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Regulatory Overview

If anyone has ever tried to read the Code of Federal Regulations, you'll know it's no easy chore. Listed below is where to look for information regarding a specific agency.

- **What is a CFR?**

Code of Federal Regulations

- **What is Title 49 CFR?**

DOT Code of Federal Regulations (Safety in transit)

- **What is Title 29 CFR?**

OSHA Code of Federal Regulations (Safety of workers and people)

- **What is Title 40 CFR?**

EPA Code of Federal Regulations (air, land, water)

Other Training Regulations

- OSHA

- EPA

- NFPA

WHAT DO THESE
ACRONYMS STAND
FOR?

ASOS-Automated Surface Observation System

**CERCLA-Comprehensive Environmental Response
and Compensation Liability Act**

CFR-Code of Federal Regulations

**CHEMTREC-Chemical Manufacturers Transportation
Emergency Center**

CONUS-Continental United States

**COTR-Contracting Officer's Technical
Representative**

DOT-Department of Transportation

EPA-Environmental Protection Agency

ERG-Emergency Response Guidebook

HM- Hazardous Material

HMR-Hazardous Materials Regulations

HMT-Hazardous Materials Table

**HMTA-Hazardous Materials Transportation
Act**

**HMTUSA-Hazardous Materials
Transportation Uniform Safety Act**

LARC-Limited Access Remote Collector

MCE-Mercury Containing Equipment

n.o.s.-not otherwise specified

NWS-National Weather Service

**NWSH-National Weather Service
Headquarters**

Acronyms

Acronyms additional

- **NAPA-NATIONAL FIRE PROTECTION AGENCY**
- **OSHA-OCCUPATIONAL SAFETY HEALTH ASSOCIATION**
- **ORM-Other Regulated Material**
- **PG-Packaging Group**
- **RCRA-Resource Conservation and Recovery Act**
- **RDA-Radar Data Acquisition**
- **RQ-Reportable Quantity**
- **TSDf-Treatment, Storage, and Disposal Facility**
- **UN/NA-United Nations/North American (numbering system)**

Regulations

- RCRA
- Goal to promote protection of human health and the environment
- Conserve valuable material and energy resources

- Federal Regulations
- RCRA requires the EPA to promulgate and enforce regulations regarding the management of hazardous waste
 - Mandatory procedures for compliance with RCRA, must be followed by facilities where haz waste is accumulated, transported, treated or disposed

- Cradle to Grave
- Compiled into Title 40 CFR

Hazardous Communication/Right-to-Know 29CFR 1910.1200



- Right-to-Know
- SDS (1-16 sections)
 - Example Attached
- ⦿ Right of employees to request
- ⦿ Right of union reps to request
- ⦿ Employer must have SDS “readily available”
- ⦿ Employer must have an SDS for every hazardous chemical used
- ⦿ Employer must provide SDS to employee or union rep when requested

- DOT
Training Handling Hazardous
Materials (HM)

(49 CFR Part 172, Subpart H).

Apply to Employees who:

- Determine hazard class
- Design, produce or sell packaging for HM
- Choose proper packaging
- Fill or put HM in packaging
- Close or secure closures
- Mark or label
- Select, provide or affix placards
- Fill out shipping papers
- Driver of vehicle carrying hazmat

Apply Employees who:

- Review shipping papers to verify compliance
- Certify HM are in proper condition for transport
- Load, segregate or unload HM
- Transfer HM from one package to another

**General
awareness**

**Function-
specific training**

Safety training

**Security
awareness
training**



Employers are responsible for compliance



Initial training is required and must be completed within 90 days of employment



Or when new regulation is finalized



Or changes job function within 90 days



Refresher every 3 years (by end of calendar month)

Packaging

- Only containers that meet DOT specifications or UN performance standards may be used for the transportation of hazardous materials (see attached packaging codes flyer)
- **General Packaging Requirements:**
- Regulations, goal is to prevent releases of hazardous materials
- *It is the shippers' responsibility to select appropriate containers, load and close them securely, and secured aboard transport.*
- **Shipper's Responsibility:**
- Compatibility with contents
- Effectiveness of its closure
- Containers filling limits
- To choose authorized packaging that meet 49 CFR 173.24

