



Safety and Environmental Exemption  
Materials of Trade Exemption (MOT)

POLICY STATEMENT

Certain hazardous materials transported by private motor carriers, for the purpose of direct support of their business (e.g. clinical and laboratory research) are exempt from most of the Department of Transportation (DOT) hazardous materials regulations, as long as they adhere to the requirements described in the Materials of Trade (MOT) exception. Ultimately, by reviewing this policy, personal should gain a better understanding of the MOT requirements and be better prepared to transport hazardous materials for University business. Note: This exemption does not apply to the relocation/movement of laboratories on or between University of South Alabama campuses, nor the relocation or movement of hazardous waste.

REASON FOR POLICY

The purpose of this policy is to assist University Departments with compliance related to the DOT Materials of Trade exception when transporting small quantities of hazardous materials. The policy and exemption does not apply to Biological Substance, Category A materials or Radioactive Materials.

DEFINITIONS

Hazardous material any item or agent (biological, chemical, physical) which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. For more information regarding individual hazard classes see 49 CFR reference in the table A Materials of Trade. Materials of trade are hazardous materials that are carried on motor vehicles for at least one of the following purposes.

- x To protect the health and safety of the motor vehicle operator or passengers. (e.g. insect repellent, fire extinguishers)
- x To support the operation or maintenance of motor vehicles/auxiliary equipment. (e.g. engine starting fluid, gasoline, spare battery)
- x Materials that must be carried by a private motor carrier to directly support a principal business that is not transportation. (e.g. academic and laboratory research, pest control, plumbing, painting). In other words, this exemption only applies to University employees transporting materials for University business, not commercial carriers (e.g. FedEx).

Expansion ration: The volume of a given amount of a substance in liquid or solid form compared to the volume of the same amount of substance in gaseous form, at a standard temperature and pressure.

Reportable quantity: ~ Z Z Y \_ • W ( μ v š ] š Ç } ( W o ] • š u š Œ ] o  
(<http://www.epa.gov/ceppo/pubs/title3.pdf>)

departments must contact Safety and Environmental Compliance (SEC) for guidance regarding their hazardous waste,

#### MOT PACKAGING AND MARKING REQUIREMENTS

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- Personnel should always try to use the least amount of refrigerant necessary to maintain the integrity of the materials during transport.

## RESPONSIBILITIES

- 1) Carriers must know the following
  - General knowledge of MOT regulations
  - Quality limitations
  - Packaging requirements
  - Marketing and labeling requirements
- 2) MOT regulations does not require:
  - Emergency response information
  - Placarding
  - Formal training or retention of training records
- 3) If refrigerant is required for the shipment then:
  - The major safety concern is asphyxiation of personnel operating the vehicle due to displacement of oxygen by gaseous nitrogen (N<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>). Even though the amounts of refrigerant being transported are small, the expansion ratios for these materials are quite large (expansion ratio liquid N<sub>2</sub>=1:694 & solid CO<sub>2</sub>=1:554) and they can quickly displace the O<sub>2</sub> in the environment. Although these particular materials are not regulated under the MOT exemption, they are still considered to be dangerous
  - Materials must be labeled as either dry ice or liquid nitrogen and the operator must have knowledge of the materials that are being transported
  - Materials should be transported in the trunk of a vehicle if possible. However, if not, then there should be adequate fresh air ventilation in the vehicle. This can be achieved by rolling the windows down during transport.
  - Materials must be in secondary containment, properly secured, properly vented and there must be enough absorbent material to absorb all of the liquid, to include the refrigerant.
- 4) USA requires that there be a spill kit in each vehicle suitable for cleaning up the materials that are being transported. In general, this would consist of personal protective equipment (e.g. gloves, eye protection), absorbent materials, broom and dustpan, and bags to contain clean-debris. If refrigerant is used during the transport, then the operator should have a pair of cryogenic gloves available in the vehicle.
- 5) All spills of materials in transport must be reported to USA SEC immediately.
- 6) Hazardous materials must never be taken on any form of public transportation.
- 7) Liability and Insurance coverage:
  - It is highly recommended that materials of trade be transported in a University owned vehicle. Notify SEC prior to transport.
  - If an employee chooses to utilize his or her own personal vehicle for transport, they are strongly encouraged to discuss coverage scenarios with their own insurance carriers.



