

DOT HAZMAT SAFETY TRAINING

COURSE OUTLINE

- **Many different types of hazardous materials are used in business every day. They:**
 - Heat our buildings.
 - Help us to maintain the equipment we use.
 - Play important roles in many manufacturing processes.
- **But if they aren't handled carefully, hazardous materials ("HAZMATs") can also create serious problems.**
- **Leaks and spills of these substances can cause:**
 - Injuries and fatalities
 - Property damage
 - Harm to the environment.
- **HAZMATs could also be used by terrorists as weapons in an attack.**
- **These hazards can be controlled by following safe procedures that have been spelled out in regulations established by the U.S. Department of Transportation (the DOT).**
- **Shipping just about any product follows a fairly standard process:**
 - An order is called in and warehousing "pulls" the product.
 - The Shipping Department packs it and sends it out.
 - The product is delivered via land, sea or air carrier.
 - It is finally received at its destination.
- **It can all be pretty routine, and if something goes wrong it's normally not a huge problem.**
- **But when the product that is being transported is a hazardous material, it's especially important to follow proper procedures every step of the way.**
 - With HAZMATs, if something goes wrong it can be a disaster!

- **Highway accidents, train derailments, plane crashes and other mishaps are bad enough when everyday cargo is involved.**
 - But whether a HAZMAT incident takes place on a loading dock or in transit, it can not only affect the people who are directly involved in the event, but also the surrounding community and environment, sometimes for years to come.
- **It is to prevent hazards like these that the "DOT" has established regulations to help ensure that HAZMATs get where they're going safely.**
 - The rules, included in Title 49 of the Code of Federal Regulations, Subchapter C, Parts 100 to 185, are known as the "Hazardous Materials Regulations", or "HMR".
- **Employers are required to provide employees like you who handle hazardous materials with training on these DOT rules.**
 - DOT HAZMAT Safety Training provides the information you will need to recognize HAZMATs in your workplace and identify the hazards that are associated with them.
- **The training also discusses:**
 - DOT regulations for transporting HAZMATs.
 - Procedures for shipping, receiving and storing them safely.
 - How to respond quickly and effectively in a HAZMAT emergency.
- **To work safely with HAZMATs, you need to be able to identify them and their hazards as soon as possible.**
 - This helps you to anticipate any problems that may arise, and take steps to prevent them.
- **So the Department of Transportation requires all containers of hazardous materials, and all vehicles that transport them, to display "Hazard Class" labels and placards.**
 - These let you know, even at a distance or when they're in motion, that the cargo requires special handling.
- **The Hazardous Materials Regulations specify the shape, size and color of the labels and placards, as well as the types of information that they need to communicate.**

- **The most important of these is a material's "Hazard Class". The DOT has defined nine of them:**
 - Class 1... explosives.
 - Class 2... all gases.
 - Class 3... flammable liquids.
 - Class 4... flammable solids, including those that are spontaneously combustible and dangerous when wet.
 - Class 5... oxidizers and organic peroxides.
 - Class 6... substances that are poisonous and infectious.
 - Class 7... all radioactive materials.
 - Class 8... corrosives, both liquid and solid.
- **Class 9 is a "miscellaneous" class that includes any hazardous substance that doesn't clearly fit into one of the other eight categories.**
- **DOT Hazard Class labels and placards enable workers, law enforcement personnel and first responders to tell at a glance the hazards that are associated with the material that is being transported.**
- **The DOT's Hazardous Materials Regulations require that "Shipping Papers" and emergency response information accompany every HAZMAT shipment.**
- **"Shipping Papers" provide a basic description of a material, including its "Identification Number" and "Proper Shipping Name".**
 - They must also include its "Hazard Class", "Division Number" and "Packing Group", which indicate the type of hazards the material presents, and the degree of danger that is associated with the substance.
- **The HMR require the Shipping Papers to present the information in this order, with no additional information mixed in.**
 - The papers must also contain a 24-hour emergency response telephone number that can be used to reach someone who has a detailed knowledge of the material that is being transported.
- **HAZMAT shippers must ensure that Shipping Papers are included with all hazardous materials that they send out.**
 - The HMR requires detailed "emergency response information" to accompany all HAZMAT shipments as well.
 - It may be included on the Shipping Papers, or can be in a separate document.