Container Condition Requirements

- Containers used for hazardous materials and wastes must be in good condition
- Containers must be free of
 - Severe rusting
 - Sharp edged creases or dents
 - Bulging heads by over pressuring
 - Severe structural defects
- **Container Management Procedures**
- Containers must not be stored or handled in a manner that may cause them to rupture or leak
- **Protect from freezing**
- Many materials go through a freeze/thaw cycle during changing weather conditions
 - Causes metal stress
 - Can result in leaking containers

Packing Groups

- PG reflect the degree of danger
 - PG 1 indicates great danger
 - PG 2 indicates moderate danger
 - PG 3 indicates minor danger
-
- PG correlates to the strength of the package
 - The higher danger the stronger packaging used
 - Assists first responder in determining hazards and risks present

Labeling

HAZARDOUS WASTE

STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AGENCY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL.

GENERATOR INFORMATION

NAME _____ PHONE _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

UN IDENTIFICATION NO. / HAZARD TRAINING NO. _____ / _____
UN WASTE NO. _____ UN MATERIAL NO. _____ ACTIVATION DATE _____

CONTENTS COMPOSITION

PHYSICAL STATE: SOLID LIQUID

HAZARDOUS PROPERTIES: CORROSIVE REACTIVE TOXIC FLAMMABLE

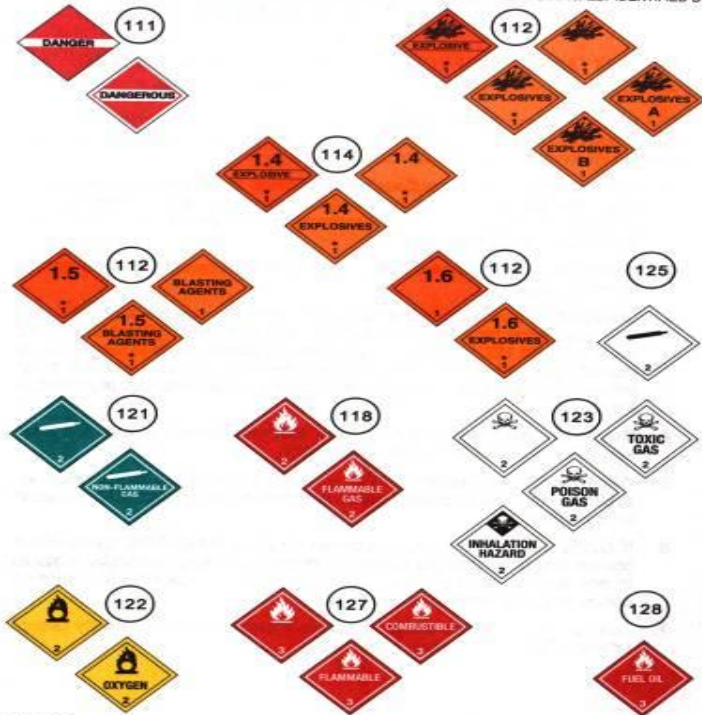
OTHER: _____

ECCO PAPER SUPPLY MAIL BAG (OR OTHER) WITH ID# _____

HANDLE WITH CARE!

