

# Training Course on Handling and Stowage of Hazardous Materials at Oil and Gas Terminals and On-Board Oil and Gas Carriers

Professional Development Training Course Outline

|          |             |               |                         |
|----------|-------------|---------------|-------------------------|
| Category | Oil and Gas | Duration      | 5 Days                  |
| Base Fee | \$1,500 USD | Delivery Mode | Online / On-site Hybrid |

## Course Introduction

The safe and efficient handling and stowage of **hazardous materials** within the **oil and gas industry** is paramount for operational integrity, environmental protection, and regulatory compliance. Training Course on Handling and Stowage of Hazardous Materials at Oil & Gas Terminals & On-Board Oil & Gas Carriers is meticulously designed to equip personnel with the essential knowledge and practical skills required to manage these critical operations effectively at both **oil and gas terminals** and **on-board oil and gas carriers**. Participants will gain a deep understanding of the inherent risks associated with various **dangerous goods**, the relevant international and local regulations governing their transportation and storage, and the best practices for ensuring a safe working environment. Through a blend of theoretical instruction, interactive exercises, and real-world **case studies**, this course fosters a culture of safety and empowers individuals to make informed decisions when dealing with **hazardous cargo** in the demanding **maritime** and **shore-based** sectors of the **energy industry**.

This intensive program addresses the full spectrum of challenges involved in **hazardous material management**, from initial identification and classification to proper handling techniques, secure stowage procedures, emergency response protocols, and the importance of thorough documentation and **risk assessment**. By focusing on practical application and incorporating the latest industry standards and technological advancements, the course aims to enhance the competency of individuals responsible for the stewardship of **flammable liquids**, **explosives**, **toxic substances**, and other regulated materials. Successful completion of this training will contribute significantly to minimizing the potential for accidents, spills, and other incidents, thereby safeguarding personnel, assets, and the environment within the dynamic context of **oil and gas operations**.

## Programme Curriculum

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## Course Duration

5 days

## Course Objectives

Upon completion of this training course, participants will be able to:

1. **Identify and classify** different types of **hazardous materials** commonly encountered in the oil and gas sector according to relevant **IMDG Code** and other applicable regulations.
2. Understand the specific **hazards and risks** associated with various classes of **dangerous goods**, including flammability, toxicity, reactivity, and corrosivity.
3. Apply correct procedures for the **handling of hazardous materials**, minimizing the risk of personal injury, property damage, and environmental contamination.
4. Execute proper **stowage and segregation** techniques for different classes of hazardous materials on board oil and gas carriers and within terminal storage facilities to ensure **cargo safety** and stability.
5. Interpret and utilize relevant **safety data sheets (SDS)** to access critical information on the properties, hazards, and safe handling of specific substances.
6. Comply with international, national, and local **regulatory frameworks** governing the transportation, handling, and storage of hazardous materials in the **petroleum industry**.
7. Implement effective **emergency response procedures** in the event of spills, leaks, fires, or other incidents involving hazardous materials.

8. Conduct thorough **risk assessments** related to the handling and stowage of hazardous materials to identify potential hazards and implement appropriate control measures.
9. Utilize appropriate **personal protective equipment (PPE)** and understand its proper selection, use, and maintenance in hazardous material handling operations.
10. Understand the principles of **cargo securing** and the importance of preventing shifting and damage during transportation and storage.
11. Maintain accurate **documentation and records** related to hazardous material handling and stowage, ensuring traceability and compliance.
12. Apply best practices for **environmental protection** and pollution prevention during the handling and storage of hazardous materials.
13. Understand the principles of **permit-to-work systems** and other safety management systems relevant to hazardous material operations.

## Organizational Benefits

- Fostering a proactive approach to hazardous material management and reducing the likelihood of accidents and incidents.
- Ensuring adherence to international and local regulations, minimizing the risk of fines and legal liabilities.
- Minimizing downtime and losses associated with accidents, spills, and improper handling.
- Equipping personnel with the knowledge and skills to handle hazardous materials safely and effectively.
- Promoting responsible practices that minimize environmental impact and protect ecosystems.
- Reducing the risk of damage to cargo, vessels, and terminal facilities due to improper handling and stowage.
- Demonstrating a commitment to safety and environmental responsibility to stakeholders.
- Potentially leading to lower insurance premiums due to a reduced risk profile.

## Target Audience

1. Terminal Operators and Supervisors
2. Ship Officers and Crew Members
3. Cargo Superintendents and Surveyors
4. Logistics and Supply Chain Personnel
5. Health, Safety, and Environment (HSE) Professionals
6. Maintenance and Engineering Staff
7. Port Authority and Regulatory Officials
8. Emergency Response Teams

## Course Outline

### Module 1: Introduction to Hazardous Materials

- Overview of hazardous materials and their importance in the oil and gas industry.
- Classification of dangerous goods according to the IMDG Code and other relevant regulations.
- Understanding the properties and characteristics of different hazard classes (e.g., flammable liquids, gases, explosives, toxic substances).
- Introduction to Safety Data Sheets (SDS) and their role in hazard communication.
- Case Study: A major incident caused by the misclassification of a hazardous substance during loading operations.

