

# **Hazardous Material** by KI5UAJ

Tonight's training is meant to be an introduction to Hazardous Materials (HazMat). Lee County Areas will soon have an exercise relating to these. So, I thought I would take the moment and have this discussion. My background involves HazMat and things CBRNE. My training and response are from my military, law enforcement and my fire service backgrounds. I was a federally licensed DOT inspector and trainer and performed random roadside inspections on vehicles transporting hazmat. I have responded to incidents involving hazmat and have worked under those conditions.

I would like to stress the need for personal safety when dealing with Hazardous Materials. Ham operators may encounter HazMat incidents, or you may be asked to assist with emergency communications in such incidents. Proper training is required for your own safety. Moreover, the wrong move by you during a HazMat operation can endanger not only your own safety, but also the safety of other responders as well as the entire local community.

The term "hazardous materials" (HazMat) refers to any substances or materials, which if released in an uncontrolled manner (e.g., spilled), can be harmful to people, animals, crops, water systems, or other elements of the environment. The list is long and includes explosives, gases, flammable and combustible liquids, flammable solids or substances, poisonous and infectious substances, radioactive materials, and corrosives.

One of the major problems faced by emergency responders is determining which chemicals are involved and in what quantities. Details of the placards and emergency response procedures can be found in the DOT Emergency Response Guidebook. These guidebooks are printed and updated every 4 years with the newest version being 2024. LeeCares recently received the latest version. These are great to keep inside your glovebox or backpack, maybe along with a pair of binoculars. This guidebook is also available in the app format. These guides help in identifying the materials, list health hazards, provide evacuation distances, provide first responders with extinguishing/mitigation information. The guidebook also has diagrams of cargo tank types and rail car types. The materials are easy to follow and recommend to have ready.

## **Hazardous Materials On The Move**

This evening, I am only speaking of these materials as they are transported via roadways and rail. The US Department of Transportation has established several systems to manage HazMat materials. They have defined various classes of hazardous materials, placards and other marking requirements for containers and packages to quickly identify cargoes, and an international cargo commodity numbering system.

The DOT requires that all freight containers, trucks and rail cars transporting these materials display placards identifying the hazard class or classes of the materials they are carrying. The placards are diamond-shaped, 10-inches on a side, color-coded and show an icon or graphic symbol depicting the hazard class (flammable, caustic, acid, radioactive, etc). They are displayed on the ends and sides of transport vehicles. A four-digit identification number may be displayed on the placard or on an adjacent rectangular orange panel. You have probably seen these placards or panels displayed on trucks and railroad tank cars. You may recognize some of the more common ones, such as 1993, which covers a multitude of chemicals including road tar, cosmetics, diesel fuel, and home heating oil. Or you may have seen 1203 placards on tankers filling the underground tanks at the local gas station. In addition to the placards, warning labels must be displayed on most packages containing hazardous materials. The labels are smaller versions (4 inches on a side) of the same placards used on trucks and other vehicles. In some cases, more than one label must be displayed, in which case the labels must be placed next to each other. In addition to labels for each DOT hazard class, other labels with specific warning messages may be required. Individual containers also must be accompanied by shipping papers that contain the proper product name, the four-digit ID number and other important information about the hazards of the material.

## **Guidelines for reporting HAZMAT Incidents**

### **Who to call:**

Call 911. Emergency response agencies have a protocol when receiving reports of these types of incidences. Your reporting of the incident via phone or by relaying information via radio may end at that point. They maintain periodically updated lists of state and Federal authorities that provide information and technical assistance on handling incidents involving hazardous materials

Be sure you are up-wind and up-hill from the incident site. You may witness a collision where there is spillage from a transport vehicle, or a semi is on fire and is placarded. Get to a safe location and try to identify the material. It cannot be over emphasized that you **MUST** stay well away from the site. Do **NOT** be tempted to get just a little closer so that you can read placards or other items. If you cannot read these items using binoculars or a scope, simply report what you can see from a safe position. If you can see from a safe position, look for:

- The four-digit number on a placard or orange panel.
- The four-digit number preceded by the initials "UN/NA" on a shipping paper, package or drum. Again, if done from a safe distance.
- The name of the material on the shipping papers, placard, or package. Again, if done from a safe distance.

Call for help immediately and let the experts handle the situation. Do not attempt to personally take any action beyond your report. This is an instance when it is vitally important to know your limitations, not just for your own safety, but also for the safety of others.

This concludes tonight's training.

Thanks, this is KI5UAJ, back to net control.