- **In addition to a material's basic description, emergency response information should include:**
 - Its immediate health hazards, handling precautions, and first aid that should be given to anyone exposed to it.
 - Procedures for dealing with spills or leaks.
 - Details on any risk of fire and explosion, as well as what to do if the substance starts to burn.
- **The DOT requires that the Shipping Papers and the emergency response information travel in the cab of the vehicle that is transporting the material.**
- **When hazardous materials leak or spill, seconds count.**
 - You need to be able to make informed and effective decisions ASAP so you can bring the situation under control.
- **That's why the DOT has compiled technical information and safety procedures about hazardous materials in a convenient "Emergency Response Guidebook".**
 - To make it easier and quicker to use, the Guidebook takes advantage of the fact that many HAZMATs have similar characteristics.
 - This is what makes it possible to organize emergency response actions into an easy-to-reference set of "sub-guides".
- **In the event of a HAZMAT incident, you look up the material that's involved and are pointed to the "sub-guide" that contains the response information you need.**
- **The information in the Guidebook is divided into four color-coded sections.**
- **The first two help you to identify the correct "sub-guide" for the material in question.**
 - If you know the HAZMAT's four-digit "chemical identification number", you can look it up numerically in the Guidebook's yellow section.
 - You can use the blue pages to look it up alphabetically by its Proper Shipping Name.
- **Both sections provide you with the number of the appropriate "sub-guide", which you can then find in the orange pages.**
 - The orange section describes the emergency actions that should be taken.
- **The green pages in the Guidebook provide information on how to isolate a spill and limit people's exposure to the hazardous material that has been released.**

- **Remember that important information about any hazardous material can also be found on its Safety Data Sheet ("SDS"). Among other information, the SDS will tell you about:**
 - The material's health hazards.
 - The protective measures you should use when handling it.
 - What type of first aid should be given to someone who has been exposed to it.
- **Shipping and receiving are where you are most likely to get "hands on" with HAZMATs that are "in transit".**
 - The DOT's Hazardous Materials Regulations provide a number of safe work practices for you to follow.
- **HAZMAT shipping safety begins with accurately describing the hazardous material that is being transported in the Shipping Papers that will accompany it, then marking and labelling the package accordingly.**
 - This provides critical technical and safety information for the people that will handle the shipment "down the line".
- **You should make sure that a HAZMAT's container, packaging and labelling are all in good condition.**
 - Never pack or send out containers that have been damaged or have labels that are torn or illegible.
 - Only use packaging that has been approved by the DOT for that particular material.
- **Always handle hazardous materials with care.**
 - Pay attention to markings such as "This End Up" and "Do Not Stack".
- **Whatever vehicle will be used to transport the material should be carefully inspected to verify that it's in good condition and properly placarded.**
 - Make sure Shipping Papers and emergency response information accompany every shipment of hazardous materials that you send out.
- **When hazardous materials shipments arrive at your facility, take a good look before you accept them.**
- **You should always reject any packages that:**
 - Arrive without accurate Shipping Papers.
 - Are improperly marked or labeled.
 - Have been damaged in any way.

- **Do not handle any HAZMAT until you have determined the identity of the material and its hazards. Be sure to:**
 - Follow any special precautions that the substance requires.
 - Wear the appropriate personal protective equipment while handling it.
 - Note what type of first aid should be given to someone who is exposed to the substance.
- **If you are going to be storing a hazardous material for any length of time, you should determine:**
 - Whether it has any special requirements regarding the temperature, humidity or light exposure in the storage area.
 - If it should be stored separate from any other materials.
- **This information can be found in the documentation that accompanies the shipment, as well as on its SDS.**
- **Even when we do our best to follow safe work practices when we're working with hazardous materials, things can still go wrong.**
 - Events such as hurricanes, wildfires and earthquakes, are completely beyond our control, but we still need to be able to respond to them effectively.
- **This is why facilities like yours are required to create a written Emergency Action Plan that describes exactly what ought to be done in different types of crisis situations... including a HAZMAT emergency.**
- **You should be aware of your role in the Plan and may already have received training in what to do and when to do it.**
 - Take the time now to familiarize yourself with the Emergency Action Plan.
 - It's available to all employees.
 - If you have any questions about your part in the Plan, talk to your supervisor.
- **If an emergency does occur, follow the Plan. Do not try to improvise on the spur of the moment.**
- **During a HAZMAT incident, people may be exposed to harmful substances.**
 - In most cases, a short-term exposure will result in a sudden reaction, such as a rash or burn, but will cause no lasting health problems.

- **However, the more hazardous the material, and the longer the "duration of exposure", the greater the chances of experiencing more severe health effects.**
- **Another concern during a HAZMAT emergency is the potential contamination of the environment outside your facility.**
 - This can happen very quickly if liquid HAZMATs spill into an outlet like a storm drain or sewer.
 - If you see hazardous materials leaking into any type of drain, alert your supervisor or the local emergency response personnel immediately.

*** * * SUMMARY * * ***

- **Be aware of DOT HAZMAT regulations and know how they apply to the work you do.**
- **Know the sources of information you can use to determine the hazards, safety precautions and emergency response procedures for any hazardous material that you work with.**
- **Know the safe work practices you should use when shipping and receiving HAZMATs.**
- **Understand the role you play in your facility's Emergency Action Plan regarding incidents that involve hazardous materials.**
- **Hazardous materials require extra care and attention throughout the shipping process, but now that you understand the risks and know the safety procedures to follow, you can help ensure that the HAZMATs you work with will travel trouble-free... every day!**