TABLE OF PLACARDS AND INITIAL

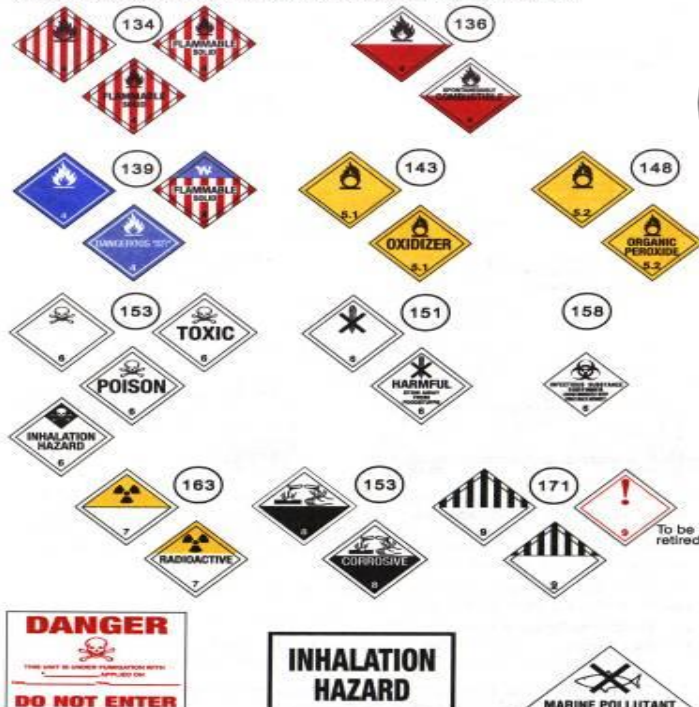
USE THIS TABLE ONLY IF MATERIALS CANNOT BE SPECIFICALLY IDENTIFIED BY



Page 16

RESPONSE GUIDES TO USE ON-SCENE

USING THE SHIPPING DOCUMENT, NUMBERED PLACARD, OR ORANGE PANEL NUMBER



Page 17



Marking and Labeling/Placarding

Definition - What does *Hazard Codes* mean?

The United States Department of Transport Hazard Codes are a classification of dangerous materials relating to transportation. It is based on United Nations recommendations.

The classifications are:

9 Hazard Classes

- Class 1 Explosive
- Class 2 Gas
- Class 3 Flammable Liquid
- Class 4 Flammable Solid
- Class 5 Oxidizer
- Class 6 Poison / Toxic
- Class 7 Radioactive
- Class 9 Miscellaneous

UN HAZARD CODES

- Each UN hazard code number has a hazard identifier, which encodes the general hazard class and subdivision. Each hazard code is divided further into sub-classes. As an example, the six hazard code divisions for Class One hazards are mass explosion, fragment producing non mass explosion, minor blast or fragment producing mass fire, moderate force with no blast or fragment, very insensitive explosive substance (with a mass explosion hazard) and explosive article (extremely insensitive).

Shipping Papers Subject to manifest requirements for Hazardous Materials/Wastes

- **Preparation**

- A trained shipper is responsible for properly completing the appropriate shipping documents

- **Types of Shipping Papers**

- Bill of Lading

- Air Bill

- EPA Hazardous Waste Manifest

- **Shipping Paper Requirements**

- Must include the following:

- Basic description

- Total quantity including unit of measure

- Shipper's certification statement

- Shipper's signature

- Emergency information

- Each person who offers a waste material for transport must certify that the material is offered in accordance with the HMR by printing on the shipping paper

- In addition, the emergency response telephone number must be placed on the shipping paperwork.

The image shows a sample of an EPA Hazardous Waste Manifest form, Form 3090 (03-02). The form is titled "EPA FORM HAZARDOUS WASTE MANIFEST" and includes sections for "GENERATOR INFORMATION", "SHIPPER INFORMATION", and "RECIPIENT INFORMATION". A large "VOID" watermark is overlaid on the form. The form contains various fields for identifying the waste, the shipper, and the recipient, as well as checkboxes for different types of waste and emergency response information.

Basic Description For Waste Shipping Paperwork (see attached manifest example)

- Must be in a set sequence
- 1.UN Identification number
- 2.Proper shipping name
- 3.Primary hazard / division
- 4.Subsidiary hazard / division
- 5.Packing group

- **Example:**
- UN3249, Waste Medicine, solid, toxic, n.o.s. (Warfarin), 6.1, PG II, **P001**

Emergency Response Information

- HM shippers must provide a 24-hr ER phone number
 - Number must appear on shipping papers
 - Must be monitored at all times while in a phases of transport
 - Pagers or call back numbers are not acceptable
-
- Each person who offers a hazardous material for transport must certify that the material is offered in accordance with the HMR by printing on the shipping paper either of the following certifications:
-
- “This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation”
-
- “I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packed, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national government regulations”

Placarding



Placard the Vehicle

- Shipper is responsible for determining and providing the necessary placards
 - Placement of Placards
 - Readily visible from the direction it faces (except where coupled)
 - Placement of Placards
 - The required placarding of the front of a motor vehicle may be on the front of a tractor instead of or in addition to the front of the cargo body
 - Placard Exceptions
 - Not required for:
 - Infectious substances
 - Limited Quantities identified on shipping papers
 - Hermetically sealed in containers in accordance with 173.13
 - HM packaged as small quantities under 173.4
 - combustible liquids in non-bulk containers
 - PIH boxes

