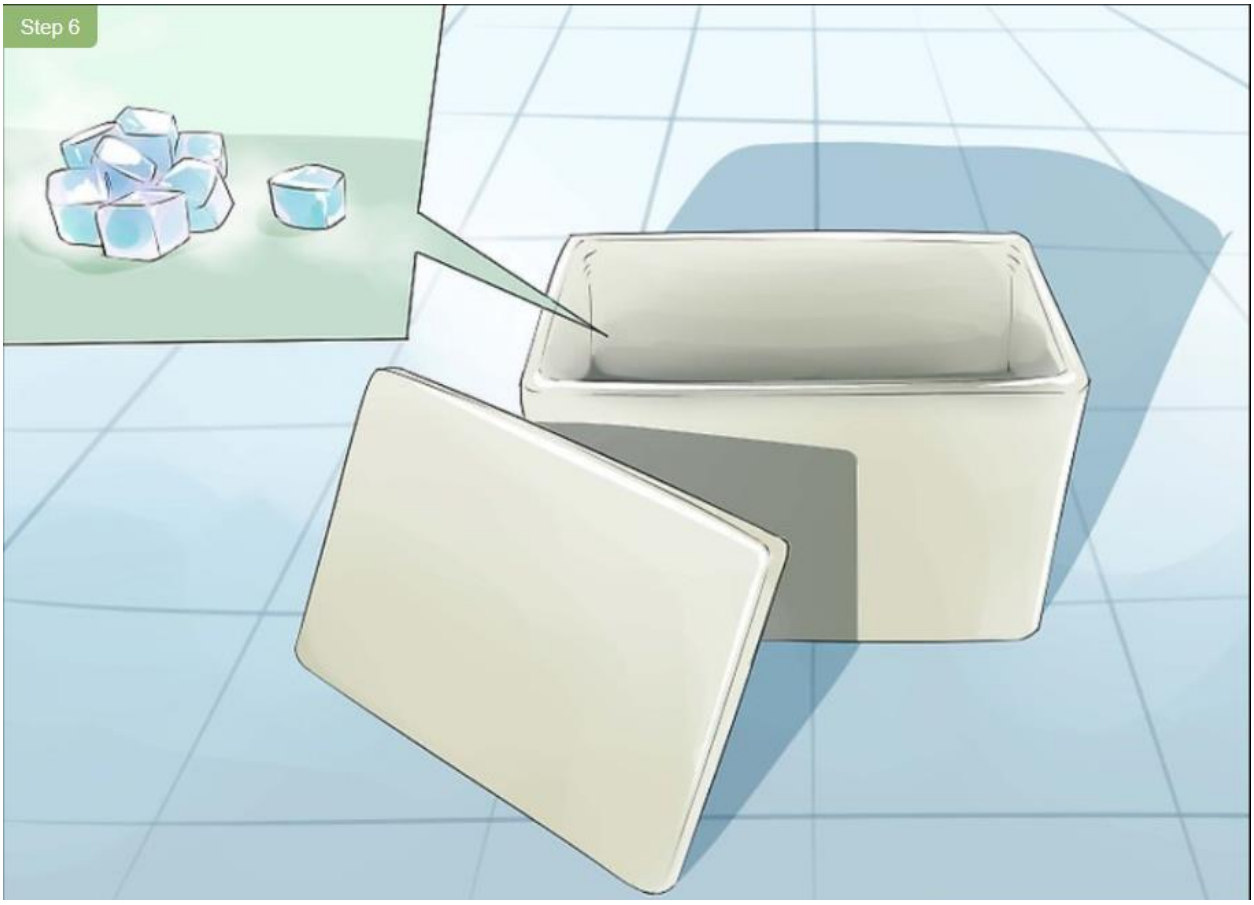
Use a chisel to break off smaller pieces from the block. If you purchased a block of dry ice and need smaller pieces, use caution while chiseling them off. Break off pieces of the ice by setting a chisel to the desired point, and tapping it lightly with a mallet.

- Always wear eye protection while chiseling to prevent chips from flying into your eyes.

5

Use the dry ice in a well-ventilated area. Dry ice is frozen carbon dioxide. As it warms, it sublimates (turns directly from a solid to gas, skipping the liquid phase) into its gaseous form. Exposure to large amounts of gaseous carbon dioxide is hazardous to your health and can cause you to lose consciousness or suffocate.

- Working in a room with good ventilation or an open window can prevent a dangerous buildup of gas and keep you safe.
- Symptoms of excessive carbon dioxide inhalation include dizziness, headache, and increased heart rate.



6

Store dry ice in an insulated container that is not airtight. Dry ice sublimates relatively quickly, but its shelf life can be extended by storing it an insulated container such as a Styrofoam cooler. Make sure the container is not airtight to prevent the buildup of carbon dioxide gas.

- Too much gas in an airtight container can lead to an explosion.

7

Melt the ice when you are finished with it by pouring warm water over it. The warmer the dry ice gets, the faster it sublimates. To dispose of it, you can either leave it open to the air in a warm area or pour warm water over it until it is gone.

- Do not leave children unattended around dry ice.
- Don't try to dump the dry ice down a sink drain or toilet or you could damage the pipes
- Don't dispose of dry ice in the trash.
- Don't let the dry ice evaporate in a small area without proper ventilation. The build-up of carbon dioxide can lead to unconsciousness and even suffocation

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