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Subj: Surface Transportation of Automotive Hazardous Materials (HMT-0402)

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 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;
- providing or offering placards to a surface 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 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)
Surface Transportation of Automotive Hazardous Materials

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