

Shipping Dangerous Goods at UAB

Introduction

Welcome to the Shipping Dangerous Goods Module. This module is **required** for anyone that who is mailing shipments of anything deemed a Dangerous Good. This training is required every two years or if regulations change significantly. In regards to shipping, **Dangerous Goods** are any substance or material capable of posing a risk to health, safety, property, or the environment.



This is only the first module of the shipping training at UAB. Depending on your work, there are other **required** training.

UAB **requires** additional shipping training for anyone that will be packing:

- Shipping with Dry Ice (BIO200)
- Shipping Biological Substances, Category B (BIO201). This includes Genetically Modified Organisms (GMOs) and Exempt Human or Animal Specimens.
- Shipping Infectious Substances, Category A (BIO202)

Objectives

At the conclusion, participants should be able to:

1. Identify the different International and Federal agencies that dictate policy and procedures for shipping Dangerous Goods.
2. Prepare a Dangerous Goods shipment correctly according to the Shipper's responsibility.
3. Place the required Marks and Labels on a Dangerous Goods shipment.
4. Fill-out the required documentation that must be with a Dangerous Goods shipment.
5. Notify UAB Occupational Health and Safety (OH&S) of any problems when it comes to the shipping of Dangerous Goods.

Shipping Dangerous Goods at UAB

Regulations

Federal and International agencies dictate policy and procedures for shipping Dangerous Goods. The regulations are often specific to the mode of transport (i.e., air, ground, sea, or railway), classification, or type of hazard. When preparing a shipment, the shipper must use the definitions or classification criteria in the regulations to determine if the material being shipped is a dangerous good; either by checking the [List of Dangerous Goods](#) for its name (Proper Shipping Name), or determining whether its physical properties/characteristics meet criteria defined in regulations.



Failure to properly pack and ship these materials is a violation of the law punishable with fines and/or imprisonment.

Shipper Responsibilities

The **Shipper (or Cosigner)** is the person(s) that will prepare the material for shipment and offer it to the operator.

Training

For shipping by air, the International Civil Aviation Organization (ICAO) and the International Air Transportation Association (IATA) dictate the training regulations. Retraining must take place within 24 months of any shipping activity, or earlier if regulations change. UAB offers training for shipment of Dangerous Goods. Anyone who handles, offers for transport, or transports Dangerous Goods must be trained and certified in three areas:

1. **General Awareness/Familiarization Training:** This provides a general awareness of Dangerous Goods regulations and enables employees to identify these materials in a manner consistent with hazard communication standards.
2. **Function-Specific Training:** This training applies to a specific task, such as preparing packages for shipment.

Shipping Dangerous Goods at UAB

3. **Safety Training:** This section covers instructions on the hazards, safe handling, and emergency response procedures associated with Dangerous Goods.

The content of this module satisfies the general awareness training requirement. The second and third area are covered in other courses. Depending on what is being shipped, there may be other required training (Chemical Safety, Category A, or Category B., etc.).

Classification of Dangerous Goods

This indicates the **type of hazard**, not the **degree of danger**.

- Class 1: Explosives (6 Divisions)
- Class 2: Gases (3 Divisions)
- Class 3: Flammable Liquid
- Class 4: Flammable Solids (3 Divisions)
- Class 5: Oxidizing Substances and Organic Peroxides (2 Divisions)
- Class 6: Toxic and Infectious Substances
 - Division 6.1: Toxic Substances
 - Division 6.2: Infectious Substances
- Class 7: Radioactive Material
- Class 8: Corrosives
- Class 9: Miscellaneous Dangerous Goods (including Dry Ice and Non-Pathogenic Genetically-Modified Organisms)

Identifying

Material to be Shipped

Identifying the material to be shipped means selecting the Proper Shipping Name and UN Number from the List of Dangerous Goods. Each Proper Shipping Name is assigned a unique UN Number (e.g., “UN 1845 Dry Ice”).

Shipping Dangerous Goods at UAB

Packing

Packing is defined as the act of placing the dangerous substances into the appropriate packaging. The required packaging materials and procedures are guided by the Packaging Instructions for the specific Dangerous Goods being shipped.

