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. More than 99.99% of hazmat shipments reach their destination without incident.

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. Freight railroads moved 2.3 million carloads of plastics, fertilizers and other chemicals in 2022.

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 derived from corn and plant materials, is a vital commodity for U.S. railroads. Its prominence surged after the 2006 ban on methyl tertiary butyl ether (MTBE), a gasoline additive, leading to ethanol’s adoption. Government policies mandating renewable and biofuels have further boosted demand.

Due to its alcohol content, ethanol relies on railroads for transportation, constituting 60 to 70% of its movement. Every U.S. Class I railroad is involved, with 15 to 20% originating on short line and regional railroads, aligning with the rural locations of ethanol production.

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.