KEY TAKEAWAY

Chemicals are essential building blocks for multiple industries, including manufacturing, agriculture, pharmaceuticals, and construction. With highly regulated operations and stringent safety measures, railroads efficiently move these crucial materials and help chemical customers compete in the global marketplace while supporting business expansion.

DATA POINTS

More than 99.9% of hazmat shipments reach their destination without incident. Freight railroads moved 2.3 million carloads of plastics, fertilizers and other chemicals in 2022.

America’s freight railroads safely, efficiently and cost-effectively transport the chemicals that make modern life possible. These include moving fertilizers to farmers, plastic resins to auto parts producers, caustic soda to pulp and paper manufacturers, and countless other chemical products to intermediaries and end users throughout the U.S. and the world.

The category “chemicals” consists of thousands of distinct products. Some chemicals are considered hazardous, and railroads take their responsibility to safely move them seriously. More than 99.9% of all hazmat moved by rail reaches its destination without a release caused by a train accident.

Top Chemical-producing States

With end users of chemicals spread throughout the country, railroads transport huge volumes of chemicals yearly. Although the U.S. chemical industry consists of thousands of firms nationwide, many plants are concentrated in the Gulf States, where raw petroleum and natural gas materials are readily available. The top chemical-producing states — TX, CA, LO, NC, IL, OH, IN, NY, PA and IA — account for approximately 66% of total U.S. chemical production.

Freight rail plays an integral role in safely and efficiently transporting agriculture fertilizers to Midwest farmers, plastic resins to automotive manufacturers, caustic soda to pulp and paper manufacturers, and countless other chemical products to intermediaries and end users. This efficient and reliable service ensures that chemical producers and consumers maintain their competitiveness here and abroad.
**Ethanol**

Ethanol — a renewable fuel made from corn and other plant materials — is an important commodity for U.S. railroads. The U.S. ethanol industry — and railroad carloads of ethanol — has grown tremendously since methyl tertiary butyl ether (MTBE), a gasoline additive, was banned from use in 2006. Coupled with high oil and low corn prices, the ban gave rise to ethanol’s replacement of MTBE as a fuel additive. Since then, Government policies requiring renewable and biofuels have only strengthened the demand for this energy resource.

Because of its alcohol content, ethanol cannot move in oil pipelines, making railroads the chief mode of transport for this commodity. Railroads account for 60 to 70% of ethanol movement. Each U.S. Class I railroads transports ethanol, with some serving several dozen plants. An estimated 15 to 20% of ethanol rail movements originate on short line and regional railroads — not surprising, given the rural nature of many short lines and much of America’s ethanol production.

Ethanol production is concentrated in the Midwest, where most of the corn used in ethanol production is grown. but many of the major markets for ethanol are on the East Coast, California and Texas.

**Fertilizers**

Railroads are essential for moving the chemicals that produce fertilizers. Railroads move large amounts of anhydrous ammonia, potassium compounds, and urea. They also carry millions of tons of raw materials used to produce fertilizer each year, including phosphate rock, crude potash, and sulfur. One rail tank car of anhydrous ammonia carries around four tanker trucks, enough to fertilize 770 acres of corn.

While railroads and farmers once connected rural communities and urban centers, the two industries now link America to much of the world — particularly Canada and Mexico. One in every 10 planted acres feeds people of these countries.

The connection between railroads and agriculture is exemplified by the ability to link fertilizers to farmers and foods to producers. Tank cars going from Canada to Florida move raw goods for input into chemical manufacturing that help create agricultural fertilizers. Those materials will then move by railroads to the U.S. heartland, helping America’s farmers generate yields. Their food products will then go by rail to ports for sale on the global market. Dinner in Mexico is made possible, in part, by train cars that started in Canada. And much of this occurs across borders, tariff free. However, continued economic gains for both industries hinge on policies that encourage such movements.