

# CHEMISTRY MOVES THE ECONOMY

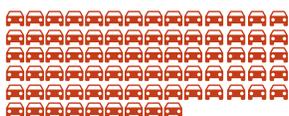
The business of chemistry directly employs nearly 800,000 people in the U.S. More than 96 percent of all manufactured goods are directly touched by chemistry. Toxic Inhalation Hazard (TIH) chemicals include chlorine, anhydrous ammonia, ethylene oxide, and hydrogen fluoride. They are essential for dozens of industries including health care, farming, manufacturing, renewable energy production, water treatment, and telecommunications.

Without the movement of [TIH] materials, gas stations would close, crop yields would diminish, potable water prices would rise, and many manufacturing activities would come to a halt.

-Harvard John F. Kennedy School of Government

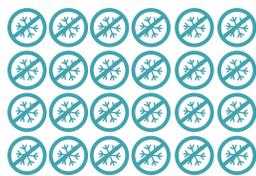
## HYDROGEN FLUORIDE

One rail car of anhydrous HF is used to produce enough environmentally-friendly refrigerant material to charge the air conditioning units of over 93,000 cars.



## ETHYLENE OXIDE

One rail car of ethylene oxide will produce 25,000 gallons of automobile antifreeze fluid.



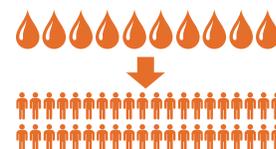
## AMMONIA

One rail car of anhydrous ammonia creates enough fertilizer to yield 128,000 bushels of corn, which can be used to produce 345,000 gallons of ethanol or to feed 1,600 head of beef cattle.



## CHLORINE

One rail car of elemental chlorine provides enough disinfectant to safely treat a 10-day supply of water for a city with 1.5 million residents.



**“TIH materials are essential to the economy and national health.”**

- U.S. Department of Transportation

**“Rail movement of these materials is extremely safe.”**

-U.S. Department of Transportation

	Jobs	Wages*
Automobile Manufacturing	134,000	\$8.4
Pharmaceutical and Medicine Manufacturing	243,000	\$19.2
Apparel Manufacturing	133,000	\$3.2
Aerospace Manufacturing	401,000	\$29.2
Agriculture, Forestry and Fishing	154,000	\$5.1
Telecommunications	1,185,000	\$77.4
Computer and Electronic Manufacturing	965,000	\$65.1
Construction	5,967,000	\$280.1
Electric power generation, transmission and distribution	512,000	\$45.7
<b>Total</b>	<b>9,694,000</b>	<b>\$533.4</b>

Source: U.S. Census Bureau

\*in billions

One rail car carries as much as four trucks. According to the Department of Transportation, the “diversion of TIH materials traffic from rail to other modes is not practical.”

