MERCURY

Dangerous Goods Handling and Transportation Across Air, Sea, and Land

15 – 19 March 2027
Milan (Italy)



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Ref: 121516_1081670 **Date:** 15 – 19 March 2027 **Location:** Milan (Italy) **Fees:** 6200 Euro

Introduction

The Dangerous Goods Handling and Transportation Across Air, Sea, and Land course provides an understanding of how to manage hazardous materials within global logistics operations safely. It addresses the growing need for compliance with international dangerous goods regulations while ensuring operational efficiency across multimodal transportation systems. Participants will explore classification systems, hazard identification, and safe handling practices essential for minimizing risks in supply chain environments. The program integrates globally recognized regulatory frameworks governing air, sea, and land transport, ensuring alignment with international safety standards. It emphasizes the importance of proper documentation, packaging, and labeling to prevent incidents and maintain compliance. Professionals will manage dangerous goods confidently and responsibly.

Targeted Groups

This Dangerous Goods Handling and Transportation Across Air, Sea, and Land training targets professionals seeking knowledge and skills:

- Logistics and supply chain professionals managing hazardous cargo.
- Freight forwarders handling international shipments.
- Warehouse staff are responsible for storage and handling.
- HSE officers ensure workplace and transport safety.
- Aviation personnel dealing with air cargo operations.
- Maritime staff managing sea freight compliance.
- Customs officers oversee regulatory enforcement.
- Transport coordinators managing multimodal logistics.

Course Objectives

Participants will achieve the following objectives by completing the Dangerous Goods Handling and Transportation Across Air, Sea, and Land course:

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- Understand the classification of dangerous goods and their hazard categories.
- Interpret international transport regulations for air, sea, and land.
- Apply correct packaging and labeling requirements.
- Ensure compliance with global dangerous goods regulations.
- Identify risks in hazardous materials transportation.
- Implement safety measures across logistics operations.
- Prepare accurate dangerous goods documentation.
- Differentiate between multimodal transport requirements.
- Handle lithium batteries and restricted items safely.
- Conduct acceptance checks for shipments.
- Apply segregation and compatibility rules effectively.
- Respond to emergencies and incidents professionally.
- Improve safety standards within supply chain environments.
- Support regulatory audits and inspections.

Targeted Competencies

Participants will gain the following competencies during the Dangerous Goods Handling and Transportation Across Air, Sea, and Land program:

- Accurate classification of hazardous materials.
- Understanding of UN numbers and shipping names.
- Compliance with air, sea, and land regulations.
- Application of packaging and labeling standards.
- Preparation of shipping documentation and declarations.
- Risk assessment and hazard mitigation strategies.
- Safe handling and storage procedures.
- Emergency response and incident control skills.
- Knowledge of regulatory auditing processes.
- Ability to ensure transport safety compliance.

Studying Scenarios

In this Dangerous Goods Handling and Transportation Across Air, Sea, and Land training, participants develop skills through the following scenarios:

- Classifying hazardous materials based on real shipment data.
- Preparing dangerous goods declaration forms.
- Identifying packaging and labeling errors.
- Evaluating transport compliance in logistics cases.
- Responding to simulated spill incidents.
- Applying segregation rules in warehouse layouts.
- Reviewing documentation for regulatory audits.

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Course Content

Unit 1: Fundamentals of Dangerous Goods Classification and Identification

- Define dangerous goods and their role in global logistics operations.
- Identify dangerous goods hazard classes and divisions from Class 1 to Class 9:
  - Class 1: Explosives with blast or projection risk.
  - Class 2: Gases under pressure or toxicity risk.
  - Class 3: Flammable liquids that ignite easily.
  - Class 4: Flammable solids and reactive substances.
  - Class 5: Oxidizers and organic peroxides supporting fire.
  - Class 6: Toxic and infectious substances harmful to health.
  - Class 7: Radioactive materials emitting ionizing radiation.
  - Class 8: Corrosive substances damaging skin and materials.
  - Class 9: Miscellaneous dangerous goods with varied hazards.
- Explain the significance of UN numbers in hazardous material transport.
- Interpret proper shipping names and classification criteria.
- Analyze Safety Data Sheets SDS to identify hazards.
- Distinguish between physical, chemical, and environmental hazards.
- Recognize labeling symbols and hazard communication standards.
- Understand roles and responsibilities in dangerous goods handling.

Unit 2: International Regulatory Framework and Compliance Systems

- Understand the structure of global dangerous goods regulations.
- Analyze air transport requirements under international aviation standards.
- Examine the rules governing sea transport of hazardous cargo.
- Review land transport regulations governing road logistics safety.
- Compare regulatory differences between air, sea, and land transport.
- Identify legal responsibilities of shippers, carriers, and operators.
- Assess penalties and consequences of non-compliance.
- Implement compliance strategies in logistics operations.

Unit 3: Packaging, Labeling, and Documentation Procedures

- Identify approved UN packaging types for hazardous materials.
- Apply packing instructions based on classification and regulations.
- Understand limitations for transporting dangerous goods.
- Recognize hazard labels and handling labels requirements.
- Apply marking requirements for shipping containers and packages.
- Implement segregation rules for incompatible materials.
- Prepare the shipper's declaration for dangerous goods.
- Understand air waybill, bill of lading, and CMR documentation.
- Detect common documentation errors and compliance risks.
- Maintain records for audits and regulatory inspections.

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Unit 4: Multimodal Transportation Operations and Handling Practices

- Apply air cargo restrictions and handling procedures.
- Understand passenger versus cargo aircraft regulations.
- Manage lithium batteries and high-risk goods in air transport.
- Perform acceptance checks and operator responsibilities.
- Apply sea transport requirements for container packing and stowage.
- Understand marine pollutant classifications and controls.
- Implement segregation rules onboard vessels.
- Apply emergency schedules for maritime incidents.
- Understand road transport vehicle requirements and signage.
- Evaluate driver responsibilities in hazardous goods transport.
- Apply route-planning and tunnel-restriction regulations.
- Ensure compliance across multimodal logistics operations.

Unit 5: Storage, Risk Management, and Emergency Response Planning

- Apply safe storage practices for hazardous materials.
- Implement warehouse segregation and compatibility rules.
- Use proper handling procedures for dangerous goods.
- Identify personal protective equipment requirements.
- Conduct inspections and monitoring of stored goods.
- Perform hazard identification and risk assessments.
- Develop mitigation strategies for operational risks.
- Implement spill response and containment procedures.
- Apply fire safety measures in storage and transport environments.
- Conduct incident reporting and investigation processes.
- Develop emergency response plans and drills.
- Analyze real-life dangerous goods incidents and lessons learned.
- Apply compliance checklists for operational safety.
- Implement best practices for safe transportation.

Final Insights & Key Takeaways

This course equips professionals with the critical knowledge required to manage dangerous goods safely and efficiently across global supply chains. It strengthens compliance, reduces operational risks, and enhances safety performance across air, sea, and land transportation systems.