General

Dry ice is a solid form of carbon dioxide that is kept at the extreme low temperature of -78.6⁰C. The substance is used for packaging and shipping frozen and perishable items. Specific guidelines have been set in place by the U.S. Department of Transportation (DOT) to ensure proper use of dry ice during shipping procedures.

Label Requirements

Shipping dry ice can pose hazards, such as suffocation from excessive carbon dioxide gas as it is released from the container. It can also damage skin upon contact and may pose an explosion hazard in some cases. Because of these risks, label all shipments using dry ice appropriately to comply with DOT regulations. Clearly identify all shipments containing dry ice with a Class 9 DOT miscellaneous hazardous material warning label. The label should read “Carbon Dioxide Solid”, UN1845 or “Dry Ice, UN1845.”





Dry ice is considered a dangerous good/hazardous material for air transport and requires special handling. Shippers are also required to have function-specific dangerous good training\*.

Safe Containers

Dry ice is not suitable for all shipping containers. Use packaging that is able to hold up to loading and unloading without risk of damage to the container. Use packaging with ventilation that allows for the release of carbon dioxide gas. An airtight seal on a package containing dry ice can lead to package explosion. Do not use a packaging material that may be cracked or weakened by extremely cold temperatures. Plastic should never be used to package dry ice. Opt for insulated foam for safe shipments.



Safe Handling and Storage

Touching dry ice with your bare skin can cause immediate freezing and an injury similar to a burn. Inhaling too much carbon dioxide gas can also be dangerous and cause suffocation, so safe handling is extremely important when dealing with this hazardous material. Always wear protective gloves to handle dry ice and use the material in a well-ventilated area. Store dry ice in an insulated container that is also ventilated. If you have difficulty breathing or begin breathing quickly, leave the area where the dry ice is located. Never touch dry ice with your bare skin.



**Disposal of Dry Ice**

* Allow the dry ice to sublimate or evaporate to the atomosphere in a well-ventilated area where CO vapor cannot build up.
* Do not dispose of dry ice in sewers, sinks, or toilets. The extreme cold can fracture ceramic fixtures or crack polyvinyl chloride (PVC) piping. If flushed down plumbing, the gas buildup can cause an explosion.
* Do not place dry ice in trash cans or similar containers. The extreme cold and resulting condensation can destroy these receptacles.

\*<http://www.mayomedicallaboratories.com/education/online/dangerousgoods>

By law, any person who causes dangerous goods to be transported by a public carrier must follow specific regulations and must have proof of training.

In a laboratory environment, send out staff, those who transport dangerous goods, and those who receive dangerous goods are among those that require training.

Upon completion of this course, you will be eligible to take an online self-assessment quiz to obtain a dangerous goods shipping training completion certificate.

The process consists of training and a quiz. Complete the following steps:

1. Review all five sections of the self-paced training course
2. Take and pass the self-assessment quiz and evaluation
3. Generate and print the Dangerous Goods Certificate

Retain a copy of the training completion certificate and please send a copy of these of your certificate to keep on file.