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.

In doing so, railroads help ensure that chemical producers and consumers can maintain their competitiveness here and abroad and continue to enhance our health, safety and quality of life.

**Because most chemicals are used in the production of other goods, the chemical industry’s fortunes tend to rise and fall with the economy, especially manufacturing.**

The chemical industry is one of the largest U.S. industries — its revenue ($486 billion in 2020, excluding pharmaceuticals) is typically more than seven times the revenue of the U.S. freight railroad industry. Although the U.S. chemical industry consists of thousands of firms located throughout the country, many plants are concentrated in the Gulf States, where petroleum and natural gas raw materials are readily available.

As the American Chemistry Council (ACC) notes, “Plentiful and affordable natural gas supplies have transformed America’s chemical industry from the world’s high-cost producer a decade ago to among the lowest-cost producers today...Companies from around the world are investing in new U.S. production capacity, leading to industry revival and new job.”

**Because end users of chemicals are spread throughout the country, huge volumes of chemicals are transported each year.**

Figures compiled by the ACC show some 948 million tons of chemicals were shipped in the U.S. in 2020 at a cost of $55.4 billion. In 2020, transportation costs were equivalent to 11.4% of the value of chemical industry shipments. In 2020, trucks accounted for 57% of chemical tonnage shipped and 70% of chemical transportation costs, while water transport accounted for 20% of tonnage and 7% of transportation costs, according to ACC data. Pipelines and air transport accounted for 5% of tons and 4% of costs.

The remainder — 19% of tonnage and 20% of chemical transportation costs — is attributable to rail. In 2020, chemicals accounted for 8.1% of originated carloads, 12.6% of originated tonnage, and 16.6% of gross revenue for U.S. Class I railroads.

In 2021, freight railroads 2.2 million carloads of plastics, fertilizers and other chemicals. The highest-volume chemical carried by U.S. railroads is ethanol. More than half of all rail chemical carloads consist of various industrial chemicals, including soda ash, caustic soda, urea, sulfuric acid and anhydrous ammonia. Plastic materials and synthetic resins account for close to a quarter of rail chemical carloads. Most of the rest is agricultural chemicals.

U.S. railroads typically transport more than two million carloads of hazardous materials each year, including many chemicals that are considered hazardous. Railroads are the safest mode to transport hazardous materials. More than 99.99% of rail hazmat shipments reach their destination without a release caused by a train accident.

**Key Takeaways**

- Freight railroads move many of the chemicals that make modern life possible.
- In 2021, freight railroads originated 2.2 million carloads of chemicals.
- More than 99.99% of all hazmat moved by rail reaches its destination without a release caused by a train accident.