
Course Syllabus:



HMT-0402

Surface Transportation of Automotive Hazardous Materials (HMT-0402)

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Overview

This course is intended for those persons and facilities that receive handle or offer into transport, all or in part by surface, air or vessel, hazardous materials (or dangerous goods) in limited or excepted quantities, or as consumer commodities.

Goals

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

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.

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 – Automotive Hazardous Materials

- Electrical System
- Battery
- Speakers
- Cable Cutters
- Fuel System
- Fuel Pumps, Injectors, & Rails
- Fuel Lines
- Fuel Pressure Regulators
- Charcoal Canisters
- Gas Tanks, Filler Necks & Gas Caps
- Power Train
- Engines
- Passenger Safety
- Air Bag Modules
- Air Curtains
- Seatbelt Pretensioners
- Steering & Suspension
- Learning Assessment

Module 4 – Hazard Communication

- Marking
- Proper Shipping Name(s)
- Technical & Chemical Name(s)
- Identification Number
- UN or DOT Specification
- Packaging Marking
- Labeling & Marking
- Hazard Warning
- Primary Risk Subsidiary Risk(s)
- Labeling Requirements
- Cargo Handling
- Orientation Arrows
- Special Marks
- Excepted Quantities Mark
- Overpack Mark
- Package Marking & Labeling
- TULIP
- Overpacks, Unit Loads & Cages
- Overpack
- PILOT
- Unit Loads
- Cages
- Placarding
- Placarding Requirements
- Placarding Exceptions
- Limited Quantities
- Hollow Diamond
- Quantité Limitée (Quebec)
- Cantidad Limitada (Mexico)
- Consumer Commodity
- ORM-D (ground)
- Consumer Commodity (Canada)
- Learning Assessment

Module 5- Lithium Batteries and Hybrid & Electric Vehicles

- UN38.3 Lithium Battery Testing
- Requirements
- Fully Regulated Batteries Overview
- Energy Ratings (in Wh)
- Lithium Metal Cells – Fully Regulated
- Lithium Metal Batteries – Fully Regulated
- Lithium Ion Cells – Fully Regulated
- Lithium Ion Batteries – Fully Regulated
- Lithium Cell & Battery Packaging
- Cargo Aircraft Only Labels
- Learning Assessment

Module 6 – Packaging

- Forces Encountered in Transportation
- UN POP Marking
- Manufacturers Marks
- Reconditioner Marks
- DOT Marking
- Cylinders
- Non-Specification Packaging
- Manufacturers Symbol
- Burst Strength
- Edge Crush Test
- Packing
- Damaged Packaging
- Packaging Evaluation
- Repackaging
- Learning Assessment

Module 7- Documentation

- Basic Description
- Alternative Description Formats
- Required Information
- Additional Descriptive Information
- Emergency Response Information
- Emergency Response Telephone Information
- ERT Service Providers
- Modal Specific Requirements
- IATA DGR- Air
- IMDG Code- Ocean
- Small Package Dispatch Services
- UPS
- FedEx
- Recordkeeping Requirements
- Learning Assessment

Module 8- Storage, Handling & Transportation

- Material Safety Data Sheets
- OSHA
- WHMIS
- ANSI/GHS
- MSDS Requirements
- Responsibility
- Availability
- General Storage Provisions
- Storage
- Safe Handling Practices
- Load Securement
- Learning Assessment

Module 9- Emergency Response

Initial Response Actions
Reports & Notifications
Facility Response Plans
Learning Assessment

Module 10- HM Security

HM Security Awareness
HM Security Plan Requirements
Personnel Security
Site Security
En Route Security
Learning Assessment

Final Exam Preparation

Certification Exam Code