



ShipMate, Inc.
780 Buckaroo Trail, Suite D
Sisters, OR 97759-0787
Tel: +1 (310) 370-3600
Fax: +1 (310) 370-5700
E-mail: shipmate@shipmate.com

March 1, 2014

Subj: Multimodal Transportation of Automotive Hazardous Materials (HMT-0412)

This web-based training course was developed by ShipMate, Inc., in cooperation with the Coordinating Committee For Automotive Repair (CCAR) and The North American Automotive Hazmat Action Committee (NAAHAC).

This course is intended for those persons and facilities that receive handle or ship automotive hazardous materials by air and/or ocean transportation modes. 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 an automotive hazardous material (dangerous good) is in proper condition for transportation in conformance with the requirements of the HMR, the International Civil Aviation Organization (ICAO) technical Instructions for the Transport of Dangerous Goods by Air, and the International Maritime Dangerous Goods (IMDG) Code;
- loading, blocking, and bracing a hazardous materials package in a transport vehicle, unit load device or intermodal freight container;
- providing or offering placards to a surface or ocean carrier to indicate that it contains a hazardous material; and
- the carriage of automotive hazardous materials by private or contract carriers in quantities for which a placard is not required.

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., DOT) inspection.

If this course does not address all of the hazardous materials transportation or pre-transportation functions that you perform, or if you have any questions regarding this or other hazardous materials training programs, or need any assistance, please call the course authors, ShipMate, Inc. at +1 (310) 370-3600.

Respectfully,

Steven Charles Hunt
ShipMate, Inc.

Web-Based Training (WBT)
Multimodal Transportation of Automotive Hazardous Materials

(Prerequisite Course Material)

Module 1	Introduction
Lesson 1	Hazardous Materials Overview
Lesson 2	Responsibilities
Lesson 3	Training
Lesson 4	Regulatory Authorities DOT Transport Canada Mexico SCT
Lesson 5	Regulatory Requirements Overview 49 CFR subchapter C IMDG Code ICAO Technical Instructions IATA Dangerous Goods Regulations Canada TDG Regulations Mexico SCT Normas Oficiales Mexicanas (NOMs)
Lesson 6	HM Table
Module 2	Classification
Lesson 1	Accident History Texas City, TX – 1947 Bhopal, India – 1984 ValuJet 592 – 1996 FedEx 1406 – 1996
Lesson 2	Physical & Chemical Properties Explosive Corrosive Flammable Combustible Reactive Radioactive Toxic Elevated Temperature Elevated Pressure
Lesson 3	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

Module 3

Automotive Hazardous Materials

Lesson 1 Electrical System
 Battery
 Speakers
 Cable Cutters (Battery Disconnects)

Lesson 2 Fuel System
 Fuel Pumps, Injectors & Rails
 Fuel Lines
 Fuel Pressure Regulators
 Charcoal Canisters
 Gas Tanks, Filler Necks & Gas Caps

Lesson 3 Power Train
 Engines

Lesson 4 Passenger Safety
 Air Bag Modules
 Driver-Side Airbags
 Passenger-Side Airbags
 Side Impact (Thorax) Air Bags
 Knee Bags
 Air Curtains
 Seat-Belt Pretensioners

Lesson 5 Steering & Suspension
 Accumulators
 Brake Boosters

Lesson 6 Paint & Body
 Lift Gate Supports
 Windshield Washer Fluid (concentrate)
 Paint & Paint Related Materials
 Adhesives & Coating Solutions

Lesson 7 Accessories
 Flares
 Fire Extinguishers
 Tire Inflators
 Cleaning Compounds
 After-Market Auto-Care Products

Module 4 Hazard Communication

- Lesson 1 Marking
 - Proper Shipping Name(s)
 - Technical & Chemical Name(s)
 - Identification Number
 - UN or DOT Specification
 - Packaging Marking
- Lesson 2 Labeling & Marking
 - Hazard Warning
 - Primary Risk Subsidiary Risk(s)
 - Labeling Requirements
 - Cargo Handling
 - Orientation Arrows
 - Cargo Aircraft Only
 - Special Marks
 - Excepted Quantities Mark
 - Overpack Mark
- Lesson 3 Package Marking & Labeling
 - TULIP
- Lesson 4 Overpacks, Unit Loads & Cages
 - Overpack
 - PILOT
 - Unit Loads
 - Cages
- Lesson 5 Placarding
 - Placarding Requirements
 - Placarding Exceptions
- Lesson 6 Limited Quantities
 - Hollow Diamond (ground, ocean)
 - Limited Quantity Mark (air)
 - Quantité Limitée (Quebec)
 - Cantidad Limitada (Mexico)
- Lesson 7 Consumer Commodity
 - ORM-D (ground)
 - Consumer Commodity (Canada)

Module 5 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 ('Strong' Outer Packaging)
Lesson 5	Manufacturers Symbol (Box Maker's Certificate – BMC)
	Burst Strength
	Edge Crush Test
Lesson 6	Packing
Lesson 7	Damaged Packaging
	Packaging Evaluation
	Repackaging

Module 6 Documentation

Lesson 1	Basic Description
	Alternative Description Formats
Lesson 2	Required Information
Lesson 3	Additional Descriptive Information
Lesson 4	Emergency Response Information
	Emergency Response Telephone Number
	Emergency Response Information
	ERT Service Providers
Lesson 5	Modal Specific Requirements
	IATA DGR - Air
	IMDG Code - Ocean
Lesson 6	Small Package Dispatch Services
	UPS
	FedEx
Lesson 7	Recordkeeping Requirements

Module 7 Storage, Handling & Transportation

Lesson 1	Material Safety Data Sheets
	OSHA
	WHMIS
	ANSI/GHS
Lesson 2	MSDS Requirements
	Responsibility
	Availability
Lesson 3	General Storage Provisions
	Storage
Lesson 4	Safe Handling Practices
Lesson 5	Load Securement

Module 8 Emergency Response

- Lesson 1 Initial Response Actions
- Lesson 2 Reporting & Notifications
- Lesson 3 Facility Response Plans

Module 9 HM Security

- Lesson 1 HM Security Awareness
- Lesson 2 HM Security Plan Requirements
- Personnel Security
- Site Security
- En Route Security

(Multimodal Course Materials)

Module 10 Air Transportation Requirements

- Lesson 1 A.I.R. Shipper™
- Lesson 2 Dangerous Goods List
- Lesson 3 General Packaging Requirements
- Lesson 4 Limited Quantities
- Consumer Commodities
- Excepted Quantities
- Lesson 5 Air Documentation
- Dangerous Goods Declarations
- Air Waybill
- Other Required Documentation
- Lesson 6 Carrier Specific Requirements
- Shipper & Carrier Responsibilities
- Lesson 7 Dangerous Goods in Checked Baggage
- Lesson 8 Forbidden Dangerous Goods

Module 11 Ocean Transportation Requirements

- Lesson 1 International Maritime Dangerous Goods (IMDG) Code
- Lesson 2 Dangerous Goods List
- Lesson 3 Hazard Communication
- Required Package Markings
- Overpack Marking & Labeling
- Placarding
- Lesson 4 Limited Quantities
- Consumer Commodities
- Excepted Quantities
- Lesson 5 Ocean Documentation
- IMO Dangerous Goods Declarations
- Additional Descriptive Information
- Lesson 6 Segregation of Dangerous Goods

