

Guidance Document: Handling and Transporting Hazardous Materials between Campuses

Purpose/Definitions:

The US Department of Transportation (DOT) regulates and restricts the transportation of hazardous materials over public roads and highways. There are times when Montgomery College employees need to self-transport hazardous materials using college vehicles between campuses and sites for various purposes including facilities operations. This procedure applies to transportation of chemicals and hazardous materials under the following circumstances:

1. MC employees who work in the Central Receiving function and are responsible for internal shipping, receiving and delivery.
2. MC Mailroom employees receiving and delivering chemicals or hazardous materials on campus
3. MC employees transporting chemicals and other hazardous materials between campus buildings, in MC owned vehicles, for college operations.

Contractors are not covered by this procedure. Contractors must follow all DoT requirements applicable to their work.

Definitions:

TRANSPORTS or TRANSPORTATION: Movement of property on public roadways, and loading, unloading or storage incidental to the movement.

Transport in a MC vehicle:

Transportation of Hazardous Materials between Montgomery College Campuses or sites, by college employee only, is exempt from the federal DOT regulations under 49 CFR 171.1(d)(5). However, all employees shall adhere to the following safety precautions and procedures described below, including training requirements. *See limits to this exemption on page 5.* If in doubt, please consult the office of Environmental Safety prior to transporting any chemicals, or biological hazardous materials. Radioactive materials are not covered by this procedure. Montgomery College is not licensed to use radioactive materials. Please contact Environmental Safety for details.

Alternative Transportation: As an alternative to self-transportation, contact the Montgomery College Central Receiving department and request delivery of a vendor shipment to the site where needed.

- The limit for transporting chemicals between campuses is based on the DOT Materials of Trade exception. We will voluntarily adhere to the Material Limits under 49CFR 173.6. Some of the most relevant requirements are listed below. Contact the Environmental Safety Office for details, or if you have questions.
- If you are transporting quantities greater than those described in 49 CFR 173.6 then you must contact Environmental Safety to create a procedure for transporting the specific item.
- Do not transport explosives, pyrophorics, spontaneously combustible, dangerous

when wet, poisonous gas, or extremely hazardous substances (GHS Category 1 “Fatal if inhaled”).

- No “hazardous wastes” as defined by Resource Conservation & Recovery Act 40 CFR 260 Subpart B will be transported by MC employees. Hazardous wastes should not be offered for shipping between campuses. Schedule a hazardous waste shipment through the Environmental Safety Office.
- Transportation of chemicals in personal vehicles is NOT permitted, at any time. To transport small quantities between campuses, schedule a delivery time through Central Receiving.
- DO NOT transport biological hazards or medical wastes such as sharps, used needles and syringes.

Packaging and Labeling

- All containers must have labels that conform to OSHA Hazard Communication Standard (29 CFR 1910.1200). This requirement is met if the container has the original manufacturer’s label, and the label is not torn, damaged, or in any way illegible. Hazardous materials stored in non-original bottles must be properly labeled with the chemical name and GHS hazard symbol or text. This information can be obtained from the product’s Safety Data Sheet.
- Hazardous materials shipping containers will follow the provisions for Required Packaging under *49CFR 173.6* and list the chemical name, primary hazard class (see appendix below) and approximate quantity on the outside of shipment packaging. A person with hazardous materials handling experience will package or inspect the packaging prior to transportation for containers not in their original commercial shipment packaging. Contact the Environmental Safety Office if you need assistance.

Required & Recommended Training:

1. Required: MC Learns E-course **Hazard Communication** or equivalent completed.
2. Required: Hazmat: General Awareness-Online training course. (JJ Keller)
3. Required if handling blood or infectious materials: MC Learns E-course **Blood Borne Pathogens Prevention** or equivalent completed.
4. Recommended: **Personal Protective Equipment (PPE)** completed.
5. Recommended: [Van Safety](#) completed.

Required: read the Montgomery College **Emergency Procedures, and Chemical Hygiene Plan**

CENTRAL RECEIVING employees will follow additional DOT Haz Mat Transportation requirements:

1. Employee DoT training within 90 days of employment and every three years, thereafter.
2. Training content: understand how to prepare shipping papers; segregate hazard classes; labeling & packaging requirements; placarding requirements; vehicle

operation requirements; emergency response and security. Understand chemical compatibility and placarding limits.

3. Record keeping - Training records: 3 years Shipping papers 1 year
4. When driving vehicle, location of shipping papers within reach of driver when seated at the wheel with lap belt on.
5. OSHA and EPA required training that applies to their job - Hazard Communication & Emergency Response training.

The above requirements are in addition to the usual package tracking and vehicle operation procedures and training.

MAILROOM Chemical Receiving

Mailroom staff must inspect all incoming shipments for the following requirements:

- Proper labels must be attached. See “Packaging & Labeling” section.
- Containers must be intact and in good condition. Refuse delivery of any damaged packages, if possible.
- Any leaking containers must be placed in an appropriate secondary container immediately and treated as a chemical spill. Report the incident to Public Safety immediately.

Chemical Storage

- Hazardous Materials Packages need to be stored and segregated according to DOT Hazard Labels (see attached Hazardous Materials Segregation Chart)
- Packages requiring refrigeration must be refrigerated, or picked up within 1 hour of delivery. Notify the department chair and Environmental Safety if refrigerated packages are not picked up in a timely manner, repeatedly.

