

# Freight Railroads Move Hazardous Materials Safely

From the chlorine used to purify drinking water to the chemicals used in fertilizers, railroads provide a safe solution for moving the hazardous materials (hazmat) essential to daily life. In fact, more than 99.99% of all hazmat moved by rail reaches its destination without a release caused by a train accident, making rail a responsible transportation choice.

Railroads recognize the responsibility that comes with moving hazmat and strive each day to safely and securely deliver the freight entrusted to them. Working with customers, suppliers, communities and federal regulators — like the U.S. Department of Transportation (USDOT), U.S. Department of Homeland Security (DHS) and U.S. Pipelines and Hazardous Materials Safety Administration (PHMSA) — railroads' approach to hazmat safety is both exacting and all-encompassing. These efforts include rigorous design standards for rail cars carrying hazmat, specialized mobile apps that equip first responders with critical safety information, and a software system jointly developed by the industry and the U.S. Federal Railroad Administration (FRA) to evaluate and determine the safest, most secure rail routes to move the materials.

These efforts — coupled with the rail industry's ongoing commitment to infrastructure investment, technology deployment, rigorous employee training, improved operating practices and community safety efforts — have lowered hazmat accident rates by 64% since 2000.

## Rail's Proactive Approach

America's freight railroads operate the safest rail network in the world. The industry's distinction as the most responsible way to move goods over land — particularly hazmat — is thanks to its consistent focus on continual improvement. While railroads' safety record stands on its own, the industry continues to work toward the ultimate goal of an accident-free future. Freight rail's approach includes:

- **Tech-Enabled Inspections:** The U.S. freight rail network is superior to other transportation modes in part because of sustained, robust investment in infrastructure, equipment and technology. These investments include powerful new inspection technologies that assess network health more accurately than ever before and improve maintenance planning.
- **Specialized Equipment:** North America's freight railroads transport most hazmat using a fleet of specialized rail tank cars. Thanks to industry advocacy, in 2015, USDOT released regulations requiring new, tougher tank car standards for certain types of hazmat, including crude oil. Railroads also proactively equip trains carrying hazmat with specialized equipment — distributed power and end-of-train devices — that provide more consistent braking, minimizing the potential for damage to rail cars in the event of an accident.
- **Government Oversight:** FRA inspectors examine rail infrastructure regularly to ensure compliance with federal safety standards. The FRA recently decided to allow railroads to use ultrasonic inspection technology, augmented with global positioning system (GPS) technology, to inspect track using specialized vehicles that don't need to stop during inspections. This continuous rail inspection technology will allow railroads to test rail more frequently; identify and repair internal rail flaws before conditions degrade safety; and reduce freight and passenger train delays associated with routine track testing.
- **Operational Modifications:** U.S. Class I railroads use the Rail Corridor Risk Management System (RCRMS), a joint initiative between railroads and government, to analyze and identify the safest and most secure routes for transporting highly hazardous materials. The model uses 27 risk factors — including hazmat volume, trip length and population density along the route — to assess the overall safety and security of rail routes.

## Key Takeaways

- More than 99.99% of rail hazmat shipments reach their destination without a release caused by a train accident.
- Hazmat safety is a shared responsibility, which is why railroads work closely with their customers, equipment suppliers, government agencies, rail labor and others to continually advance hazmat safety.
- Tens of billions of dollars in private investment to improve rail track and equipment reliability as well as develop and implement new safety-enhancing technologies have helped drive rail hazmat accident rates down 64% since 2000.
- Railroads support the USDOT's tougher tank car standards and the phase-out of older tank cars is underway.

# USDOT 2015 Rule for Tougher Tank Car Standards



## Community Preparedness & Response

With operations across 49 states, America's freight railroads honor their responsibility to the communities they serve. This commitment is best demonstrated by their emphasis on preparedness and community engagement. Railroads work diligently to prepare communities in the rare event of a rail accident and support them during and after the incident. These efforts include:

- **First Responder Support:** U.S. freight railroads train tens of thousands of first responders throughout the country each year, many at the industry's Security and Emergency Response Training Center (SERTC). In response to COVID-19-related travel restrictions, SERTC recently launched a new virtual training platform to ensure first responders have continued access to this vital training.
- **Transparent Communications:** Railroads actively collaborate with local officials on emergency response plans in the rare event of an incident. Upon request, railroads also share information with state and local officials on the types of cargo moving through their communities to inform emergency response planning. In partnership with the International Association of Fire Chiefs, the industry developed the AskRail app, which provides first responders across the rail network immediate access to accurate, timely data about what type of hazmat a rail car is carrying and how to safely respond to an incident.
- **Emergency Response Teams:** Railroads have 24/7 emergency response teams to assist local officials. Railroads maintain networks of on-call hazmat response contractors and environmental consultants to provide additional assistance.
- **Community Assistance:** Railroads provide services (e.g., lodging, food) to those displaced by rail hazmat accidents and work to make communities whole. Railroads will often establish assistance centers and claims teams to assess and meet the long term needs of displaced community members.