## **Module 2: Regulatory Framework and Compliance**

- International Maritime Dangerous Goods (IMDG) Code: structure, key provisions, and updates.
- Overview of other relevant international conventions and regulations (e.g., SOLAS, MARPOL).
- National and local regulations governing the handling and storage of hazardous materials in oil and gas facilities.
- Understanding the responsibilities of shippers, carriers, and receivers of hazardous materials.
- Case Study: A company facing penalties due to non-compliance with local hazardous material storage regulations.

## **Module 3: Hazard Identification and Risk Assessment**

- Principles of hazard identification and risk assessment in hazardous material operations.
- Techniques for identifying potential hazards associated with handling and stowage activities.
- Methods for evaluating the likelihood and severity of potential consequences.
- Developing and implementing risk control measures and safety procedures.
- Case Study: A risk assessment exercise for a specific hazardous material handling operation at an oil terminal.

## **Module 4: Safe Handling Practices**

- Best practices for the safe loading and unloading of hazardous materials from vessels and storage tanks.
- Procedures for the safe transfer of hazardous liquids and gases through pipelines and hoses.
- Guidelines for the safe handling of packaged hazardous materials, including drums, IBCs, and cylinders.
- Importance of proper labeling, marking, and placarding of hazardous materials.
- Case Study: Implementation of new handling procedures that significantly reduced the risk of spills during transfer operations.

## **Module 5: Stowage and Segregation Requirements**

- Principles of safe stowage on board oil and gas carriers, considering stability, compatibility, and accessibility.
- Segregation requirements for different classes of hazardous materials to prevent adverse reactions.
- Stowage requirements within oil and gas terminal storage areas, including tank spacing and secondary containment.
- Considerations for the stowage of temperature-sensitive and other special types of hazardous materials.
- Case Study: Challenges and solutions in the stowage of incompatible hazardous materials on a multi-product tanker.

## **Module 6: Emergency Preparedness and Response**

- Developing and implementing emergency response plans for incidents involving hazardous materials.
- Procedures for responding to spills, leaks, fires, and other emergencies.
- The role of emergency response teams and the use of specialized equipment.
- Communication and notification procedures during emergency situations.

- Case Study: Lessons learned from a major oil spill incident and the effectiveness of the emergency response.

### **Module 7: Personal Protective Equipment (PPE) and Safety Equipment**

- Types of personal protective equipment required for handling different hazardous materials.
- Proper selection, use, maintenance, and limitations of PPE (e.g., respirators, gloves, protective clothing).
- Overview of safety equipment used in hazardous material operations (e.g., gas detectors, fire suppression systems).
- Importance of regular inspection and maintenance of safety equipment.
- Case Study: An incident highlighting the importance of using the correct PPE when handling a corrosive substance.

### **Module 8: Documentation, Security, and Environmental Considerations**

- Requirements for documentation related to the transportation and storage of hazardous materials (e.g., cargo manifests, bills of lading).
- Security measures to prevent unauthorized access and tampering with hazardous materials.
- Environmental regulations and best practices for preventing pollution during handling and storage.
- Waste management procedures for hazardous materials and contaminated materials.
- Case Study: Implementing a comprehensive documentation system that improved traceability and accountability for hazardous cargo.

### **Training Methodology**

This course will employ a variety of interactive and engaging training methods, including:

- Lectures and presentations incorporating visual aids and multimedia.
- Interactive discussions and Q&A sessions to encourage participation.
- Group exercises and practical scenarios to reinforce learning.
- Case study analysis of real-world incidents and best practices.
- Simulations (where applicable) to provide hands-on experience in a safe environment.
- Quizzes and assessments to evaluate participant understanding.

### **Register as a group from 3 participants for a Discount**

Send us an email: [info@fineskilltrainingcenter.org](mailto:info@fineskilltrainingcenter.org) or call +254769199797

### **Certification**

*Upon successful completion of this training, participants will be issued with a globally- recognized certificate.*

### **Tailor-Made Course**

*We also offer tailor-made courses based on your needs.*

### **Key Notes**

- a. The participant must be conversant with English.
- b. Upon completion of training the participant will be issued with an Authorized Training Certificate
- c. Course duration is flexible and the contents can be modified to fit any number of days.
- d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.
- e. One-year post-training support Consultation and Coaching provided after the course.
- f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

### Upcoming Scheduled Sessions

| Start Date  | End Date    | Location | Price   |
|-------------|-------------|----------|---------|
| 21 Sep 2026 | 25 Sep 2026 | Online   | \$1,000 |
| 21 Sep 2026 | 25 Sep 2026 | Physical | \$1,500 |
| 21 Sep 2026 | 25 Sep 2026 | Physical | \$0     |
| 21 Sep 2026 | 25 Sep 2026 | Physical | \$0     |
| 21 Sep 2026 | 25 Sep 2026 | Physical | \$0     |
| 21 Sep 2026 | 25 Sep 2026 | Physical | \$0     |
| 21 Sep 2026 | 25 Sep 2026 | Physical | \$0     |
| 21 Sep 2026 | 25 Sep 2026 | Physical | \$0     |

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

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