



### Hazardous Materials Transportation Policy

Responsible Official: **Chief Operating Officer**

Responsible Office: **Office of Environmental Health and Safety**

#### Policy Purpose

The purpose of this policy is to define how ETSU will comply with all applicable regulatory requirements imposed by the U.S. Department of Transportation (DOT) and International Air Transportation Association (IATA) regarding hazardous materials and dangerous goods transportation-related activities.

#### Policy Statement

The ETSU Environmental Health & Safety Office will manage and facilitate the Hazardous Materials Transportation program and assist all ETSU departments in compliance with these requirements.

- I. All hazardous materials must be prepared and shipped according to DOT Hazardous Materials (HazMat) or IATA Dangerous Goods Regulations.
- II. Any faculty, staff and students involved in shipping, receiving and/or transporting hazardous materials/dangerous goods are considered ETSU HazMat employees and must obtain training commensurate with their duties.
- III. ETSU must test and certify HazMat employees before shipping hazardous materials.
- IV. When necessary, security plans will be developed and implemented in accordance with 49 CFR Part 172 Subpart 1.
- V. All radioactive material shipped to ETSU must come through the campus Radiation Safety Office. Radioactive material shipped by or from ETSU must be coordinated by the Radiation Safety Office.
- VI. All infectious substances, select agents or dry ice must be shipped in accordance with the ETSU Environmental Health & Safety [Office Guide to Shipping Biological Materials](#).

Authority: U.S. Department of Transportation (DOT), International Air Transportation Association (IATA), 49 CFR Parts 171-177, Hazardous Materials Transportation Act (HMTA), Hazardous Materials

Transportation Uniform Safety Act of 1990 (HMTUSA), IATA Dangerous Goods Regulations (DGR), Federal Aviation Association (FAA)

Previous Policy: N/a

## Policy History

Effective Date: April 27, 2018

Revision Date:

## Procedure

As part of the program, ETSU faculty, staff and students who are involved in transportation-related activities will be informed about hazardous materials/dangerous goods transportation regulations. At ETSU, examples of hazardous material include acids and bases, flammable solvents, compressed gas, dry ice, most laboratory samples and chemicals, radioactive material, as well as certain cleaners, pesticides and paint. Any package that arrives with a diamond-shaped DOT label is a hazardous material.

### I. Hazardous Materials Transportation Regulation.

The U.S. Department of Transportation (DOT) regulates both surface and air shipment of hazardous materials shipped within the United States. These regulations set out the responsibilities for institutions and individuals involved the transportation-related activities of hazardous materials and dangerous goods, which include the following hazard classes:

<b>Hazard Class or Division</b>	<b>Label Name</b>	<b>Label Design or Section Reference</b>
1.1	EXPLOSIVES 1.1	172.411
1.2	EXPLOSIVES 1.2	172.411
1.3	EXPLOSIVES 1.3	172.411
1.4	EXPLOSIVES 1.4	172.411
1.5	EXPLOSIVES 1.5	172.411
1.6	EXPLOSIVES 1.6	172.411
2.1	FLAMMABLE GAS	172.417

2.2	NONFLAMMABLE GAS	172.415
2.3	POISON GAS	172.416
3.0	FLAMMABLE LIQUID (none)	172.419
4.1	FLAMMABLE SOLID	172.420
4.2	SPONTANEOUSLY COMBUSTIBLE	172.422
4.3	DANGEROUS WHEN WET	172.423
5.1	OXIDIZER	172.426
5.2	ORGANIC PEROXIDE	172.427
6.1 (material poisonous by inhalation see §171.8 of this subchapter)	POISON INHALATION HAZARD	172.429
6.1 (other than material poisonous by inhalation)	POISON	172.430
6.1 (inhalation hazard, Zone A or B)	POISON INHALATION HAZARD	172.429
6.1 (other than inhalation hazard, Zone A or B)	POISON	172.430
6.2	INFECTIOUS SUBSTANCE <sup>1</sup>	172.432
7 (see §172.403)	RADIOACTIVE WHITE-I	172.436
7	RADIOACTIVE YELLOW-II	172.438
7	RADIOACTIVE YELLOW-III	172.440
7 (fissile radioactive material; see §172.402)	FISSILE	172.441
7 (empty packages, see §173.428 of this subchapter)	EMPTY	172.450
8	CORROSIVE	172.442

In addition, the regulations specify: proper classification, packaging, labeling, security assessment, and documentation of all shipments. The regulations require training for anyone who prepares, offers, or receives materials for shipment and establishes penalties and fines for non-compliance. Failure to comply with the regulations may not only result in substantial fines and penalties for the University, but the individual(s) causing the violation can also be held personally liable.

