



## What is PTFE Hose?

Polytetrafluoroethylene (PTFE) is an engineered plastic Resin in the fluorocarbon group, the most commonly known of which is DuPont's trademark Teflon. This high molecular weight resin displays outstanding chemical resistance to a remarkably wide variety of chemicals. The only known classes of chemicals that attack PTFE are the molten alkali metals such as sodium and potassium, and halogenated chemicals like fluorine gas or chlorine trifluoride. Other halogens and related compounds such as Freon are known to effuse at a given rate.

The chemical compatibility of PTFE, combined with its other physical characteristics, make it the deal engineered plastic for use in hose applications.

- **Flexible and Strong** - Combined with metal braid, PTFE hose can perform under high pressure and continuous flexing and vibration conditions. Braided PTFE can withstand hundreds of thousands of flex cycles without failure or fatigue.
- **Chemically Resistant and Inert** - PTFE hose can handle an almost endless variety of fluids at extremes of pressure and temperature. It is the most universal hose known.
- **Wide Ranging Temperature** - Hoses made of PTFE can typically withstand temperatures from -100°F to +500°F (-73°C to +260°F) under most operating conditions. Even 350°F steam/cold water cycling is no match for PTFE.
- **Non-stick, Low Friction** - Almost no substances can adhere to PTFE. This property insures the purity of any fluid when transferred in a PTFE hose. It also allows for repeated reuse or alternate use with different fluids. With a coefficient of friction as low as 0.05, deposits cannot build up and flow rates are high throughout the hose life.
- **Resistant To Moisture** - By its nature, PTFE lacks affinity to moisture. Absorption is less than 0.01%. In addition, no odor, taste, or color is added to the transfer fluid by PTFE, making it an FDA approved material for food contact.
- **Ageless** - Weather, exposure, time ... none of these affect the properties of PTFE. PTFE hose has limitless shelf life, it does not age.

## Why Select PTFE Hose?

Because of the versatility of PTFE hose, the applications for it are limited only by the imagination. Across almost every industry, PTFE hose applications can be found ... from caustic chemical transfer like chlorine to high purity food handling and pharmaceuticals: from automotive and transportation to ground support. From reaction injection molding to reverse osmosis; the list goes on and on. Chances are there are PTFE hose applications in your business.

The benefits of using PTFE hose over another choice are many. Because of its unique characteristics and construction, PTFE hose provides.

- **Reduced Maintenance Costs** – The hose life is often many times that of conventional rubber or metal hose, reducing the actual per hour cost.
- **Less Production Loss** – The real cost of a failed hose is time or loss of product. The properties of PTFE hose keep it in service longer than any other.
- **Greater Safety** – The real cost - PTFE hose handles the most dangerous fluids...steam, acids, caustics, noxious gases, even flammable liquids...safely. PTFE hose is constructed with built-in safety factors. It is engineered not only for the application but also for the operator.
- **Lower Inventory Costs** – A single hose can suit many different applications within a plant or facility. Longer service life means fewer inventories to purchase and keep track of from month to month.

