U.S. Energy Information Administration

Frequently Asked Questions
How much oil is used to make plastic?

Although crude oil is a source of raw material (feedstock) for making plastics, it is not the major source of feedstock for plastics production in the United States. Plastics are produced from natural gas, feedstocks derived from natural gas processing, and feedstocks derived from crude oil refining. The U.S. Energy Information Administration (EIA) is unable to determine the specific amounts or origin of the feedstocks that are actually used to manufacture plastics in the United States.

Petrochemical feedstock naphtha and other oils refined from crude oil are used as feedstock for petrochemical crackers that produce the basic building blocks for making plastics. EIA data can only identify those oil-derived feedstocks specifically designated as petrochemical feedstock by petroleum refineries in EIA's refining surveys, which break out into Naphtha For Petrochemical Feedstock Use and Other Oils For Petrochemical Feedstock Use. However, the petrochemical industry also consumes large quantities of hydrocarbon gas liquids (HGL), which may be produced by petroleum refineries or natural gas processing plants.

In 2016, most of the HGL produced in the United States (85%) were byproducts of natural gas processing, and the remaining 15% were from crude oil refineries. The HGL produced by U.S. petroleum refineries contain both alkanes and olefins. Alkanes can be used as feedstock for petrochemical crackers, whereas refinery olefins, primarily propylene, but also minor quantities of ethylene and butylenes, can be used as direct inputs into plastics manufacturing. Because the petrochemical industry has a high degree of flexibility in the feedstock it consumes and because EIA does not collect detailed data on this aspect of industrial consumption, it is not possible for EIA to identify the actual amounts and origin of the materials used as inputs by industry to manufacture plastics.

Lean more:
Energy Explained: Refining Crude Oil
Energy Explained: Hydrocarbon Gas Liquids

Last updated: May 17, 2017

Other FAQs about Oil/Petroleum

- What is the outlook for home heating fuel prices this winter?
- What do I pay for in a gallon of gasoline and diesel fuel?
- When was the last refinery built in the United States?
- How much oil consumed by the United States comes from foreign countries?
- How much oil is consumed in the United States?
- How much oil is used to make plastic?
- Does the world have enough oil to meet our future needs?
- What is the difference between crude oil, petroleum products, and petroleum?
- What are petroleum products, and what is petroleum used for?
- Does EIA have maps or information on the location of U.S. natural gas and oil pipelines?
- How much of the oil produced in the United States is consumed in the United States?