

Definition:

A plastic bottle is a container constructed of plastic with a neck that is narrower than its body and an opening at the top. The mouth of the bottle is normally sealed with a plastic bottle cap. Plastic bottles are typically used to store liquids such as water, soft drinks, cooking oil, medicine, shampoo, milk, and ink.

History:

Plastic bottles were first used commercially in 1947, but remained relatively expensive until the early 1960's when high-density polyethylene was introduced. They quickly became popular with both manufacturers and customers due to their lightweight nature, and relatively low production costs compared with glass bottles . The food industry has almost completely replaced glass in many cases with plastic bottles, but wine and beer are still commonly sold in glass bottles.

Types

Materials	Characteristics	Usage
High-density polyethylene (HDPE)	Naturally translucent and flexible. The addition of color will make HDPE bottles opaque although not glossy.	Shampoo and detergent bottles, milk jugs, cosmetics, motor oil
Low Density Polyethylene (LDPE)	Less chemically resistant than HDPE, but is more translucent	For squeeze application
Polyethylene Terephthalate (PET)	Very good alcohol and essential oil barrier properties, generally good chemical resistance	Carbonated beverage bottles
Polyvinyl Chloride (PVC)	Naturally clear, have extremely good resistance to oils, and have very low oxygen transmission	Salad oil, mineral oil, and vinegar, shampoos, and cosmetic products
Polypropylene (PP)	Excellent moisture barrier, stability at high temperatures	Hot fill products such as pancake syrup
Polystyrene (PS)	Excellent clarity and stiffness at an economical cost	Dry products including vitamins, petroleum jellies, and spices