## II. Responsibilities.

The regulations stipulate that ETSU as a HazMat employer is ultimately responsible for compliance; however, this program sets forth individual responsibilities as follows:

1. The Environmental Health & Safety Office will provide technical information, oversight, training and emergency response and will be responsible for:
  - A. Coordinating and facilitating DOT training opportunities for all campus shippers.
  - B. Testing and certifying individuals to ship hazardous materials; and
  - C. Auditing all campus shipping centers for compliance.
2. Department heads must identify all faculty, staff and students who require training and ensure that they are trained before being allowed to ship, transport, and/or receive hazardous materials.
3. All faculty, staff and students must properly handle, classify, package, label, and document all shipments of hazardous material and must not ship materials for which they are not trained and certified.

## III. Classification and Identification.

The shipper is responsible for all aspects of the classification and identification of hazardous materials being shipped. The DOT regulations set forth the procedures and criteria for determining the proper shipping name and the hazard class for hazardous materials. Some materials are so hazardous that they are specifically designated as "forbidden" in the Hazardous Materials Table in 49 CFR 172.101 and may not be offered for transportation or transported in commerce. Some require special review and approval. Others are designated as "forbidden" from transportation by specific modes such as air transportation. 49 CFR 173.21 extends the "forbidden" designation beyond those materials listed by name in the Hazardous Materials Table to additional general categories, including materials (other than materials classed as explosives) that will detonate in a fire; combinations of materials that are likely to cause a dangerous evolution of heat, create flammable or poisonous gases or vapors, or produce corrosive materials; and packages that give off a flammable gas or vapor likely to create a flammable mixture with air in a transport vehicle.

The Hazardous Materials Table and List of Dangerous Goods are key elements and primary guides to offerors, carriers, and enforcement personnel in determining compliance with the regulations. For each entry, they specify the proper shipping name, hazard class or division, identification number, packing group and required hazard warning labels. Furthermore, they identify modal-specific rules, such as quantity limitation requirements for transportation by passenger aircraft.

#### IV. Packaging.

The shipper is responsible for all aspects of the packing of hazardous materials. The packaging required for hazardous material is the first line of defense in ensuring that the material is not released during transportation. The regulations specify various performance levels for packaging for hazardous materials, based on the nature and level of hazards posed by the specific material to be packaged therein. An inadequately packaged hazardous material may not be offered for transportation, accepted or transported. All packaging must be designed to ensure that under normal conditions of transportation there will be no release of contents, and that the effectiveness of the packaging will not be substantially reduced by temperature changes. Packaging used to transport liquids by aircraft must be able to withstand significant changes in ambient pressure.

In the case of combination packaging, the inner packaging containing a liquid must be packaged so that the closures are properly installed and tight, are upright, and the outer packaging must be marked to show the proper orientation. All inner packaging must be adequately secured and cushioned within the outer packaging to prevent breakage or leakage and to control movement within the outer packaging under conditions normally incident to transportation. Substances that may react dangerously with each other may not be placed in the same package.

The Hazardous Material Table and List of Dangerous Goods specify the packaging requirements for each shipping name in the tables. For each entry, they specify the packaging authorizations, per-package quantity limitations for passenger and cargo aircraft, and special provisions. These packing instructions must be followed.

#### V. Documentation, Marking, and Labeling.

The shipper is responsible for all necessary marking and labeling of each package of hazardous material being shipped. Essential elements of hazard warning information are required to be communicated through shipping documents, package marking and labels, placards on transport vehicles and bulk packaging, written emergency response information, and emergency response telephone numbers to be used in the event of an emergency involving the hazardous material.

Shipping papers can be in the form of a bill of lading, freight bill, hazardous waste manifest,

or other shipping document. The "shipper's certification" on the shipping paper is a positive endorsement that the offeror is required to provide when tendering a shipment of hazardous materials to a carrier for transportation. The person signing the certification must be trained in appropriate areas of the Hazardous Material Regulations (e.g., classification, description, packaging, marking and labeling) pertaining to the shipment. At a minimum, a properly prepared shipping paper clearly identifies a hazardous material by its proper shipping name, hazard class or division number, identification number, packing group (if any), and total quantity. Additional hazard warning and handling information, such as "POISON" and "CARGO AIRCRAFT ONLY," must be entered on the shipping paper. This information is intended to enhance safety by informing HazMat employees of the presence of hazardous materials and prompting them to ensure that the required actions, such as placarding and segregation of incompatible materials, are accomplished. Emergency responders in responding to incidents and accidents involving hazardous materials use this same information.

Package markings and labels convey information on packages, such as proper shipping name, identification number, and hazard class of a hazardous material. This information readily identifies that a package contains a hazardous material. Carrier personnel and other persons use hazard warning labels and package marking to ensure that the hazardous materials are properly segregated and stowed. This ensures compliance with loading and stowage requirements designed to prevent potentially dangerous situations that may occur with adjacent stowage of incompatible hazardous materials, or to prevent contamination of foodstuffs, feed or other edible materials. For example, the regulations generally prohibit the loading of Class 8 (corrosive) material above or next to Division 4.1 (flammable solid) materials or Division 5.1 (oxidizing) materials.

