

4 Critical Questions to Ask When Transporting Dangerous Goods



Various regulatory bodies and different jurisdictions makes it challenging to remain in compliance while transporting dangerous goods.

It's been said that no matter what you do for work, the most dangerous part of your job is driving there and back.

[Injury statistics](#) bear that out, with 67,000 transportation-related occupational injuries in 2018 and 1,276 fatalities (accounting for 24% of all work-related fatalities that year). We're already talking about a high-risk activity – even before introducing the idea of transporting dangerous goods.

There are plenty of examples of how bad it can get when hazardous goods transportation goes wrong. Here in Canada, we have notable events in history such as [the Halifax harbor collision in 1917](#) and [the Lac-Mégantic train derailment in 2013](#). Although the former was a far larger event, both resulted in explosions that leveled cities.

Tight regulations are in place for a good reason ' the hazard posed by transporting certain material can be tremendous.

Regulating the Transportation of Dangerous Goods

Transportation of dangerous and hazardous goods is a fairly broad topic. In the United States alone, depending on the mode of transport, there are five separate administrations regulating the transport of dangerous goods, all of which fall under the [Department of Transportation](#) (DOT):

- FAA (Federal Aviation Administration)
- FMCSA (Federal Motor Carrier Safety Administration)
- FRA (Federal Railway Administration)
- PHMSA (Pipeline and Hazardous Materials Safety Administration)
- USCG (United States Coast Guard)

Each department has its own expansive set of regulations, so it would be important to know which jurisdiction your transportation activities fall under.

The distinction here is fairly obvious, but remember that since *transportation* itself is the activity, it's possible to travel through several different regional jurisdictions in a single journey. For example, cities may have rules about transport over watercourse and reservoirs that may differ from one municipality to the next. Provinces and states may vary in what they allow depending on the roadway type in use. A company has to know the rules they will encounter on a given journey, reading all the fine print.

Four Essential Questions

From a high level, transporting hazardous material requires consideration of four basic questions.

Does the Material Being Transported Qualify as a 'Hazardous Material'?

This is a seemingly obvious question that is deceptively complicated.

'Hazardous' isn't a matter of opinion, after all. It has regulatory meaning and those meanings may vary depending on where and how the materials are transported. It's a shipper's responsibility to determine whether the material (in the quantity, medium, and means of transportation) is considered hazardous under the relevant legislation, and what that implies. Amongst other things, a shipper would need to determine the requirements that pertain to a particular shipment, such as correct shipping name, the class and division to which the material belongs, and certification requirements. These inform some of the actions at the next step.

How Does the Material Need to Be Packed and Prepared?

Materials need to be packed or stored in a compliant way, which can mean a lot of things depending on the material. Some materials need to be wetted (e.g. Picric acid), others need to be bagged in a meticulous way (e.g. [asbestos](#)), still others may be exempt if they are transported in a small enough containment (e.g. acetylene). Some materials can't be transported together due to synergistic effects (e.g. flammables and [oxidizers](#)). Many have specifications about how they must be blocked, braced, or segregated.

Thing is, these examples all depend on the jurisdictional rules so the shipper has to understand the conditions and exceptions relevant to their own materials and mode.

Once the material itself is packaged and marked, remember that

labelling must be present and visible indicating the identification number and relevant hazard(s). The driver will also need to have a copy of the shipping manifest and certification (where relevant).

(Learn about [Health and Safety Symbols and Their Meanings](#))

What Is the Emergency Response Plan'

The Illinois State Police use a notorious training video of a trooper running to a crashed tanker truck, then collapsing immediately as he enters an invisible cloud of anhydrous ammonia. Whether or not the footage is authentic, it illustrates an important point: that knowing the appropriate response and the hazards is critical.

Drivers will need to be familiar with the emergency response plan developed for transporting the materials in question. They need to know their responsibilities and who to contact in the event of an emergency in order to protect themselves, first responders, the public, and the environment.

(Read more in [8 Things to Consider When Developing an Emergency Response Plan](#))

What Training Is Needed'

Each of the above questions relates to something the transportation company has to 'know.' What are the regulations and jurisdictions' What do I do in an emergency' How do I pack this stuff' All of those questions are answered through a robust training program for all workers involved in the process.

A training program for truck drivers, for instance, should ensure not only that they are competent at operating the vehicle, but also aware of the hazards and controls, rules, guidelines, emergency response, and company procedures.

Conclusion

Transporting dangerous goods is at once a vital operation and a tremendous safety liability for businesses. I've only been able to scratch the surface in terms of the factors that need to be considered. Indeed, transportation safety is, in many ways, its own discrete discipline. Start here, but be sure to expand your knowledge before packing and sending off any dangerous goods.

Source: [Safeopedia](#) By [Daniel Clark](#)