Louisiana’s Chlorine Chemistry Industry

Louisiana is home to great food, a melting pot of various cultures, big football, and a rich supply of natural resources. Additionally, one of the largest occurrences of salt domes is found along the Gulf Coast in Texas and Louisiana. This is where chlorine and sodium hydroxide manufacturing begins. With 28 salt dome caverns in 17 parishes, Louisiana has been mining salt (brine) for more than 60 years.

To mine brine, water is injected into a cavern to dissolve the salt. The liquid brine solution is then piped from the cavern to a chemical manufacturing facility.

Electricity is applied to the brine solution, and electrolysis occurs. This rearranges the molecules to make chlorine (Cl₂) gas, hydrogen (H₂) gas, and sodium hydroxide (NaOH) liquid.

The products that are not used onsite are transported for downstream uses. Chlorine is either piped nearby or transported by rail in tank cars. Hydrogen is generally transported by pipeline and sodium hydroxide by rail, truck, or barge.

Who We Are

Solutions Through Science (STS) is a partnership of the chlor-alkali producers and users in Louisiana. Established in 2000, STS is a single voice for our member companies, which are committed to serving Louisiana by providing reliable and durable products, volunteering in our communities and operating our plants in a safe and responsible manner. STS partners with the Louisiana Chemical Association and the American Chemistry Council’s Chlorine Chemistry Division. Its members include BASF, Formosa Plastics, Mexichem, Olin, OxyChem, Shintech and Westlake Chemical.
Chlorine Chemistry Products that Touch Our Lives Everyday

Chlorine and sodium hydroxide are building block chemicals that are essential to make products that benefit our lives every day. The primary sectors and a small sample of the many final products that rely on chlorine chemistry include:

**Healthcare:** pharmaceuticals, surgical sutures/membranes, respiratory inhalers, blood bags, artificial joints, eyeglass and contact lenses, disinfectants

**Building and Construction:** vinyl siding, gutters, electrical insulation, pipes, windows and doorframes, garden hoses, fences, awnings, decks, paints

**Water and Food:** swimming pool disinfectant, water treatment, food sanitizer and bactericide, crop protection

**Transportation:** seat cushions, shatter-resistant windows, jet engine shafts, car bumpers, air bags, brake fluid

**Energy and Environment:** solar panels, hybrid car batteries, home insulation, wind turbine blades, lightweight automobiles, refrigerants

**Defense and Law Enforcement:** bullet-resistant helmets and vests, riot shields, parachutes, night-vision goggles

**Technology:** computer chips, cell phones, fiber optic cables, satellites

Economic Benefits Of The Chlorine Chemistry Industry

Louisiana’s chlorine producers are critical to the state’s economic growth and produce 35-40 percent of the nation’s chlorine capacity annually.

The chlorine chemistry industry employs more than 17,000 people, making up 13 percent of the manufacturing jobs in our state.

Every year, Louisiana’s chlorine chemistry industry generates $1.8 billion in earnings. Additionally, a total of 29,700 jobs in the state are supported indirectly by industry activity through supply-chain linkages.

For every chlorine chemistry industry job in Louisiana, a total of 3.2 jobs are created in other parts of Louisiana’s economy. In total, more than 72,000 jobs in Louisiana are supported by the chlorine chemistry industry.

Combined, these economic impacts generate $4.1 billion in earnings and $713 million in state and local taxes.

To learn more about Solutions through Science, visit stsla.org