



Shipping Hazardous Materials

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This is a guidance document intended to provide University personnel with the requirements for the safe shipment and transport hazardous materials. Those University personnel that have any involvement with the shipment of hazardous materials, either directly or indirectly (i.e. using a shipping contractor) should familiarize themselves with this information. EH&S and Central Receiving have staff members that are trained and certified to ship hazardous materials, unless you have received the appropriate training and are certified to ship, please contact EH&S for assistance with any hazardous material shipment.

The Department of Transportation (DOT) and International Air Transport Association (IATA) regulate all activities involved with the shipment and transport of hazardous materials (e.g. chemicals, gases, etc.). The Hazardous Materials Regulations apply to each person who performs or directs functions related to the transportation of hazardous materials. Examples of applicability are those who may engage in the following activities: Offering hazardous materials for transport

- Filling packages
- Marking and labeling packages
- Preparing shipping papers, handling, loading, securing and segregating packages within a transport vehicle, freight container or cargo hold, and transporting hazardous materials.

If your job activities at UT Dallas involve at any time the offering for shipment or arranging for shipment of hazardous materials, you should be familiar with the requirements needed to ship hazardous material.

The Department of Transportation (DOT) oversees the Hazardous Materials Regulations (HMR 49 CFR Parts 171-180) that regulate all activities involved with the shipment and transport of hazardous materials (e.g. chemicals, gases, etc.). This includes shipping hazardous materials interstate, intrastate, through foreign commerce by rail car, aircraft, motor vehicle and vessel. These comprehensive regulations govern transportation-related activities by offerors (e.g., shippers, shipping/receiving departments, brokers, forwarding agents, freight forwarders,); carriers (i.e., common, contract, and private trucking and other transport companies). In most cases, UT Dallas acts as an offeror of hazardous materials.

DOT definition of a hazardous material

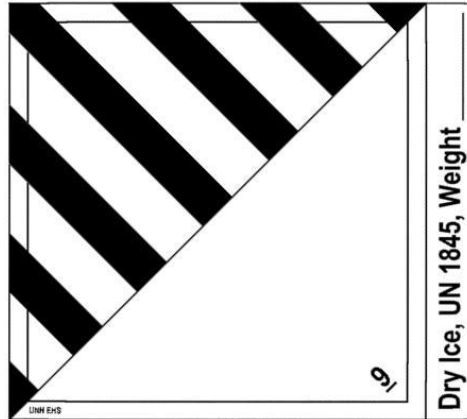
A DOT hazardous material is defined as a substance or material, which has been determined and designated by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. All DOT hazardous materials are listed in the DOT's Hazardous Materials Table, or meet defining criteria provided in DOT regulation Part 173 Subpart D. This section defines such characteristics as flammability, corrosivity, toxicity, etc.

General Hazardous Materials Classifications:

- Hazard Class 1: Explosives
- Hazard Class 2: Compressed Gases
- Hazard Class 3: Flammable Liquids
- Hazard Class 4: Flammable Solids
- Hazard Class 5: Oxidizers and Organic Peroxides
- Hazard Class 6: Toxic Materials
- Hazard Class 7: Radioactive Material
- Hazard Class 8: Corrosive Material
- Hazard Class 9: Miscellaneous

Training is a requirement to perform functions associated with HAZMAT shipments

As a person involved in some manner with a shipment of hazardous materials, DOT defines you as a "HAZMAT Employee." Stated briefly, a HAZMAT employee is anyone who directly affects hazardous materials transportation safety. Before any HAZMAT employee performs a function subject to the HMR, that person must be provided initial training in the performance of that function. Each HAZMAT employee must be initially trained, and periodically retrained at least every three years to meet your training requirement. Unless you have had this training and are current in your certification, you should not ship hazardous materials, including dry ice packages.



Dry Ice Shipping Regulations

The International Air Transport Association (IATA) and the Department of Transportation (DOT) both consider dry ice to be a hazardous material due to its potential to cause asphyxiation. Dry ice can also damage skin upon contact and may pose an explosion hazard in some cases. Because of these risks, all shipments using dry ice should be appropriately labeled to comply with DOT regulations. Please contact EH&S at x 4111 for assistance with dry ice shipments.

If regulations for shipping dry ice are not met, the IATA can fine the person or company responsible \$50,000.

The following are the major considerations when putting together a dry ice shipment

- 1. Gas venting:** Packages must allow for release of carbon dioxide gas. Dry ice must never be sealed in a container with an airtight seal such as a jar with a threaded lid or a plastic cooler.
- 2. Package integrity:** A package containing dry ice must be of adequate strength for its intended use. It must be strong enough to withstand the loading and unloading normally encountered in transport. It must also be constructed and closed in order to prevent any loss of contents that might be caused by vibration or by changes in temperature, humidity, or altitude.
- 3. Package materials:** Do not use plastics that can be rendered brittle or permeable by the temperature of dry ice. This problem can be avoided by using commercially available packages intended to contain dry ice.
- 4. Airbill:** The airbill (also referred to as the air waybill) must include the statement “Dry Ice, Class 9, UN1845, *number of packages X net weight in kilograms*”.
- 5. Labeling:** The outermost container must be labeled with a hazard class 9 label, UN 1845, and total weight of dry ice in kilograms.

Shipping Biologicals

If you will be shipping infectious or potentially infectious materials such as: blood, tissues, specimens, micro organisms, etc. your shipment is regulated and you must comply with the appropriate regulations. DOT and IATA also regulate the shipping of these types of hazardous materials. Everyone who ships these materials must have IATA training.

Please contact EH&S x4111 if you need to ship hazardous material and do not have this training. Those who prepare a package must have a current training certificate and know the proper way to prepare the shipment. Those who sign the air waybill or declaration form are certifying that the package is packed properly. It is very important that no one signs an airway bill or declaration form without having been trained or ensuring that the package and paperwork is correct.