

## Davis, Linda S

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**From:** Davis, Linda S  
**Sent:** Tuesday, August 05, 2008 10:18 AM  
**To:** 'chme@ecn.purdue.edu'; 'chmegrad@ecn.purdue.edu'  
**Cc:** 'Gauger, Steve A'  
**Subject:** Safety Update #1: Hazardous Material Movement by University Employees  
**Attachments:** 6-2008 rev - Hazardous Material Movement by University Employees as Part of University Business.doc; Engineering Chemical Shipments 6-08.ppt

ChE Faculty, Staff and Graduate Students,

Purdue guidelines for on campus shipment of hazardous material are presented in the attached documents.

Purdue is exempt from DOT hazardous materials rules because we are considered a state agency. However, we still need to comply with the intent of the DOT rules: 1) package chemicals so they arrive at the location intact and not leaking, 2) avoid accidents on the road, and 3) be prepared if an accident does occur.

REM contacts for hazardous material shipping are Lanie Hazlewood (67367) and Adam Krajcek (63072).

Linda

*Linda S. Davis*

Industrial Education Director  
School of Chemical Engineering  
Purdue University  
480 Stadium Mall Dr.  
West Lafayette, IN 47907-2100  
Phone: (765)496-1710  
[lsdavis@purdue.edu](mailto:lsdavis@purdue.edu)

## Hazardous Material Movement by University Employees as Part of University Business

First, compliance:

Purdue is exempt from DOT hazardous materials rules because we are considered a state agency. We still need to comply with the intent of the rules, which is to avoid accidents on the road, be prepared if they do happen, and for the chemicals to arrive at the location intact and not leaking.

Second, safety and emergency preparedness recommendations:

1. For insurance purposes, use only University vehicles to transport chemicals. If this is not possible, check with individuals' private insurance companies to make sure coverage extends to moving chemicals while at work. Also, if you're using a rental from Transportation Services, they ask you take extreme care to protect the vehicle from damage due to chemical leaks.
2. Ensure the container has an appropriate, tight fitting lid. The lid should have the ability to contain the contents of the container if it becomes inverted during transport. Examples of inappropriate lids includes cracked caps, loosely fitting rubber stoppers or Para film.
3. Segregate chemicals according to primary hazard. The laboratory storage segregation requirements can be used as guidance for segregation during transport. For example, do not place an oxidizer such as ammonium nitrate in the same container as an organic solvent such as acetone.
4. Package to prevent breakage (e.g. avoid glass to glass contact).
5. Chemical containers should be placed in some type of outer packing such as a box, bin, or bucket. All containers should be packaged upright. Use your common sense when packaging. Packing materials such as newspaper or even better vermiculite should be used to stabilize chemical containers and prevent movement during loading, transport and unloading.
6. Mark the outer container in some way to identify that it contains hazardous chemicals (e.g. "Corrosives").
7. The outer containers should remain tightly secured during transport. Measures should be taken to avoid movement of the outer containers, especially if the container will have a tendency to slide on the floor. Nothing elaborate, an empty box could be used to fill the space from the last box and the door.
8. Transport with two or more people.
9. Be prepared for unforeseen accidents. At least one person should be knowledgeable of the cargo. An inventory with estimated volumes or weights per hazard would be a good idea (e.g. 20 gallons of flammable liquids and 10 pounds of toxic solids estimated)
10. Plan the route; don't detour to Wal-Mart with chemicals.
11. Be prepared for a spill. Prepare a spill kit prior to transport. Nothing elaborate, safety glasses, gloves, an absorbent material such as pads, and an empty bucket are sufficient for most small spills.
12. Avoid shipping strongly incompatible material in the same shipment. If this can't be avoided, then secondary containment would be advisable. Use extra caution when packing and unpacking self-reactive material.
13. Carry a cell phone with preprogrammed numbers of who to call in an emergency. For on campus emergencies Purdue Fire will respond. Use 911 from a Purdue phone or 765-494-8221 from a cell phone to contact Purdue Police dispatch. For off Campus emergency, call 911 and the nearest emergency response agency will respond.

Finally, don't hesitate to call Lanie Hazlewood (67367) or Adam Krajicek (63072) our experts on hazardous material shipping. They can provide more advice and possibly lend you some secondary containment bins.



# Chemical Shipments

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Lanie Hazlewood  
Hazardous Materials Mgmt Program  
Coordinator

# Regulations

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- Purdue University is exempt from Department of Transportation (DOT) hazardous materials rules.
- ... However, we need to comply with the intent of the regulations.



# On Campus Shipment

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## Guidelines



# On Campus

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- REM has a guidelines document available for shipping chemicals on campus



# On Campus

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- General guidelines
  - Use a University vehicle
  - Package to prevent breakage and spillage
  - Segregate according to primary hazard
  - Label the outer container
  - Secure boxes from movement during transport

# On Campus

## Be prepared for accidents

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- Transport with two people or more
- Carry a cell phone
  - Use 911 from a Purdue phone
  - 765-494-8221 from a cell phone
- Plan the route
  - don't detour to Wal-Mart with chemicals
- Have a spill kit





# Off Campus Shipments

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# Off Campus Shipments

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- REM provides service for shipments of hazardous materials off campus
- Following information will be needed:
  - Name and quantity of chemical
  - MSDS for material
  - Ship to address
  - Account number for shipping charges



# Off Campus Shipments

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- Contact
  - Lanie Hazlewood:  
[lhazlewood@purdue.edu](mailto:lhazlewood@purdue.edu) (67367)
  - Dan Miller: [dnmiller@purdue.edu](mailto:dnmiller@purdue.edu) (67364)