
Course Syllabus:

HMT-0100

Surface Transportation of Hazardous Materials



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Materials

Computer (PC, laptop)
Internet Connection: High Speed

Requirements

You should print and maintain a copy of this course syllabus and overview on file at your facility. It is recommended that you provide a copy of this document in the event of a regulatory agency (e.g., OSHA) inspection.

Evaluation

Upon completion of the course of instruction, a comprehensive examination will be offered. In order to earn a Certificate of Completion, you must receive at least 80% on the exam. The exam is comprised of at least 10 questions, randomly selected from a database of questions and address each of the lesson topics covered in the course.

Overview

This course is intended for those persons and facilities that receive, handle, or ship automotive hazardous materials by surface transportation.

Goals

This web-based training course was developed by ShipMate, Inc. and is intended for those persons and facilities that receive, handle, or ship certain hazardous materials by surface transportation. This course fulfills the U.S.

Department of Transportation's hazardous materials transportation training requirements for: (1) general awareness and familiarization; (2) general safety; (3) hazardous materials security awareness; and (4) function-specific training for the following transportation and pre-transportation functions:

- Determining the hazard class of a hazardous material;
- Selecting a hazardous materials packaging;
- Filling a hazardous materials packaging;
- Securing a closure on a filled or partially filled hazardous materials package;
- Marking a package to indicate that it contains a hazardous material;
- Labeling a package to indicate that it contains a hazardous material;
- Preparing a shipping paper;
- Providing and maintaining emergency response information;
- Reviewing a shipping paper to verify compliance with the HMR;
- Certifying that a hazardous material is in proper condition for transportation in conformance with the requirements of the HMR;
- Loading, blocking, and bracing a hazardous materials package in a transport vehicle;

Lesson Topics

Module 1 – Introduction

- Introduction
- Course Overview
- Course Objectives
- Navigation
- WBT Library
- Glossary
- Learning Assessments
- Additional Information

Lesson Topics – cont'd

Module 2 – Classification

- Accident History
 - Texas City, TX- 1947
 - Bhopal, India- 1984
 - ValuJet 592- 1996
- Physical & Chemical Properties
 - Explosive
 - Corrosive
 - Flammable
 - Combustible
 - Reactive
 - Radioactive
 - Toxic
 - Elevated Temperature
 - Elevated Pressure
- International Classification
 - Class 1- Explosives
 - Class 2- Gases
 - Class 3- Flammable Liquids
 - Class 4- Solids
 - Class 5- Oxidizers & Organic Peroxides
 - Class 6- Toxic Materials
 - Class 7- Radioactive Materials
 - Class 8- Corrosive Materials
 - Class 9- Miscellaneous Dangerous Goods
- Limited Quantity Determinations
 - Surface
 - Air
 - Ocean
- Learning Assessment

Module 3 Regulatory Requirements

- Lesson 1 Regulatory Requirements Overview
- Lesson 2 International Dangerous Goods Regulations
- Lesson 3 Other Regulatory References
- Lesson 4 49 CFR subchapter C
 - Part 171 – General Requirements
 - Part 172 – Hazard Communication
 - Part 173 – Classification & Packaging Authorizations/Exceptions
 - Part 174 – Rail
 - Part 175 – Air
 - Part 176 – Ocean
 - Part 177 – Highway
 - Part 178 – Packaging Manufacturing, Testing & Marking
- Module 3 - Summary
- Module 3 - Learning Assessment

Module 4 Hazardous Materials Table (HMT)

- Lesson 1 Resources Available
- Lesson 2 Column 1 – Symbols
- Lesson 3 Column 2 – Proper Shipping Name
- Lesson 4 Column 3 – Hazard Class, Division & Compatibility Group
- Lesson 5 Column 4 – Identification Numbers
- Lesson 6 Column 5 – Packing Group
- Lesson 7 Column 6 – Labels, Sub Risk Labels
- Lesson 8 Column 7 – Special Provisions
- Lesson 9 Column 8A – Packaging Exceptions

- Quantity Limits (Cargo Air)
- Vessel Stowage Categories
- Other Vessel Stowage
- Segregation Requirements
 - Reportable Quantities
- Hazard Substances
- Marine Pollutants
- Module 4 - Summary
- Module 4 - Learning Assessment

Module 5 Hazard Communication

- Excepted Quantities Mark
 - Overpack Mark
- Lesson 5 Package Marking & Labeling
 - TULIP
- Lesson 6 Overpacks, Unit Loads & Cages
 - Overpack
 - PILOT
 - Unit Loads
 - Cages
- Lesson 7 Placarding
 - Placarding Requirements
 - Placarding Exceptions
- Lesson 8 Limited Quantities
 - Hollow Diamond (ground, ocean)
 - Limited Quantity Mark (air)
- Module 5 - Summary
- Module 5 - Learning Assessment

Module 6 Packaging

- Lesson 1 Forces Encountered in Transportation
- Lesson 2 UN POP Marking
- Manufacturer Marks
 - Reconditioner Marks
- Lesson 3 DOT Marking Cylinders
- Lesson 4 Non-Specification Packaging
 - Lesson 5 Manufacturers Symbol
- Edge Crush Test
- Lesson 6 Packing
 - Packaging Closure
- Manufacturers Closure Instructions
 - Lesson 7 Manufacturers Test Reports
- Lesson 8 Damaged Packaging
 - Packaging Evaluation Repackaging
- Module 6- Summary
- Module 6- Learning Assessment

Module 7 Documentation

- Lesson 1 Basic Description
 - Alternative Description Formats
- Lesson 2 Required Information
- Lesson 3 Additional Descriptive Information

Lesson Topics – cont'd

Reportable Quantities (RQ)
Radioactive Materials Information Residues
Cargo Aircraft Only
Not Otherwise Specified
Flashpoint (Recommended)
Lesson 4 Emergency Response Information
Emergency Response Telephone Number
Emergency Response Information
ERT Service Providers
Lesson 5 Mode Specific Requirements
IATA DGR - Air
IMDG Code – Ocean
Lesson 6 Small Package Dispatch Services
UPS
FedEx
Lesson 7 Recordkeeping Requirements
Module 7 - Summary
Module 7 - Learning Assessment

Module 8 Segregation

Lesson 1 Overview
Lesson 2 Segregation Tables
Lesson 3 Segregation by Highway
Lesson 4 Segregation by Rail
Module 8 - Summary
Module 8 - Learning Assessment

Module 9 Emergency Response

Lesson 1 Basic Guidelines
Lesson 2 Initial Response Actions
Lesson 3 Reporting & Notifications
DOT Form F5800.1
Lesson 4 Facility Response Plans
Module 9 - Summary
Module 9 - Learning Assessment

Module 10 HM Security

Lesson 1 Applicability
Lesson 2 HM Security Plan Requirements
Personnel Security Site Security
En Route Security
Lesson 3 High Consequence Cargoes
Module 10 - Summary
Module 10 - Learning Assessment
Course Summary Certification Exam Code Certification Exam

Final Exam Preparation

Certification Exam Code