

Chemical Shipping FAQ

This sheet is designed to assist the shipper in properly classifying and packaging chemical material. This sheet is not intended to replace proper training and certification as required by the Department of Transportation.

Chemical Hazard Shipping TheCryoGuys offer a variety of chemical hazard services including basic hazard shipping and “certified hazmat shipper” packing services. This reference guide includes an overview of applicable shipping regulation and compliant service options.

STEP 1 – Chemical Hazard Identification

Q: Who defines hazard classification for U.S. ground transportation?

A: The Pipeline and Hazardous Materials Safety Administration (PHMSA) is a division of the U.S. Department of Transportation (USDOT) which, among other things, defines and regulates ground shipment of hazardous materials within the U.S. PHMSA’s regulatory language concerning hazmat ground-shipment is contained in 49CFR. 49CFR provides complete definition of the term “hazardous material” including all chemical hazards.

Q: Why do I need to classify the chemicals I intend to ship?

A: If you are moving a chemical inventory along with your lab, every chemical must be correctly classified, labeled, packed and manifested per 49CFR. Not only does this process ensure public safety, it mitigates risk of penalties for non-compliance which include fines of up to \$20,000 per individual infraction and indefinite impound of vehicle and content.

Q: How do I know if a chemical is regulated as hazardous for ground transportation?

A: USDOT identifies the following 9 hazard classes in 49cfr.



Most bioscience labs use at least 3 of these hazard classes on a regular basis. If you are unsure whether a specific chemical is regulated as hazardous for ground transportation, inspect section 14 of the MSDS provided by the original manufacturer.

Q: I haven’t checked, but I really don’t think my chemicals are hazardous. Can I simply pack and ship them as non-hazards?

A: You would put your shipment, yourself, the hazmat carrier and the public at risk to do so. TCG requires a “shipper certification” signature for all lab chemical shipments even in the event that everything is presented as “non-hazardous”.



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Q: A chemical was shipped from the manufacturer via FedEx. Doesn't this indicate that it is not a shipping hazard?

A: Absolutely not! Previous shipment can never be used as a short-cut to correct identification and shipping compliance. There are numerous problems with making such an assumption, including previous non-compliant shipping and regulatory changes implemented since the first shipping date.

STEP 2 – Chemical Hazard Shipping

Q: What is required to ship hazardous lab chemicals?

A: 49CFR outlines legal responsibility of a “Certified Hazmat Shipper” as follows:

- (1) The Certified Hazmat Shipper must have certified training in applicable regulation and procedure.**
- (2) The Certified Hazmat Shipper must classify each item being shipped as either hazard or non-hazard. Hazards must then be identified including the following data: hazard class, proper shipping name, and UN-number.**
- (3) The Certified Hazmat Shipper must pack, label and manifest all hazards in a DOT-compliant manner.**

Q: I took a basic hazmat shipping course recently. What more is required to ship my lab's chemical inventory?

A: Experience! The average lab chemical inventory includes a wide range of hazard classes and container sizes which all require unique UN-approved hazmat packing methods and systems. Extensive familiarity with both regulatory language and the vast array of compliant packing solutions is required to pack chemicals in a compliant manner which is also time, space and cost effective.

Q: Can someone else ship my chemicals for me?

A: Yes. Anyone who is properly trained can act on your behalf as a “certified hazmat shipper”. Some EH&S departments are able to fulfill this role for small shipments.

Q: Does TCG offer a “Certified Hazmat Shipper” service to identify, label, mark, pack, and manifest my chemical inventory?

A: Yes. TCG offers a range of chemical packing and preparation services at various price-points ranging from basic consulting to complete inventory packing and shipping. These services are available separately from TCG's hazmat transportation services but may be bundled under a single service outline.

STEP 3 – Chemical Hazard Transportation

Q: Is TCG able to transport my chemical inventory?

A: Yes. TCG is licensed, insured and registered to handle all classes of hazardous materials other than Explosives – Class 1 and Radioactive – Class 7.

Q: Some of my chemicals require climate control. Can TCG maintain multiple temperature ranges in transit?

A: Yes. TCG can provide tightly regulated temperature control for properly packed chemicals at 18C, +4C, -20C or any other temperature required.

Q: I store chemicals and biologicals in my lab-refrigerator. Can TCG transport my refrigerator under power with chemicals and biologicals aboard?

A: Yes. TCG can transport your lab freezer and content so long as all hazards within have been labeled, marked, packed and manifested in compliance with DOT regulation.

Q: How do I know that my chemical shipment will be transported safely?

A: TCG's personnel undergo extensive hazmat shipping and incident response training. Each TCG vehicle carries incident response and emergency response information as well as a chemical spill kit. All TCG shipments are monitored remotely in real-time via TCG's dispatch office, allowing for immediate response in the case of an incident.