Proper Chemical Transport

Best Practices

Public hallways have less ventilation, are hard to isolate, and are the most dangerous place for spills.

- Use freight elevators, not the stairs and avoid congested areas
- Hands should not have gloves on them. Bring gloves and absorbents with you in case of problems
- Be extra vigilant over bumps like elevator thresholds, around corners, by doorways
- Wipe down the container exterior to limit any odors

Do Not Use Public transportation

Transport of hazardous materials via public or shared transportation is **prohibited**. Under NO circumstances may public transportation (e.g., UMN buses, shuttles, Twin Cities buses, private taxis, Light Rail Transportation (LRT), etc.) be used for transport of hazardous materials.

Figure 1: Secondary containers for small quantities (left) or low hazard (right)

Secondary Containment Requirements

All transportation of liquids require a secondary container that is not glass. Acceptable options include: the original shipping box, Ziploc bag for amounts < 100 mL (Fig 1, left), plastic jars for up to 1 L (Fig 2, right), buckets for $\leq$ 4 L (Fig 2, left), and carts for containers > 4 L (Fig 3) or more than 2 bottles.

Flammable liquids, low odor thresholds (e.g., mercaptans, thiols etc.) and other hazardous chemicals with a low vapor pressure, must be fully enclosed to avoid release if moved outside the lab. Unopened shipping boxes, a sealed bucket or safety can may be used. Carriers without a lid can be used in the lab.

Figure 2: Transport of hazardous chemicals outside of the lab

Large Quantities (> 20 liters)

Transportation of large quantities of chemicals **requires certified hazmat transporter or HSRM approval**.

Exception: With the approval from HSRM, laboratory personnel may transport larger quantities of chemicals within connected buildings. Obtain approval from the HSRM Research Safety Professional assigned to your college by contacting the DEHS office at (612) 626-6002.

Figure 3: Cart approved for transport

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Proper Chemical Transport (cont.)

Compressed Gases

Use a cylinder cart, secured with a strap and the valve cap screwed in place. Cylinders must be transported to different floors on the elevator and extra passengers should be avoided. High pressure cryogenic gases may have building specific policies.

Shipping Chemicals off Campus

If you need to ship chemicals off campus the department of transportation requires the person shipping to have training. U Market and UMN Regulated Waste will provide this service. If you frequently need to ship hazardous materials, contact the HSRM Regulated Materials division for shipper training.

Hazardous Materials Transport

U Market

The average turnaround time for on campus courier completion is 3 hours, but urgent delivery is accommodated as needed. Out-state rush shipments can also be arranged for an additional charge. Arrangements for transport can be made online with the U Market Campus Courier, or by calling U Market Services Customer Support at (612) 624-4878

For more information, contact U Market at the following locations and numbers:
KE Dock: (612) 626-3777
BDD Dock: (612) 626-2748

HSRM Regulated Waste

For transport of highly reactive materials or large quantities, contact HSRM Regulated Waste at (612) 626-1604, or hazwaste@umn.edu.

Resources

Transporting and Shipping Hazardous Materials

Hazardous Materials Shipping

UMN Chemical Hygiene Plan