FRE-THANE® Polyurethane Tubing

Features	Benefits
Extremely Flexible	Small bend radius for routing into tight places.
Very Kink Resistant	Withstands abuse that would damage other plastic tubings.
Excellent Memory	Tolerates repeated flexing.
Very Abrasion Resistant	Outlasts other tubings, suitable for conveying abrasives.
Low Gas Permeability	Reduces leak and contamination problems.
Low Extractables	No plasticizers to leach or contaminate the media.
Low Compression Set	Maintains optimal physical properties.
Broad Resistances	To chemicals, water, fuel, oil and fungus.
Naturally Clear	Transparent and opaque colors available.

Tightest Size Tolerances

Freelin-Wade is the leading manufacturer of Polyurethane tubing. We offer the largest variety of sizes, colors, configurations and package options available. Our processes and quality assurance programs enable us to specify the tightest size tolerances in the industry. If you have a need for a size, color or compound not listed, give us a call.

Polyurethane... The Popular Choice

Polyurethane tubing is an increasingly popular tubing choice for pneumatic applications. Also known as urethane (abbreviated as PUR), Polyurethane tubing has over twice the tensile strength of vinyl tubing making it ideal for air logic applications up to 125 PSI. With no inherent plasticizers to leach or migrate, Polyurethane tubing retains its lively rubberlike feel and excellent flexibility over long periods of time. Polyurethane's excellent memory provides secure retention with barb fittings. Polyurethane tubing can be formed into highly durable self-storing retractable coils. See pages 28-29 for Polyurethane stock and custom engineered coils and pages 31 and 33 for FLEXCOIL® and FLEXEEL® Polyurethane hoses.

Hardness Range

Polyurethane is available in durometer ranges of 70 Shore A to 65 Shore D. Various grades to meet specific requirements of FDA, USDA, NSF or Biomedical applications are available. See the Hardness Comparison Chart located on page 42.

The Ideal Choice For Fluid Power Applications

Formed by processing two basic ingredients: Polyisocyanate and Polyol, there are two general classes of Polyurethane; ester base *(polyester polycapro-lactone)* and ether base *(polytetra-methylene glycol ether)*. Freelin-Wade has standardized on ether based compounds for its stock offerings. While ester base compounds are less expensive and generally stronger with higher tensile strengths, they tend to hydrolyze and degrade when exposed to moisture commonly found in pneumatic lines, making the ether compounds the better choice for fluid power applications.

Fitting Compatibility

The standard catalog sizes of polyurethane tubing listed here have been designed to work with commercially available fittings suitable for pneumatic and other fluid transfer applications. The dimensions, wall thicknesses and durometers have been carefully selected for optimum performance.