In addition, emergency responders can use the information provide by package markings and hazard warning labels when shipping papers are destroyed or otherwise not immediately available. Hazardous materials marking must be durable, in English, and unobscured by other information appearing on the package. Hazard warning labels must conform to the size and color specifications, be placed on the package near the marked proper shipping name, be clearly visible, and be unobscured by other information.

Hazard warning placards and identification numbers are displayed on the outside of motor vehicles, freight containers, and bulk packaging loaded with hazardous materials. They provide a readily visible warning that hazardous materials are present. The information they provide can be critical to emergency responders in mitigating the impacts of a hazardous materials incident or accident.

Emergency response information and an emergency response telephone number must be provided by the offeror and maintained by the carrier for use in the mitigation of an accident or incident involving hazardous material. The emergency response telephone number for use in the event of an emergency involving hazardous material must be:

1. Monitored at all times the hazardous material is in transportation, including storage

incidental to transportation, and

2. Answered by a person who is either knowledgeable of hazards and characteristics of the hazardous material being shipped and has comprehensive emergency response and incident mitigation information for that material, or has access, without delay, to a person who possesses such knowledge.

VI. Important Note Concerning State Owned Vehicle Transport.

A state agency or local jurisdiction that transports chemicals for its own use, using its own personnel and state-owned vehicles, is exempt from the DOT regulations as long as the material is not shipped for commerce, it remains within the state, and it is packaged according to these procedures. ETSU must comply with the DOT regulations if it offers chemicals to a non-governmental carrier (by motor vehicle, aircraft, rail, or vessel) or transports these materials in "furtherance of a commercial enterprise."

This procedure states the requirements for the packaging and transport of chemicals in a manner that will minimize the threat of release via container breakage during transport. Chemicals which are considered hazardous cannot be transported in privately owned or personal vehicles. All transport must be in a University vehicle driven by a University employee. Chemicals can only be transported for the purposes of conducting research, field investigations, educational purposes and other official university business.

VII. Security Measures For Shipping Hazardous Materials And Receiving Deliveries.

Hazardous materials shipped from or received at ETSU's facilities, including hazardous materials loaded or unloaded to and from transport vehicles, are to be secured immediately against unauthorized access. This includes the following:

1. Loading hazardous materials or receiving shipments must only occur in authorized areas.
2. Visitor access to hazardous materials storage and handling areas, including truck drivers and delivery people, will be on a strictly controlled basis.
3. Security devices including locks, gates, doors and other barriers will be utilized to the greatest extent possible to protect against unauthorized access to hazardous materials.
4. All deliveries will be inspected for shipping documentation and damage to packages that may cause a release of the hazardous material.
5. The shipper will be notified immediately of missing or damaged items.
6. Deliveries of hazardous materials will only be accepted when verified as expected and when delivered by a carrier known to the University.

7. Hazardous materials will only be received when authorized personnel are available to receive and promptly store them in a secure manner.
8. Personnel observing the delivery of hazardous materials will watch for abnormal behavior.

VIII. Employee Responsibilities to Enhance Security.

The following additional measures should be taken by all employees to further enhance security at the University:

1. Be aware of your surroundings at all times.
2. Report suspicious activities to ETSU Public Safety at 439-4480 and/or the Environmental Health & Safety Office at 439-6028.
3. Make sure not to leave vehicle engines running unattended and do not leave keys in transport vehicles that are unattended.
4. Lock unattended transport vehicles or vehicles not in use, making sure that the vehicle keys are secure or returned to the designated key storage area.
5. Do not preload hazardous materials shipments during times of heightened threat levels.

IX. Actions to be Taken in the Event of a Security Breach.

In the event of a security breach, including suspicious incidents or individuals, ETSU employees should immediately contact ETSU Public Safety at 439-4480.

X. Actions to be Taken in the Event of a Spill.

In the event of a spill due to a damaged or leaking package, ETSU employees should secure the location and immediately contact ETSU Public Safety at 439-4480. Trained spill response personnel will then be notified to manage the situation.

XI. Important Links.

[Pipeline and Hazardous Materials Safety](#)  
[49 CFR Part 101](#)

## Procedure History

Effective Date: April 27, 2018



Revision Date:

**Related Form(s)**

[49 CFR Part 101](#)  
[Office Guide to Shipping Biological Materials](#)  
[Pipeline and Hazardous Materials Safety](#)

**Scope and Applicability**

Primary: Health and Safety

Secondary: Academic Students Facilities and Operations