Handling/Safety

- The proper Personal Protective Equipment (PPE) will be used when handling unpackaged bottles.
- Safety Data Sheets [SDS or MSDS] will be available on the Montgomery College Environmental Safety/ CloudSDS database for all materials shipped. Paper copies will be carried for highly hazardous materials. Examples of highly hazardous materials include concentrated acids, bases, highly flammable liquids and highly toxic substances. For the purposes of this document, “highly” is defined as GHS Category 1 or NFPA Diamond rating 4. Consult the (M)SDS for substance Categories & Ratings.
- Examples of materials where a SDS paper copy would not be carried would include low toxicity chemicals and dilute solutions.

Moving & Handling Hazardous Materials on Campus:

Applicable to transport between laboratories within a building (e.g. in stairwells, elevators, through public or non-lab spaces) and between buildings within a short distance (e.g. across the street, down sidewalk, across parking lot) Transport by bicycle or scooter is prohibited.

Packaging and Labeling

- All containers must have labels that conform to OSHA Hazard Communication Standard (29 CFR 1910.1200). This requirement is met if the container has the original manufacturer's label, and the label is not torn, damaged, or in any way illegible. Hazardous materials stored in non-original bottles must be properly labeled with the chemical name and GHS hazard symbol or text. This information can be obtained from the product's Safety Data Sheet.
- Place previously opened containers into an impermeable secondary container such as a plastic tote bin, a rubber acid carrying bucket, plastic bucket, or a 5-gallon pail . Make sure all containers used are compatible with the chemical to be transported. If necessary, a small amount of packing material (shipping peanuts, vermiculite, or cardboard inserts), that is compatible with the chemical(s), should be used to prevent bottles from tipping over or breaking during transport. You should have proper PPE accessible in the event of a spill. The use of secondary containers for unopened hazardous materials when in their original shipping box is not necessary as long as the container is made secure. Any secondary container that obscures a primary container's labeling must be labeled with the same information.

Handling

- Avoid moving large or fragile materials by hand if a cart is available for transport between laboratories, building floors, or between buildings.
- **CART REQUIREMENTS:** cart must be clean, leak-proof and have at least a 2-inch lip to contain a potential spill and prevent the container from sliding off. If moving between buildings, sturdy carts with pneumatic wheels are preferred.
- If being carried by hand, the container must be sealed, clearly labeled as above, and packaged **within another** tightly sealed, clean leak-proof, shatter-proof container OR in original shipping packaging from manufacturer.
- Take care when moving materials through public spaces or high traffic walkways.
- Do not leave the package unattended.
- Use freight elevators for moving chemicals between floors. If freight elevators are not available, use uncrowded passenger elevators. If this is not possible, be sure to warn passengers or prohibit passengers from riding with you. Stairs should be used only if elevators are not available.

Compressed Gas Cylinders:

- When transporting compressed gas cylinders, always use a proper gas cylinder hand truck with the cylinder strapped to the cart and keep the cap in place. NEVER roll or drag a compressed gas cylinder.

- Avoid riding elevators, if necessary, consider using a buddy system to have one person send properly secured cylinders on the elevator, while the other person waits at the floor by the elevator doors where cylinders will arrive.

Safety

- Be prepared to clean a spill immediately if necessary
- Portable spill kits can be assembled easily: gloves, eyewear, disinfectant, absorbent material, hand sanitizer, waste disposal bag. Are required to accompany materials being transported.
- Have means to contact Public Safety for assistance in the event of an incident.

Regulations

49CFR 171.1(d)(5): The Primary Provision We Are Following:

DOT rules list specific functions that are exempt from the federal standard when hazardous materials are being transported for noncommercial purposes. The exemption applies to “transportation of a hazardous material in a motor vehicle, aircraft, or vessel operated by a Federal, state or local government employee solely for noncommercial Federal, state, or local government purposes.” 171.1(d)(5)

49CFR 173.6, Materials of Trade Exception

Another provision, 49CFR 173.6, *Materials of Trade Exception*, allows the transport of limited amounts of hazardous materials necessary for the conduct of business, as long as that business isn't transportation, without requiring such things as: a Commercial Driver's License, formal shipping papers, placards, etc. But there are certain restrictions - some of which are described below.

Material Limits under 49CFR 173.6:

- *For most chemicals:* Single containers of no more than 30 kg (66 pounds) or 30 liters (8 gallons).
- *For gas cylinders:* Gross weight of cylinder no more than 220 pounds.
- Total GROSS weight of all hazardous material is 200 kg (400 lbs)

Things You May Not Transport under 49CFR 173.6: Explosives, Pyrophorics, materials classified as Inhalation Hazards and Hazardous Wastes.

Required Packaging under 49CFR 173.6:

- Packages must be *leak tight* for liquids and gases, *sift proof* for solids, *securely closed, secured against movement*, and *protected* against damage.
- Each material must be packaged in the manufacturer's original packaging, or a packaging of equal or greater strength and integrity.

Citation:

DOT 49CFR 171.1(d)(5); 49CFR 173.6

HAZARDOUS MATERIALS REGULATIONS (HMR):

<http://www.gpo.gov/fdsys/pkg/CFR-2009-title49-vol2/pdf/CFR-2009-title49-vol2-part171.pdf>

MATERIALS OF TRADE EXCEPTION:

<http://www.gpo.gov/fdsys/pkg/CFR-2002-title49-vol2/pdf/CFR-2002-title49-vol2-sec173-6.pdf>