Marking / Packaging Bio Infectiuous

- **The film bag may not exceed a volume of 175 L (46 gallons). The film bag must be marked and certified by its manufacturer as having passed the tests prescribed for tear resistance in ASTM D 1709-01, Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method (see § 171.7 of this subchapter), and for impact resistance in ASTM D 1922-00a, Standard Test Method for Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method (see § 171.7 of this subchapter). The film bag must meet an impact resistance of 165 grams and a tearing resistance of 480 grams in both the parallel and perpendicular planes with respect to the length of the bag. You must keep this certification on file.**
- **(ii) The plastic film bag must be closed with a minimum of entrapped air to prevent leakage in transportation. The bag must be capable of being held in an inverted position with the closed end at the bottom for a period of 5 minutes without leakage.**

**INFECTIOUS
WASTE**



MEETS ASTM D-1709-01 165 GRAMS IMPACT
MEETS ASTM D-1922-00a 480 GRAMS TEAR

NAME: _____

ADDRESS: _____

DATE: _____

CB

BASURA INFECCIOSA



Testing/Packaging

- Red Bag Tying
 - Goose Neck
 - OR packed boxes or Bag Tie

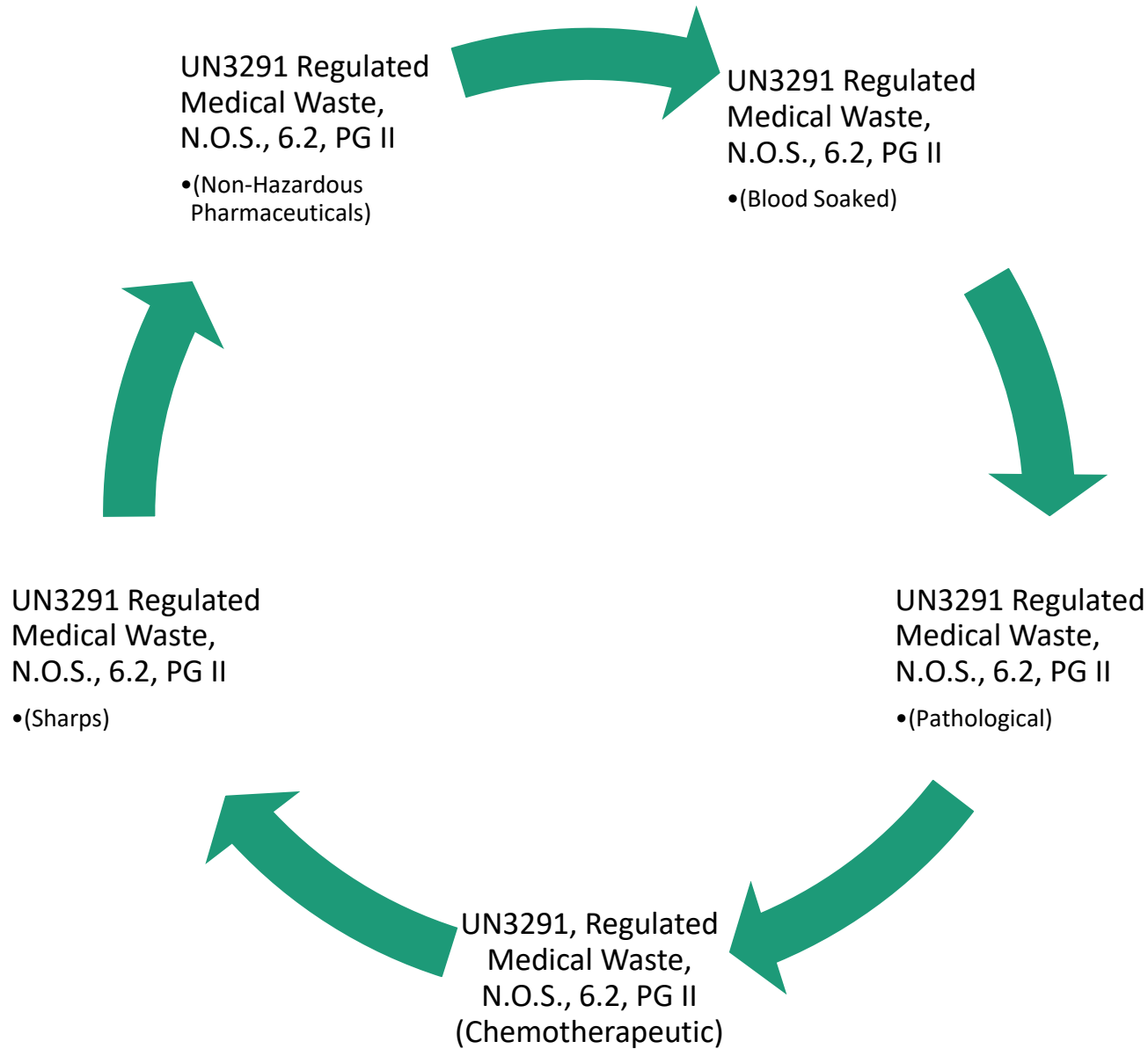


Common Packaging Issues

Common Packaging Issues



Basic Description RMW





Hazardous Waste Shipments

- Subject to manifest requirements of 40 CFR 262 (EPA)
- EPA definition: a solid waste that displays a hazardous characteristic or a waste that is on one of the hazardous waste lists.
- All hazardous wastes are regulated as hazardous materials

Spills

1. Isolate spill area and do not allow anyone to walk through the area. Use barrier tape if necessary.
2. Notify the supervisor of the area of the spill.
- 3. All spill cleanup materials must be disposed of as hazardous waste spill debris.



Security: Closure is a major factor in incidents investigated by DOT caused by human error in closures of packages

Bung tightening -Outlet valves secured

- A container of hazardous materials or waste must always be kept closed except when it is necessary to add or remove materials or waste
- Closures on packages shall be designed and closed such that under conditions normally incident to transportation there is no identifiable release of hazardous materials to the environment
- Open head drum considered closed when lid on ring in place and bolt tightened to spec's

Filling: Do not overfill container

- Overfilling can result in bulging heads and damage integrity of the container
- Safety hazard for personnel using the container
- Concern for both bulk and non bulk containers

Venting: Venting of packaging, to reduce internal pressure that may develop by the evolution of gas from the contents is permitted only when:

