

# Corrosion Resistant Pfa Tubing 1/4 Inch Custom Molded Welded Fluid Transfer Components

Item Number: PL-CP377



## Introduction

Experience superior chemical inertness with our custom-molded PFA tubing solutions. Engineered for 1/4 inch applications and advanced welding processing, these corrosion-resistant components guarantee ultra-high purity and long-term reliability in the most demanding industrial fluid transfer environments.

[Learn More](#)

Application	Description	Key Benefit
Semiconductor Processing	Transport of ultra-pure deionized water and aggressive etching chemicals during wafer fabrication.	Prevents metal ion contamination and ensures process stability.
Fuel Cell Testing	Handling of hydrogen and high-humidity gases in fuel cell test stands and energy research.	Resistance to high-humidity corrosion and low gas permeability.
Pharmaceutical Synthesis	Fluid transfer in reactors for the production of active pharmaceutical ingredients (APIs).	FDA-compliant material purity and resistance to organic solvents.
Environmental Monitoring	Collection and transport of air and water samples for trace-level pollutant analysis.	Low adsorption ensures accurate quantification of trace analytes.
Petrochemical Analysis	Handling of high-temperature hydrocarbons and corrosive catalysts in laboratory pilot plants.	High thermal stability and robust mechanical performance.
Chemical Manufacturing	Custom manifolds for the distribution of bulk acids and bases in industrial pilot lines.	Leak-proof welded connections and custom-tailored geometries.
High-Precision Chromatography	Delivery of mobile phases and samples in advanced analytical instrumentation.	Minimized pressure loss and consistent fluid dynamics.

Specification Category	Parameter Details for PL-CP377	Value/Range
<b>Model Identification</b>	Product Identifier	PL-CP377
<b>Material Properties</b>	Base Material	High-Purity Perfluoroalkoxy (PFA)
<b>Dimensions</b>	Standard Outer Diameter	1/4 Inch (Customizable)
	Wall Thickness	Custom Specification (Molded to Order)
	Length	Custom Continuous Lengths or Pre-cut Segments
<b>Customization Options</b>	Molding Capabilities	Full Custom Mold Development Available
	Processing	Thermal Welding, Flaring, CNC Machining
	Fitting Integration	Integrated PFA Fittings or Welded Junctions
<b>Performance Metrics</b>	Operating Temperature	-200°C to +260°C
	Chemical Resistance	Near-Universal (Excluding molten alkali metals)
	Surface Finish	Ra ≤ 0.25 μm (Smooth Bore)

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<b>Compliance</b>	Cleanliness Standards	Trace Analysis Grade / Semiconductor Grade
	Fabrication Method	High-Precision CNC and Custom Injection/Compression Molding