

Shipping Dangerous Goods at UAB

Introduction

Welcome to the Shipping Dangerous Goods Module. This module is required for anyone mailing shipments deemed a Dangerous Good. In regards to shipping, Dangerous Goods are substances or materials capable of posing a risk to health, safety, property, or the environment.



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

Objectives

At the conclusion, participants should be able to:

1. Identify the different International and Federal agencies dictating policies 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 for a Dangerous Goods shipment.
5. Notify Environmental Health and Safety (EHS) of any problems when it comes to the shipping of Dangerous Goods.

Regulations

Federal and International agencies dictate policies and procedures for shipping Dangerous Goods. The regulations are often specific to the mode of transport (e.g., 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 intended material for shipment is a dangerous good; either by checking the [List of Dangerous Goods](#) for its Proper Shipping Name or determining whether its physical properties or characteristics meet criteria defined in regulations.



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

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Shipper Responsibilities

The Shipper (or Cosigner) is the person(s) preparing materials for shipment and offering 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 of training:

1. **General Awareness and Familiarization:** 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:** Applies to a specific task (e.g., preparing packages for shipment).
3. **Safety:** 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 is covered in other courses. Depending on the intended shipment, there may be additional required training (Chemical Safety, Category A, or Category B., etc.).

Classification of Dangerous Goods

Classification 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)

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- 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 intended materials for shipment 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”).

Packing

Packing is the act of placing dangerous substances into the appropriate packaging. The Packaging Instructions guide the required packaging materials and procedures for the specific Dangerous Goods shipment.

Selecting the Proper Packaging

Once the materials intended for shipment are appropriately 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, pack Dry Ice according to “Packaging Instructions 954.”

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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 have visible hazard marks or labels providing information about the contents of the package.

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

Documentation

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

1. Shipper's Declaration or Transport Document: Dangerous Goods Regulations require shippers to complete a legal document or declaration for each shipment. Depending on the 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 requiring 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)"

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Other Legal Arrangements

The shipper ensures all legal documentation are met. This documentation includes obtaining the proper import and export permits for International shipments.

Operator (or Carrier) Responsibilities

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

Detecting Errors

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

Using Acceptance Checklist

Carriers utilize **checklists**:

- Ensuring proper documentation
- Observing quantity limits
- Confirming all marks and labels are clear and proper
- Certifying the correct shipping name and UN Numbers
- Guaranteeing the outer packaging requirements meet those designated for materials described in the shipping document
- Inspecting for leakages or compromises in the package integrity.

Loading and Storage

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

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Reporting

You should report any problems to the UAB Department of Environmental Health and Safety (EHS) immediately at (205) 934-2487. If an incident occurs after hours, you should contact the UAB Police at (205) 934-3535.

Receiver (or Consignee) Responsibilities

The Receiver (or Consignee) is the person(s) at the final destination for the sent the material. Responsibilities of a receiver are:

1. Assisting with import permits
2. Inspecting received packages for damage or leaks
3. Verifying the itemized list of contents
4. Reporting receipt to the shipper
5. Reporting leaking packages to the appropriate authority

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Conclusion

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

Other Training

UAB requires additional shipping training for anyone:

- 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)

EHS has many training courses available to all UAB active employees and students. A [decision tree](#) is available to assist you in choosing the right training courses to supplement the knowledge or skills you may need at work. If you have any questions or comments, contact EHS at (205) 934-2487.