- Not transporting by aircraft
- Evolved gases are not poisonous, create flammable mixture with air, or be an asphyxiate under normal conditions
- Packaging is designed to preclude an un-intentional release of hazardous materials from the receptacle



What are Universal Wastes? (cont.)



- Universal Wastes are certain hazardous wastes that are universally generated in large quantities by industrial facilities but present a limited hazard
- They are exempt from the hazardous waste regulations but must still be managed separately from general trash.
- There are four (4) categories of universal waste, which include:
 - lamps;
 - batteries;
 - pesticides; and
 - mercury-containing equipment.



Packaging/Labeling Universal Waste Bulbs and Batteries



1. Label universal waste containers with a standard "**Universal Waste Label**", noting the accumulation start date on the label.

To maintain Small Generator status, do not accumulate more than 5,000 kilograms (11,023 pounds) of universal waste throughout your facility at any one time.

NOTE: Universal Waste may not be stored for longer than

1 year after accumulation start date.



SPILLS; UNIVERSAL WASTE

- Isolate spill area and do not allow anyone to walk through the area. Use barrier tape if necessary.
- Notify the supervisor of the area of the spill.
- All spill cleanup materials must be disposed of as hazardous waste spill debris.



Test DOT/HM

Print Name: _____ Date: _____

1. What do these acronyms stand for?

OSHA

EPA

NFPA

2. What is a CFR?

3. Title 49 CFR is DOT/HM (safety in transit)?

True or False

4. **Definition - What does *Hazard Codes* mean?**

The United States Department of Transport Hazard Codes are a classification of dangerous materials relating to transportation. It is based on United Nations recommendations.

True or False

5. PG correlates to the strength of the package The higher danger the stronger packaging used?

True or False

6. Cradle to Grave Compiled into Title 40 CFR is that the generator is responsible for their material from pick-up to disposal/destruction?

True or False

7. What are the three major steps when there is a spill?

- 1.
- 2.
- 3.

8. HM shippers must provide a 24-hr ER phone number, Number must appear on shipping papers, Must be monitored at all times while in a phases of transport, Pagers or call back numbers are not acceptable?

True or False

9. What is the UN number for Warfarin?

10. What CFR is for the EPA (air, land, water)?

11. What is the shipping Name for Blood-Soaked Regulated Medical Waste?

12. The bag must be capable of being held in an inverted position with the closed end at the bottom for a period of 5 minutes without leakage.