Selecting the Proper Packaging

Once the materials intended for shipment are properly classified and identified, regulations dictate the minimum packaging requirements to prevent leakage or spillage during transport. These are referred to as “Packaging Instructions” and vary depending on the type and quantity of the Dangerous Goods. These are detailed in the [IACO Technical Instructions](#) and [IATA Dangerous Goods Regulations](#). For example, Dry Ice is packaged according to “Packaging Instructions 954.”)

Marks and Labels

Marks and Labels communicate to carriers, consignees, and the public about the Dangerous Goods that present in the package. Packages of Dangerous Goods must be durable and clearly visible hazard Marks or Labels that provide information about the contents of the package.

- **Hazard Labels:** Diamond-shaped labels that are assigned specific colors or images for easy identification and indicate the class or division of the material in the package. Hazard labels must be accompanied by the Proper UN Number and Proper Shipping Name (PSN) for the associated Dangerous Good.
- **Handling Labels:** Labels that contain standard colors or images that outline specific handling directions specific to the substances within the package (e.g., orientation).

Shipping Dangerous Goods at UAB

Documentation

There are two types of documents used in transporting Dangerous Goods:

1. **Shipper's Declaration or Transport Document:** Dangerous Goods regulations do require the shipper to complete a legal document or declaration for each shipment. Depending on mode of transportation this document is referred to as:
 - a. "Transport Document" by ICAO
 - b. "Shipper's Declaration for Dangerous Goods," by IATA
 - c. "Shipping Paper" by the Department of Transportation (DOT)
2. **Waybills (Air Waybills):** Waybills are dedicated shipping documents used by all scheduled operators and airlines. These may differ among carriers, but convey the same information. Waybills for Dangerous Goods that require a Shipper's Declaration must include one of the following statements in the "handling information" section of the document (which may be conveyed by checkboxes):
 - a. "Dangerous Goods per attached Shipper's Declaration"
 - b. "Dangerous Goods per attached Dangerous Goods Document (DGD)"

Any other Legal Arrangements

The shipper must ensure that all legal documentations are met. This includes obtaining the proper import and/or export permits for International shipments.

Shipping Dangerous Goods at UAB

Operator (or Carrier) Responsibilities

The **Operator (or carrier)** is the person(s) responsible for transporting the material from the origin to the destination.

Must Detect Errors

Carriers must ensure that the regulations are followed before accepting Dangerous Goods for transport.

Use Acceptance Checklist

Carriers utilize [checklists](#) to:

- Ensure proper documentation
- Observe quantity limits
- Confirm that all marks and labels are clear and proper
- Certify proper shipping name and UN Numbers are correct
- Ensure the outer packaging requirements meet those designated for materials described in the shipping document
- Establish that there is no leakage or compromise in the package integrity.

Loading and Storage

Placing the correct Marks and Labels on packages allows the carrier to properly load and store Dangerous Goods during transit. The operator will inspect the package for damage or leaks. This typically only includes the exterior of the package, but they may request the shipper to open the package for inspection of the inner packaging.

Shipping Dangerous Goods at UAB

Reporting

You should report **any** problems to the UAB Department of Occupational Health and Safety (OH&S) immediately at (205) 934-2487. If an incident occurs after hours you should contact the UAB Police.

Receiver (or Consignee) Responsibilities

The **Receiver (or Consignee)** is the person(s) the material was sent to at the final destination. Responsibilities are to:

1. Provide assistance with import permits
2. Inspect received packages for damage or leaks
3. Verify itemized list of contents
4. Report receipt to the shipper
5. Report leaking packages to the appropriate authority

Conclusion

This concludes the module on **Shipping Dangerous Goods**. The Agreement for Shipping Goods Module should open. You have two chances to attest to your understanding.

Want to Learn More?

OH&S has many training courses available to all UAB active employees and students. This includes topics such as in depth radiation training, biosafety, bloodborne pathogens, chemical safety, Controlled Substances, building life safety, hazardous and medical waste, universal waste, PPE, Hazard Communication, etc.

We have a [decision tree](#) to assist you in choosing the right course to match the knowledge/skills you may need at work every day as well.

If you have any questions or comments, please feel free to contact OH&S at 205-934-2487.