

# What are petrochemicals?

**Petrochemicals are a set of chemical compounds used as building blocks to make plastics and other chemicals.**

In the strictest scientific sense, petrochemicals are a set of very specific chemical compounds, which can be made from oil, natural gas, coal, plants, or other sources.

**The vast majority of petrochemicals are derived from oil or natural gas.**

Oil and natural gas are used as feedstocks (the main raw material used in the manufacture of a product) to make approximately 99% of U.S. petrochemicals. Petrochemicals may be produced using extreme temperatures (over 1400 °F) and pressures (over 2000 psi) in a process called cracking. The cracking process requires large amounts of energy and sophisticated engineering.

**The most basic of these petrochemicals are considered the building blocks for organic chemistry.**

Basic petrochemicals include: ethylene, propylene, butadiene, benzene, toluene, and xylene. From this base set of petrochemicals come a very large number of other chemicals, which are called “petrochemical derivatives” or simply, “derivatives.” These are the products of the petrochemical industry, which are used as raw materials for other chemical products used in 95% of all manufactured goods.

**Most things we use on a daily basis come from petrochemicals.**

Products made from petrochemicals include: plastics, soaps, detergents, solvents, paints, drugs, fertilizer, pesticides, synthetic fibers and rubbers, and flooring and insulating materials. Petrochemicals are used to make such common products as aspirin, cars, clothing, electronic equipment, furniture, and much more.

**Did you know?**

Petrochemical manufacturers are driving innovations in healthcare like casts that help broken bones heal up to 80% faster and ultra-lightweight materials that allow patients with spinal-cord injuries to walk again.